

## The Sizewell C Project

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#### SIZEWELL C PROJECT - ENVIRONMENTAL STATEMENT

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#### APPENDIX 11A: PHASE 1 DESK STUDY REPORT

Please Note: The red line boundary used in the figures within the appendices was amended after these documents were finalised, and therefore does not reflect the boundaries in respect of which development consent has been sought in this application. However, these changes do not integrally change the conclusions and recommendations of this report.

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# Sizewell C: Southern Park & Ride, Wickham Market

Phase 1 Desk Study Report EDF Energy

January 2020

### SNC·LAVALIN



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#### **Document history**

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Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
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#### Client signoff

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## Glossary of Abbreviations and Technical Terms

Abbreviation / Term	Description
BGS	British Geological Survey
COMAH	Control of Major Accident Hazards
CSM	Conceptual Site Model
DCO	Development Consent Order
EDF	EDF Energy
EIA	Environmental Impact Assessment
GAC	Generic Assessment Criteria
IPPC	Integrated Pollution Prevention and Control
m bgl	Metres below ground level
MAGIC	Multi Agency Geographic Information for the Countryside
NGR	National Grid Reference
NIHHS	Notification of Installations Handling Hazardous Substances
NPPF	National Planning Policy Framework
PCSM	Preliminary Conceptual Site Model
PINS	The Planning Inspectorate
RIGS	Regionally Important Geological Sites
SPZ	Source Protection Zone
SSAC	Site Specific Assessment Criteria
SSSI	Site of Special Scientific Interest
SZC	Sizewell C Development
UXO	Unexploded Ordnance

## 1. Introduction

#### 1.1. General

Atkins has been commissioned by EDF Energy (EDF) to carry out a desk-based review of available information for the proposed new nuclear power station at Sizewell, Suffolk (referred to as Sizewell C). It is intended to submit a Development Consent Order (DCO) application to the Secretary of State, which will be supported by various documents including an Environmental Impact Assessment (EIA). The development proposals are for two main elements:

- The Main Development Site: including reactor buildings, turbine halls, cooling water infrastructure, interim waste / fuel storage, operational service centre and offices, electricity transmission equipment and various associated highways infrastructure.
- Associated Development sites: including two Park and Ride schemes, a freight management facility and improvements to rail / highways infrastructure.

This report is concerned with the proposed southern park and ride scheme Sizewell C construction workers, which will be located approximately 1.7km north east of Wickham Market town centre (herein referred to as the site). The location of the site is shown in Figure 1 included in Appendix A.

#### 1.2. Purpose and Structure of Report

The purpose of this report is to collate and assess, where possible, the findings of the environmental desk study relevant to the proposed development and to identify key gaps in data should there be any. The key focus of the report is to identify potential contamination risks associated with the proposed development through preparation of a factual summary of the available information and where necessary, to assess the completeness and relevance of this information in order to identify requirements for further investigation. The information within this report will also form the baseline conditions for use in preparation of the Environmental Statement. An outline of the report content is provided below:

- Section 2 provides a description of the site location, including details of the proposed development and boundary as well as relevant off-site features;
- Section 3 sets out the desk study information obtained to establish the environmental setting of the site;
- Section 4 provides a Preliminary Conceptual Site Model (PCSM) developed through the identification and assessment of risk presented by potential pollutant linkages; and
- Section 5 summarises the extent of information available for the site, as well as identifying data gaps.

#### 1.3. Limitations

The Envirocheck report [1] reviewed for the desk study was obtained in 2012 for the original redline boundary which has since been amended. However, the report includes the site and the surrounding area with a buffer of up to 1km and therefore covers the new redline boundary. The information for the site has also been updated with current information obtained from publicly available sources including British Geological Survey (BGS) mapping, the Environment Agency website where available [2], Defra's MAGIC website [3], Zetica's website [4] and Suffolk Biological Records Centre [5]

The conclusions and recommendations of this report are based on the project description and redline boundary (Appendix A) provided to Atkins by EDF and are correct at the time of writing the draft report (July 2019).

The findings and opinions conveyed via this report are based on information obtained from a variety of sources as detailed within this report. Nevertheless, Atkins cannot and does not guarantee the authenticity or reliability of the information. No attempt has been made to verify independently any data collected by others.

## 2. Site Location and Description

#### 2.1. Proposed Development and Boundary

The proposed development at Wickham Market comprises a Park and Ride Scheme. Figure 1 included in Appendix A shows the site location, redline boundary and its position relative to the Main Development Site.

The proposed Park and Ride will include car parking areas with approximately 900 spaces; a bus terminus; parking and shelters; perimeter security fencing and lighting; a welfare building including toilets, bus drivers' rest room and security administration offices; postal courier facility; on-site soil storage which will be used for the reinstatement of the site once construction of the Sizewell C is completed; and external areas including roadways, footways, landscaping and drainage.

As part of the proposed development, the access roads into the site will also be upgraded. These comprise a section of the B1078 (Main Road), the B1078 slip road and the A12 which are located to the south and south west of the site.

#### 2.2. Site Location

The site is located approximately 1.7km north east of Wickham Market town centre, 16km west south west of the Main Development Site. The National Grid Reference (NGR) for the approximate centre of the site is TM 31631 57426. The site is an irregular shape comprising predominantly agricultural land immediately north of the A12 and a section of the B1078 (Main Road), the B1078 slip road and the A12 located to the south and southwest of the site.

Access to the land can be gained from a layby along the B1078 slip road leading to the A12 and the footpath which follows the southern boundary of the site and continues north east away from the site boundary. A publicly accessible bridleway forms the majority of the western boundary of the site which leads up to a wooded area adjacent to the north west corner of the site and extends further north west towards the B1116.

#### 2.3. Site Visit

A site walkover was carried out by two Atkins Environmental Consultants during March 2019 to gain further information on the site setting, to consider the context of the proposed development, and to confirm the current desk study mapping and aerial photographs. Additionally, it was an opportunity to identify potential visual or olfactory contamination present at the site at the time of the walkover. The observations from the site walkover are summarised below and photographs are provided in Appendix B.

#### 2.3.1. Land Use

The majority of the site was noted to comprise large open fields and farmed agricultural land. The B1078 (Main Road), the B1078 slip road and A12 are located within the south and south-west of the site. An area along the western site boundary which is identified on historical and current mapping to be a disused sand pit (see Section 3.2 for further details) was noted to be overgrown and surrounded by trees, with a fenced area located towards the eastern edge of the disused sand pit. A track is present in the east of the site running from south-east to south-west parallel with the A12, and a wooden fence approximately 1.3m high surrounds this area of the site.

#### 2.3.2. Site Boundaries

The site's northern and eastern boundaries have no distinguishable features and are formed by open agricultural fields. The site is bound to the south and south east by agricultural fields and to the south west by the A12 and the A12 junction/roundabout with the B1074, B1078 and B1116. The western boundary is formed by a track which is tree-lined up to the Whin Belt woodland. Further north, no trees are present along the track. A drainage ditch is present adjacent to the site on the western side of the track, up to Whin Belt.

#### 2.3.3. Surrounding Area

The surrounding area mainly comprises agricultural fields in all directions. Two areas of woodland (Whin Belt and Wonder Grove) are present to the west of the site and an area of unnamed woodland is present adjacent to the north-east corner of the site.

#### 2.3.4. Ground Cover and Topography

At the time of the visit in 2019, the ground cover was almost entirely grass and previously harvested crops with a small area in the south west comprising part of a track. The site was generally flat with a gentle slope towards the south.

#### 2.3.5. Surface Water

The small pond which is indicated on historical and current mapping to be present in the area of the disused sand pit appeared to have dried up and was not able to be located during the walkover. A drainage ditch with approximately 0.2m of surface water was noted adjacent to the western edge of the site. Two ponds were also noted to be present within the woodland area adjacent to the north west corner of the site.

#### 2.3.6. Services

Three overhead cables were noted to be present adjacent to the western boundary of the site, running from the B1078 (Main Road) in a north to south orientation to the Whin Belt woodland.

#### 2.3.7. Visual / Olfactory Evidence of Contamination

A square fenced area was noted to be present in the area of the disused sand pit. This use of this area is unknown, but it appears to have been used as a pheasant rearing pen containing housing and feeding areas. Within the fenced area a 2m x 2m pen constructed from corrugated iron was observed, alongside a blue container within unknown contents (possibly a feeding station). Adjacent to the fenced area was an intermediate bulk container (IBC). This was black and opaque and it was not possible to tell what it contained. However, the IBC appeared to be connected to several secondary containers within the fenced area and may have been used to supply water. A drum and a canister were also located nearby, the contents of which could also not be identified. It is considered that the contents of any of these containers may be potentially contaminative. However, there was no visible or olfactory evidence of spills or leaks on the ground surrounding the IBC or containers and it is possible that they were used to store water and feed.

Within the disused sand pit area there was also mounds of soil covered with vegetation. It is considered possible that these are areas of disturbed ground and could potentially contain a range of organic and / or inorganic contamination.

Fly-tipped materials were also present within this area of the site including rubber tyres.

#### 2.3.8. Potential Hazards and / or Constraints

The site walkover identified several features which may have the potential to either be a localised source of contamination or to place constraints on either the construction or operational phases of the proposed development:

- The fly-tipped areas around the area of the former disused sand pit (identified on historical maps) are considered to be a potential hazard; it is not known what has been tipped there previously, but localised evidence of plastics, tyres, metal and old drums were visible during the site walkover;
- Uneven ground, mounds of soil and dense vegetation in the disused sand pit area. The contents
  of the stockpiles are unknown, and therefore could be contaminating the ground, or pose risk to
  site workers, for example if they contained asbestos. These and any other infilled areas will also
  need to be considered during construction, as differential settlement of the ground may occur due
  to the unconsolidated backfilled material; and
- The fenced-off area within the disused sand pit and the IBC, drum and canister in the adjacent
  area are considered to be potential hazards / constraints as the contents of these containers are
  unknown. However, it was noted during the site walkover that these were likely to have been
  used to store water and feed, as they were present within an area of fencing which appeared to

have been used to rear game birds. Similar containers and pheasants were observed in adjacent woodland areas.

In addition, access to the site may be restricted due to landowner agreements and the current use of the agricultural fields, additional biosecurity measures may be required.

## 3. Environmental Setting

#### 3.1. General

An Envirocheck report [1] was obtained in 2012 and has been used to provide information relating to the site and surrounding areas and is presented in Appendix C. Further information has also been obtained from publicly available sources of information including Defra's MAGIC online mapping [3], the Zetica online unexploded ordnance (UXO) risk maps [4], Suffolk Biological Records Centre website [5], BGS geological mapping and historical borehole records [6] and the Environment Agency's website, where available [2].

#### 3.2. Site History

A review of the historical and current land use of the site and surrounding area (within 500m of the site) has been undertaken to identify the nature and location of potentially contaminative activities that may have taken place on or adjacent to the site.

Historical maps between 1883 and 1995 are presented within the Envirocheck report [1], included in Appendix C. Information obtained during the site walkover in 2019 was used to determine whether there had been any significant changes been 2012 and the present day. Key aspects of the site history are summarised in Table 3.1 below.

Table 3.1 Summary of site history

Date (Scale)	On-site	Surrounding area
1883 (1:2,500) 1884 (1:10,560)	The site is shown as predominantly fields. A road is present running along the south of the site from north east to south west. The road connects to two further roads in the south-west of the site running from north west to south east. Beggar's Barn is shown in the north-west corner of the site comprising of an approximately square building. A sand pit is shown in the south west of the site adjacent to the site boundary.	Two sand pits are shown approximately 70m and 130m to the north-east of the site.  The Great Eastern Railway is shown approximately 420m north-east of the site in a north-west to south-east orientation.
1904 (1:2,500) 1905 (1:10,560)	No significant changes.	The sand pit approximately 70m north east of the site is no longer shown, presumed to be infilled. The sand pit approximately 130m north-east is now labelled as a gravel pit.
1951 (1:10,560)	No significant changes.	Residential properties have been constructed approximately 150m southwest of the site.
1957 (1:10,000)	No significant changes.	No significant changes.
1975 (1:2,500)	The sand pit is now labelled as 'disused'.	The Great Eastern Railway is now labelled as 'dismantled railway'.
1978 (1:2,500)	The road in the south of the site is shown as being upgraded and extended to the south-west, with associated earthworks. The new road is labelled as the A12 (Main Road) and the original road is now labelled as B1078 (Main Road) with	The A12 (Main Road) to the east of the site is being upgraded extended.

Date (Scale)	On-site	Surrounding area
	a slip road leading on the A12 (Main Road). The layout of the two original roads in the south-west of the site have also changed as part of the construction works. These roads are labelled as B1078 and Station Road.	
1980 - 1982 (1:10,000)	No significant changes.	The gravel pit to the north east of the site is no longer shown and is now vegetated with trees. An electrical substation is indicated to be present 250m south of the site.
2012 (1:10,000)	Beggar's Barn is no longer shown, the building presumably demolished. The construction of the A12 has been completed and the A12, B1078 (Main Road) and B1078 slip road are shown in their current layout.	No significant changes.
Present day	No significant changes.	No significant changes.

The site has mainly comprised agricultural land since at least 1883 (the earliest available historical map). Several roads have been present in the south and south west of the site since 1883 and upgraded and extended in the 1970s as part of the construction of the A12. Made Ground may be present associated with the construction of the roads and within the area of the disused pit where disturbed ground and soil mounds were noted during the site walkover. Beggar's Barn located in the north west corner of the site may have been an active farm, therefore potential contamination at the site may comprise fuels, oils and pesticides associated with various farming practices. The disused sand pit in the south west of the site is presumed to have been infilled, although it is not currently known what these fill materials comprise.

The surrounding area has comprised predominantly agricultural land since at least 1883. A sand and gravel pit were present 70m and 130m north-east of the site until 1904 and 1980 respectively when it is presumed that they were infilled.

#### 3.3. Superficial and Bedrock Geology

#### 3.3.1. Made Ground / Artificial Deposits

Made Ground is not shown on BGS online mapping [6], however there is potential for Made Ground to be encountered in the soil mounds and disturbed ground observed during the site walkover in the area of the disused sand pit which is likely to have been infilled. Made Ground may also be present in the areas associated with the construction of the B1078 (Main Road), the B1078 slip road and the A12 (Main Road), and within the infilled pits located off-site.

#### 3.3.2. Superficial Deposits

The majority of the site is shown to be underlain by superficial deposits of the Lowestoft Formation [6]. The south west and north east areas of the site are underlain by sands and gravels of the Lowestoft Formation, whereas the central area of the site is underlain by diamicton deposits of the Lowestoft Formation comprising poorly-sorted matrix-supported deposits.

Historical BGS borehole and trial pit logs [6] along the A12 indicate that sand and gravel deposits are present within the south of the site. Lithological descriptions detailed within the logs generally include clay, sand and gravel with occasional chalk up to approximately 6 metres below ground level (m bgl). The underlying material generally becomes more dense and sandy with depth, with the bedrock not proven up to a depth of 20m bgl. Borehole and trial pits logs are included as Appendix D.

#### 3.3.3. Bedrock and Structural Features

According to the BGS website [6], the site is underlain by Bedrock geology comprising sands of the Crag Group, described as 'shallow-water marine and estuarine sands, gravels, silts and clays'. It is not clear from borehole logs along the A12 the depth at which the bedrock begins, as both the superficial deposits and bedrock in this area are described as being sands and gravels, confirmed in the borehole logs. There are no significant structural features located on or within 500m of the site.

#### 3.3.4. Local Geological Sites

According to mapping on the Suffolk Biological Records Centre website [5] the site is not located within a Local Geological Site formerly known as Regionally Important Geological or Geomorphological Sites (RIGS).

### 3.4. Mineral Extraction and Ground Stability

#### 3.4.1. Mining and Natural Cavities

The Envirocheck report [1] indicates that the site is in an area that is not affected by coal mining activity. Based on the geology indicated on the BGS mapping it is unlikely that workable coal bearing strata are present underlying or in the vicinity of the site.

#### 3.4.2. Historical Extractive Activities

There are no historical extractive activities listed in the Envirocheck report [1]. The Suffolk County Council Minerals Local Plan [7] has been viewed which indicates that there are no planned areas of mineral extraction within 1km of the site. However, historical maps and the site walkover indicate the presence of a sand pit on site, a sand pit 70m north east and a gravel pit 130m north east indicating historical small scale extraction of sands and gravels.

#### 3.5. Radon

The Envirocheck report BRE Radon Guidance [8] states that the site and surrounding area are in a lower probability radon area, as less than 1% of homes are above the action level. Therefore, no radon protective measures are necessary in the construction of new buildings on site (e.g. welfare building).

It should be noted that it is not a requirement to test new non-domestic buildings for radon gas. However, under the Health and Safety at Work Act, the employer has a duty to ensure that the risk to employees from radon is kept within acceptable levels.

#### 3.6. Hydrogeology

The superficial deposits in the south west and north eastern sections of the site are classified by the Environment Agency [3] as a Secondary A Aquifer<sup>1</sup>, associated with the Lowestoft Formation Sand and Gravel. The superficial deposits in the centre of the site associated with the Lowestoft Formation Diamicton are classified as Secondary Undifferentiated Aquifer<sup>2</sup>.

According to the Envirocheck report [1] and the Environment Agency website [2], the Crag Group bedrock underlying the site is classified as a Principal Aquifer<sup>3</sup>. The site lies within a groundwater Source Protection Zone<sup>4</sup> (SPZ) III (Total Catchment). An Inner Protection Zone (Zone 1) is located approximately 500m south of the site.

<sup>1</sup> Secondary A aquifers are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

<sup>&</sup>lt;sup>2</sup> Secondary Undifferentiated aquifers are assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

<sup>&</sup>lt;sup>3</sup> Principal Aquifers are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

<sup>&</sup>lt;sup>4</sup> Source Protection Zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The maps show three main zones (inner, outer and total catchment) and a fourth zone of special interest, which we occasionally apply, to a groundwater source.

#### 3.6.1. Groundwater Abstractions

The Environment Agency website [2] indicates that there is one licensed groundwater abstraction approximately 60m east of the site for general agricultural use for spray irrigation. The abstraction is used seasonally between 1 April and 31 October and has a maximum annual abstraction limit of 31,700m<sup>3</sup>. There are no further groundwater abstractions within 500m of the site.

#### 3.6.2. Groundwater Discharge Consents

The Environment Agency website [2] lists one waste exemption held on the public register (Bridge & Ivy Farms Ltd) 55m to the north-east of the site, for the deposit of agricultural waste (including plant materials and inland dredgings), burning of waste, treatment of wood / plant waste by chipping / shredding and use of waste in either construction or for agricultural benefit. A groundwater discharge consent listed to the same holder in the Envirocheck report [1] is identified as no longer current.

#### 3.7. Hydrology

A small pond is shown south of Whin Belt in the disused sand pit area in the south west of the site on current mapping. However, the pond was not able to be located during the site walkover in March 2019 and appeared to have dried up. A drainage ditch with approximately 0.1m of surface water was noted adjacent to the western boundary of the site during the site walkover in 2019. Two ponds are located approximately 10m and 30m west of the site boundary within a small area of woodland immediately north west of the site [1]. A network of drains is present 250m to the south of the site around Lower Hacheston. A drain is shown approximately 310m west of the site boundary adjacent to a track leading from Wonder Grove to the B1116. The River Ore is located approximately 480m north east of the site.

#### 3.7.1. Surface Water Abstractions

The Environment Agency website [2] indicates that there are no surface water abstractions on or within 500m of the site.

#### 3.7.2. Surface Water Discharge Consents

The Envirocheck report [1] lists two surface water discharge consents within 500m of the site. The first is located approximately 500m south of the site, belonging to Tweed Developments Ltd. for a sewage disposal works, with sewage discharges of final/treated effluent, not belonging to a water company, into the River Deben. The second is approximately 600m south west of the site and is held by Bridge and Ivy Farms Ltd for a single domestic property, which is also licensed to discharge final/treated effluent.

#### 3.8. Flood Risk

The Envirocheck report [1] and Government Flood Maps [9] indicate that the majority of the site is located in Flood Zone 1 and has a very low risk of flooding from rivers or the sea without defences. Risks associated with groundwater flooding at the site are also considered to be low.

The River Ore located approximately 480m north-east of the site, is located in a Flood Zone 2 and 3, and at high risk of extreme flooding from rivers or the sea without defences. The network of drains located 250m south of the site are also indicated to be within a Flood Zone 2 and 3.

The Environment Agency's long-term flood risk mapping shows that the majority of the site is also at very low risk of flooding from surface water. However, there are four isolated areas of low risk of surface water flooding within the site including:

- Across the proposed new access road into the site;
- Along the southern boundary with the A12;
- Along the site boundary; and
- At the north-east boundary.

There are also two areas of combined 'medium' and 'high' risk within the north-west corner of the site and adjacent to the north-bound A12 slip road. Towards the southern extent of the site, there is a large area of 'high' surface water flood risk, situated on the A12 at the B1078 junction.

#### 3.9. Pollution Incidents to Controlled Waters

The Envirocheck report [1] and Environment Agency website [2] indicate that there have been no pollution incidents to controlled waters within 500m of the site.

#### 3.10. Substantiated Pollution Incident Register

The Envirocheck report [1] states that there have been no substantiated pollution incident register entries on or within 500m of the site since 1999.

#### 3.11. Waste Management Sites

The Environment Agency website [2] and Envirocheck report [1] confirm that there are none of the following within 500m of the site:

- Historical landfill sites;
- Authorised landfill sites;
- Waste transfer sites;
- Control of Major Accident Hazards sites (COMAH);
- Explosive Sites;
- Notification of Installations Handling Hazardous Substances (NIHHS);
- Planning Hazardous Substance Consents; or
- Planning Hazardous Substance Enforcements.

#### 3.12. Integrated Pollution Prevention and Control (IPPC) Sites

According to the Envirocheck report [1] there are no IPPC sites on or within 500m of the site. The Environment Agency website also confirms that there have been no major or significant pollution incidents on or within 500m of the site.

#### 3.13. Registered Radioactive Substances

According to the Envirocheck report [1] there are no registered radioactive substances within 500m of the site.

#### 3.14. Fuel Stations

According to the Envirocheck report [1] there are no fuel stations within 500m of the site.

#### 3.15. Contemporary Trade Directories

The Envirocheck report [1] indicates that there are no active trade establishments that have the potential to use contaminants of concern in their processes on or within 500m of the site.

#### 3.16. Sensitive Land Uses

The Envirocheck report [1] and the MAGIC website [3] were reviewed for the following statutory land designations:

- Areas of Outstanding Natural Beauty (AONB);
- Areas of Special Protection (AoSP) and Special Protection Areas (SPA);
- · Country Parks;
- Historic Gardens and Designated Landscapes;
- Local and National Nature Reserves (LNR / NNR);
- National Parks;
- Ramsar Sites:

- Sites of Special Scientific Interest (SSSI);
- Special Areas of Conservation (SAC);
- · Sites of Community Interest (SCI); and,
- World Heritage Site.

Two Grade II Listed Buildings are recorded located approximately 500m south of the site in Lower Hacheston (Ash Cottage and 36 Ash Road). Both buildings were listed in November 1984.

Extensive evidence of a Late Iron Age settlement, and the Romano-British settlement of Hacheston has been found in the vicinity of the site.

The Envirocheck report indicates that the site lies within a surface and groundwater Nitrate Vulnerable Zone (NVZ)<sup>5</sup>.

#### 3.17. Unexploded Ordnance (UXO)

A Zetica UXO map [4] was obtained to assess the risk of encountering UXO at the site. The map indicates that the site is located within an area with a low risk of encountering UXO, and is included in Appendix E.

#### 3.18. Land Ownership / Access

Access is possible to the various areas of the site via current roads and tracks, with the land owned by one private landowner.

<sup>&</sup>lt;sup>5</sup> Nitrate Vulnerable Zone (NVZ) is designated where land drains and contributes to the nitrate found in 'polluted' waters. Polluted waters include:

<sup>•</sup> Surface or ground waters that contain at least 50mg per litre (mg/l) nitrate

<sup>•</sup> Surface or ground waters that are likely to contain at least 50mg/l nitrate if no action is taken

<sup>•</sup> Waters which are eutrophic, or are likely to become eutrophic if no action is taken

A water is eutrophic if it contains levels of nitrogen compounds that cause excessive plant growth resulting in 'an undesirable disturbance to the balance of organisms present in the water and to the quality of the water'.

## 4. Preliminary Conceptual Site Model (PCSM)

#### 4.1. Approach to PCSM

The PCSM has been developed based on the site description provided in Section 2.1.

Land contamination is assessed through the identification of risk presented by potential contaminant linkages (PCLs), i.e. Source – Pathway – Receptor relationships, and the development of a Conceptual Site Model (CSM). Guidance provided by the Environment Agency in CLR11<sup>6</sup> [10] and the Guiding Principles for Land Contamination (GPLC) documents [11] provide the technical framework for the development of such CSMs and the application of risk assessment (qualitative or quantitative) to consider whether potential pollutant linkages are significant and require appropriate management or mitigation.

The National Policy Statement (NPS) for Energy Infrastructure, accompanied by the NPS for Nuclear Power Generation, does not make specific requirement for Land Quality assessment beyond the requirement to consider the risks posed by land contamination and need for an EIA. Section 4.10 of the NPS EN-01 confirms that issues related to land quality may be subject to separate regulation, and therefore the National Planning Policy Framework (NPPF) [12] has been consulted regarding the need for additional environmental assessment.

The NPPF [12] states that "to prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location. The effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of an area or proposed development to adverse effects from pollution, should be taken into account. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner."

The basis of CLR11 and GPLC1 is the development of the Conceptual Site Model (CSM) which is the representation of the source-pathway-receptor (pollutant) linkages on which the assessment of risk can be based.

The basic approach to the human health and controlled water risk assessment reported here follows the principles given in CLR11 and GPLC1, i.e. application of the following assessment hierarchy:

- Tier 1 risk screening by establishment of potential pollutant linkages, i.e. the preliminary conceptual site model (PCSM).
- Tier 2 generic quantitative assessment using Generic Assessment Criteria (GACs) that represent 'minimal' or 'tolerable' risk.
- Tier 3 quantitative risk assessment using Site Specific Assessment Criteria (SSACs) that represent 'unacceptable risk', or where generic assessment criteria are not available or they are not applicable to the CSM.

At this stage, the following Preliminary Conceptual Site Model (PCSM) has been developed using the proposed scheme details and desk study information summarised in the preceding sections of this report, i.e. a Tier 1 assessment.

#### 4.2. Risk Estimation

Through consideration of the potential consequence and likelihood of exposure occurring, a potential risk rating for each PCL has been assigned and is presented in Table 4.5. The purpose of this assessment is to focus upon the potential risks present based on the proposed with no mitigation measures. The definitions of estimated risk are taken from CIRIA report C552 [13] and have been summarised in Table 4.1 below.

<sup>&</sup>lt;sup>6</sup> It is noted that CLR11 is due to be withdrawn in December 2019 and replaced by updated online guidance: Environment agency (June 2019) Land contamination: Risk Management (LCRM).

Table 4.1 Definitions of estimate risk

Risk Level	Definition					
Very High Risk  There is a high probability that severe harm could arise to a designated record or there is evidence that severe harm to a designated receptor is cur happening. This risk, if realised, is likely to result in a substantial liability. Usinvestigation (if not already undertaken) and remediation are likely to be required.						
High Risk	Harm is likely to arise to a designated receptor. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not already undertaken) is required and remedial works may be necessary in the short term and are likely over the long term.					
Medium Risk	It is possible that harm could arise to a designated receptor. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the long term.					
Low Risk	It is possible that harm could arise to a designated receptor, but it is likely that this harm, if realised, would be mild. Further investigation is not necessarily required, however should be considered to confirm that there is no unanticipated contamination present.					
Very Low Risk	The possibility of harm to the designated receptor is either not plausible or, if the possibility of harm is plausible, risk is considered to be very unlikely with attenuation along the exposure pathway. Further investigation is not necessarily required, however may be considered to confirm that there is no unanticipated contamination present.					

The risk is evaluated through the probability matrix presented in Table 4.2. The definitions of probability and consequence are given in Appendix F.

Table 4.2 Estimation of the level of risk by comparison of consequence and probability

	Consequence								
		Severe	Medium	Mild	Minor				
(Likelihood)	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk				
	Likely		Moderate Risk	Moderate / Low Risk	Low Risk				
٠ ح	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk				
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk				

#### 4.3. Preliminary Conceptual Site Model (PCSM)

Based upon the historical and present land uses identified in the various sources and publicly available information reviewed, a PCSM has been produced, identifying potential sources of contamination, migration or exposure pathways and receptors for the site. A worst-case scenario has been adopted in the preparation of this PCSM, i.e. all likely potential sources, exposure or migration pathways and sensitive receptors have been assumed to be present.

The following sections are described in terms of the potential source – pathway – receptor PCLs, which are defined by interpretation of the information contained within this desk study and the details of the proposed development, correct at the time of writing (July 2019).

#### 4.3.1. Potential Contaminants

Probability

The potential sources of contamination and associated groups of potential contaminants of concern have been identified from the desk-based review of information, and are outlined in Table 4.3 below.

The list of activities and contaminants of concern in the table below should not be considered exhaustive and provides a guide to the likely range of contaminants which may be present at or around the site.

Table 4.3 Summary of potential on and off-site sources of contamination

	Cammany or potential on and on old coal				
	Activity / feature	Potential contaminants			
On-site	Beggar's Barn, historically present in the north west of the site, previously used for cattle and dairy farming.	Metals, inorganics, fuels, oils and pesticides, herbicides, silage, effluent, and fuel/engine oils associated with various farming practices and stored onsite.			
	Made Ground associated with the construction of the B1078 (Main Road), A12 and B1078 slip road within the south and south west of the site as well as activities associated with their operation.	A range of inorganic and organic contaminants including polyaromatic hydrocarbons (PAHs), coal tars asbestos and ground gases. Fuels and oils attributed to spills from vehicles or the roads included within the site boundary, plus exhaust particulates.			
	Containers with unknown contents located in the disused sand pit area (i.e. IBC, drum, canister) which could have leaked or been spilled.	Metals, inorganics, fuels, oils, chemicals and pesticides.			
	Made Ground associated with the disused sand pit in the south-west of the site (presumed to have been infilled), and the mounds/disturbed ground on-site.	Gas associated with biodegrading material and a range of inorganic and organic contaminants including metals and hydrocarbons, Polychlorinated Biphenyl (PCBs), asbestos, etc.			
	Fly-tipped waste within the disused sand pit area.	Asbestos and a range of inorganic and organic contaminants including metals and hydrocarbons.			
	Farmland within site boundary. Potential for other un-mapped farmers tips.	Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils. Risk of inorganic and organic contamination including metals and hydrocarbons, PCBs, asbestos, etc.			
Off-site	Made Ground associated with the construction of the A12 (Main Road) to the south west of the site as well as activities associated with their operation and with residential properties within 250m of the site.	A range of inorganic and organic contaminants including the potential for asbestos and ground gas. Fuels and oils attributed to spills from vehicles on the roads included within the site boundary, plus exhaust particulates.			
	Electrical substation located 250m south of the site.	Oils, metals and PCBs.			
	Farmland surrounding the site.	Fuels, oils and pesticides associated with various farming practices.			
	Made Ground associated with the former railway located 420m north-east and activities associated with its operation	A range of organic contaminants including hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash and fill used in the construction of the Great Eastern Railway.			
	Made Ground associated with the disused sand pits located 70m and 130m to the north-east	Ground gas and a range of inorganic and organic contaminants including the potential for asbestos.			

#### 4.3.1. Potential Receptors

This section details potential receptors which are relevant to the current site use, and may be relevant to the construction and operation of the site. Following the removal of the park and ride and reinstatement of the site, receptors will revert back to the current site use. Potential receptors are outlined in Table 4.4.

Table 4.4 Summary of potential receptors

Receptor Groups	Current site use	Proposed Park & Ride Use			
Human health	Farmers and workers on agricultural	Construction / maintenance workers			
(on-site)	land				
	-	Users of the new park and ride site			
Human health	Farmers on adjoining agricultural land	Farmers on adjoining agricultural land			
(off-site)	Pedestrians / cyclists / horse riders accessing public footpaths, bridleways and local roads within 500m of the site.	Pedestrians / cyclists / horse riders accessing public bridleway and local roads			
	Residents within 500m of the site	Residents in local area			
Controlled water	Groundwater in Secondary A and Secondary Undifferentiated superficial aquifer	Groundwater in Secondary A and Secondary Undifferentiated superficial aquifer			
	Groundwater in Principal bedrock aquifer	Groundwater in Principal bedrock aquifer			
	Off-site surface water bodies (River Ore, ponds, ditches and drains)	Off-site surface water bodies (River Ore, ponds, ditches and drains)			
Property	Existing on-site and off-site services and structures (including listed buildings and archaeological features)	Existing on and off-site services and structures (including listed buildings and archaeological features)			
	-	Proposed on-site services and structures			
	Crops and livestock (on-site and off-site)	Crops and livestock (off-site)			

#### 4.3.2. Potential Migration / Exposure Pathways

This section details the potential migration or exposure pathways between the sources of contamination and receptors identified above. For a pollutant linkage to exist between the contaminant sources identified and the potential receptors, a pathway must exist.

#### **Potential Human Exposure Pathways:**

Potential exposure pathways to the identified on-site human receptors include:

- Dermal contact with and ingestion of contaminants in soils, soil-derived dusts and water; and
- Inhalation of soil derived dust, fibres and gas/vapours.

The potential exposure pathways to the identified off-site human receptors include:

- Dermal contact with and ingestion of contaminants in soil-derived dusts and water that may have migrated off site; and
- Inhalation of soil derived dust, fibres and gas/vapours which may have migrated off site.

#### **Potential Controlled Waters Exposure Pathways:**

- Leaching of contaminants in soil to groundwater in underlying aquifer;
- Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifer;

- Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow; and
- Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge.

#### **Potential Property Exposure Pathways:**

- Direct contact of contaminants in soil and/or groundwater with buried services;
- Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata; and
- Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.

#### 4.3.3. PCSM and Underpinning Assessment Assumptions

Table 4.5 presents the key information included in the PCSM prepared for the site in its current undeveloped state (baseline), and also for future scenarios (construction and operation). A post-operation (removal and reinstatement) scenario is considered to be the same as the baseline as the site will be returned to its original land use. The assessment has been undertaken using the following assumptions:

- The site has been developed as described in Section 2.1; and
- Construction has been carried out in accordance with appropriate Health and Safety and environmental protection requirements.

Table 4.5 Preliminary Conceptual Site Model

Source	Receptor	Contaminant exposure / migration pathway		Baseline		Construction			Operation											
			patiway	Probability	Consequence	Risk Category	Probability	Consequence	Risk Category	Probability	Consequence	Risk Categor								
ON-SITE:  Made Ground associated	Human health: On-site	Farmers and workers on agricultural land	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and water.	Low Likelihood	Mild	Low risk	Receptor not present			Receptor not present										
with the infilled disused sand pit, mounds, disturbed ground and earth bund in the south west of		Construction / maintenance workers	Inhalation of contaminants in soil, soil-derived dust, fibres and gas/vapours.	Receptor not present			Unlikely <sup>7</sup>	Mild	Very low risk	Unlikely	Mild	Very low risk								
site: Beggars Barn in north west		Users of the new park and ride		Receptor not present			Receptor not present			Low Likelihood	Mild	Low risk								
of the site, previously used for cattle and dairy farming.  Fly-tipped waste along the	Human health: Off-site	Farmers on adjoining agricultural land	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and water which may have migrated off-site.	Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk								
south western and western boundaries (including drums, IBCs, canisters, etc)		Pedestrians, cyclist, horse riders accessing public bridleway and local roads	Inhalation of contaminants in soil, soil-derived dust, fibres and gas/vapours which may have migrated off-site.	Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk								
A range of contaminants including asbestos, metals, hydrocarbons, PCBs, PAHs, solvents, etc.		Residents within 500m of the site i		Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk								
ground gases including methane, carbon dioxide,	Controlled Waters	Groundwater in Secondary A	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low Likelihood	Medium	Moderate / Low risk	Likely	Medium	Moderate	Low Likelihood	Medium	Moderate / Low risk								
carbon monoxide, hydrogen sulphide.  Made Ground associated with the construction of the B1078 (Main Road), A12		Undiffere superficia aquifer ar Principal bedrock a	and Secondary Undifferentiated superficial aquifer and Principal bedrock aquifer	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk	Likely	Medium	Moderate	Low Likelihood	Medium	Moderate / Low risk							
and B1078 slip road within the south and south west of the site as well as activities associated with their		Off-site surface water bodies (River Ore, ponds, ditches,	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Low Likelihood	Mild	Low risk	Likely	Mild	Moderate / low risk	Low Likelihood	Mild	Low risk								
operation.  A range of inorganic and organic contaminants		and drains)	Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge.	Low Likelihood	Mild	Low risk	Likely	Mild	Moderate / low risk	Low Likelihood	Mild	Low risk								
including the potential for asbestos and ground gas. Fuels and oils attributed to	gas. services  set to services  site r un-  from ddes, fuel and ation and	Existing on-site and off-site	Direct contact of contaminants in soil and/or groundwater with buried service.	Unlikely	Minor	Very low risk	Low Likelihood	Minor	Very low risk	Unlikely	Minor	Very low risk								
Fuels and oils attributed to spills from vehicles on the roads included within the site boundary, plus exhaust particulates.  Farmland within site boundary. Potential for unmapped farmers tips:  Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils. Risk of inorganic and organic contamination including metals and hydrocarbons, PCBs, asbestos, etc.		services and structures (including listed buildings and archaeological features)	Migration of vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk								
										Future on-site services and structures	Direct contact of contaminants in soil and/or groundwater with existing buried service.	Receptor not present			Receptor not present			Unlikely	Minor	Very low risk
			Migration of vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present			Receptor not present			Unlikely	Mild	Very low risk								
		Crops and livestock (on- site)	Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal	Low Likelihood		Low risk	Receptor not present			Receptor not present										
		Crops and livestock (off-site)	contact by livestock.	Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk								

<sup>&</sup>lt;sup>7</sup> It has been assumed that all construction workers will adhere to site working practices, including use of appropriate PPE

Source	Receptor		Contaminant exposure / migration pathway	Baseline			Construction			Operation		
				Probability	Consequence	Risk Category	Probability	Consequence	Risk Category	Probability	Consequence	Risk Category
Made Ground associated with the construction of the A12 and slip road to the south west of the site as well as activities associated with their operation, and with residential properties within 250m of the site.	Human health: On-site	Farmers / workers on agricultural land Construction /maintenance workers Users of the new park and ride	Dermal contact with and/or ingestion of contaminants in windblown soil-derived dusts and water that may have migrated onto site.  Inhalation of contaminants in soil, soil-derived dust, fibres and vapours which may have migrated onto site.	Receptor not present  Receptor not present	Mild	Very low risk	Receptor not present  Unlikely  Receptor not present	Mild	Very low risk	Receptor not present  Unlikely  Unlikely	 Mild Mild	Very low risk  Very low risk
	Controlled waters	Groundwater in Secondary A and Secondary Undifferentiated superficial aquifer and Principal bedrock aquifer	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk	Low Likelihood	Medium	Moderate / low Risk	Unlikely	Medium	Low risk
			Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk	Low Likelihood	Medium	Moderate / low Risk	Unlikely	Medium	Low risk
Made Ground associated with the disused sand pits located 70m and 130m to the north-east.	Property / services	Existing on-site services	Migration of vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk	Low Likelihood	Mild	Low risk	Unlikely	Mild	Very low risk
Electrical substation located 250m south of the site.		Future on-site services and structures	Migration of vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present			Receptor not present			Unlikely	Mild	Very low risk
Fuels and oils attributed to spills from vehicles on the roads, plus exhaust particulates. Oils, metals and PCBs. Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils. A range of inorganic and organic contaminants including the potential for asbestos and ground gas.												
		Crops and livestock (on- site)	Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Unlikely	Mild	Very low risk	Receptor not present			Receptor not present		

## 5. Summary and Conclusions

#### 5.1. Data Gaps

A limitation to the identification and assessment of PCLs in this report is the absence of intrusive ground investigation data. This would give specific, localised information regarding the conditions of the underlying ground and would enable a more accurate identification and characterisation of risk to human health and controlled waters.

The area of infilling (former sand pit) including the mounds and disturbed ground and area of drums and canisters within the west of the site will require intrusive investigation in order to determine the type and nature of the fill materials and to provide relevant geo-environmental and geotechnical information to inform the detailed design and appropriate remediation measures if required.

#### 5.2. Conclusions

The site area is currently used for agricultural purposes. Possible sources of contamination have been identified at the site including activities undertaken at Beggars Farm; the potential presence of Made Ground (including the potential for asbestos) associated with the infilling of the disused sand pit, the construction of the B1078, A12 and B1078 slip road and the mounds / disturbed ground; and storage of unknown materials in drums within the disused sand pit area.

Risks to human health without mitigation measures were considered to be very low to low, based on the findings of the desk study. Risks to controlled waters were considered to be low to moderate; with the impact on groundwater being the highest risk. Risks to property and services were generally assessed as being very low to low, given the low probability and minor consequence of these receptors being affected.

It has been assumed that during construction site workers will wear appropriate PPE and employ standard site management and mitigation procedures in order to protect receptors from exposure to / mobilisation of contaminants. On the basis of the risk classifications for the various receptors, the following recommendations for further investigation are considered appropriate:

Table 5.1 Recommendations

Receptor		Highest risk classification	Recommended actions / further assessment			
Human health (on-site)	Farmers and workers on agricultural land	Low risk	Further investigation and potentially intrusive investigation is recommended in the areas of			
	Construction / maintenance workers	Very low risk	infilled sand pit, made ground, mounds, disturbed ground, earth bunds, storage of canisters and IBCs, etc.			
	Users of the new Park and Ride site	Low risk	The low potential for contamination on the			
Human health	Farmers on adjoining agricultural land	Low risk	remainder of the site should be confirmed through limited sampling and chemical analysis as part of a geotechnical ground			
(off-site)	Pedestrians / cyclists / horse riders accessing public bridleway	Low risk	investigation.			
	Residents in local area	Low risk				
Controlled Waters	Groundwater in Secondary A, Secondary Undifferentiated and Principal aquifers	Moderate				
	Off-site surface water bodies (ponds, ditches, drains, River Ore)	Moderate / low risk				
Property	Existing on-site and off- site services (including	Low risk				

Receptor		Highest risk classification	Recommended actions / further assessment
	listed buildings and archaeological features)		
	Future on-site services and structures	Very low risk	
	Crops and livestock (onsite and off-site)	Low risk	

## 6. References

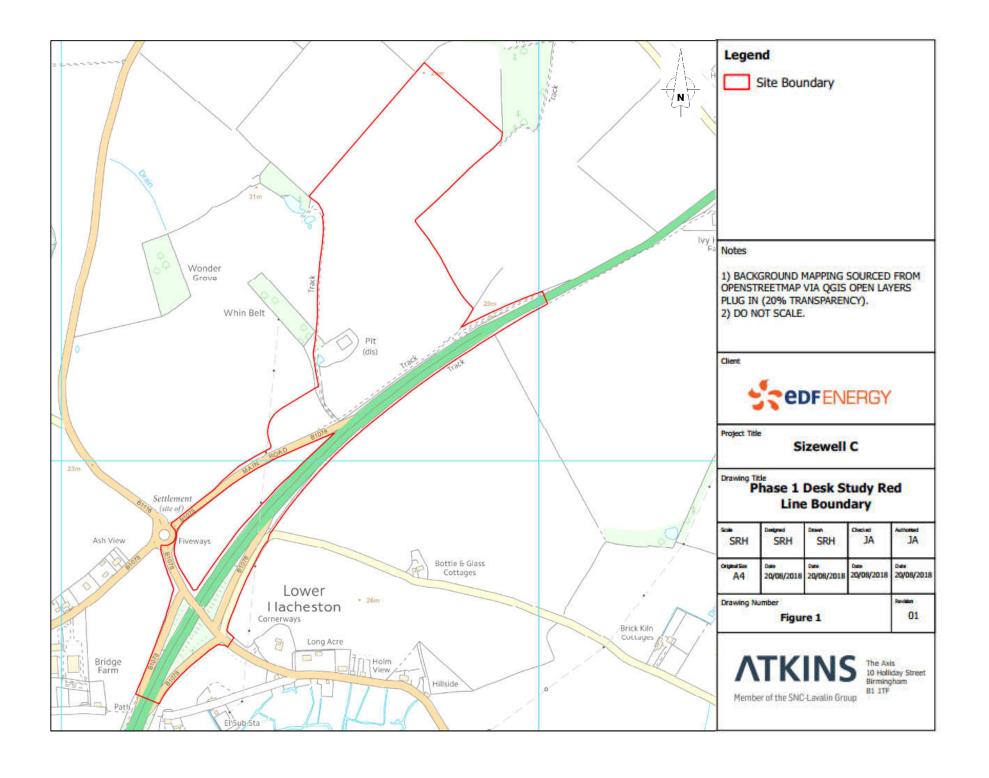
- [1] Landmark Information Group, "Envirocheck Report Ref. 40147573\_1\_1," 2012.
- [2] Environment Agency, "http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=\_e," [Online]. [Accessed March 2015].
- [3] Defra, "MAGIC," [Online]. [Accessed August 2018].
- [4] Zetica, "Online UXO Risk Maps," August 2018. [Online]. Available: https://zeticauxo.com/downloads-and-resources/risk-maps/.
- [5] Suffolk Biological Records Centre, [Online]. [Accessed August 2018].
- [6] British Geological Survey (BGS), "GeoIndex," [Online]. [Accessed August 2018].
- [7] Suffolk County Council, "Suffolk Minerals Local Plan," [Online]. [Accessed August 2018].
- [8] Building Research Establishment (BRE), "Radon: Protective Measures for New Buildings. BRE Report B211.," 2007.
- [9] UK Government, "Flood Map for Planning," [Online]. Available: https://flood-map-for-planning.service.gov.uk/.
- [10] Environment Agency and Defra, "Model Procedures for the Management of Contaminated Land," R&D Publication CLR11, 2004.
- [11] Environment Agency, "GPLC1: Guiding Principles for Land Contamination," 2010.
- [12] Communities and Local Government, "National Planning Policy Framework," 2018.
- [13] Construction Industry Research and Information Association (CIRIA), "Contaminated Land Risk Assessment: A guide to good practice (C552)," 2001.
- [14] Yell, "Yell website," [Online]. [Accessed August 2018].





## Appendix A. Drawings and Figures

Please Note: The Desk Study Report completed in July 2019 is based on the red line boundary available at that date. Final red line boundaries have been issued in January 2020, however, these changes do not integrally change the conclusions and recommendations of this report.







## Appendix B. Site Walkover Photographs

Date: 19/03/19

Comments

View of the

Project: Sizewell C Site Walkover, Wickham Market

View of the south-west of the site, looking north-east along the B1078 (Main Road). Shows overhead cables and Whin Belt woodland in

the distance.



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

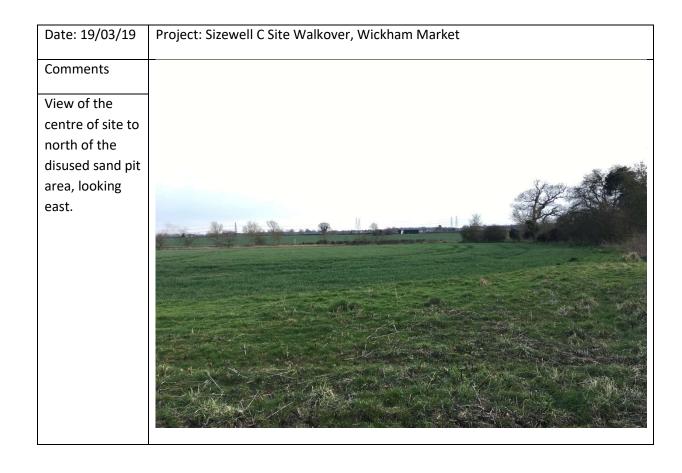
#### Comments

View of the south-east of the site, looking north-east.
Shows wooden fence and track adjacent to the A12.



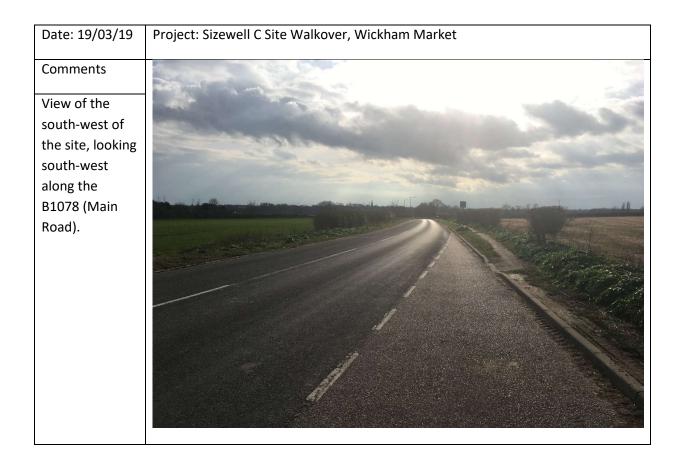
Date: 19/03/19 Project: Sizewell C Site Walkover, Wickham Market

View of the west of site, looking north from the A12 towards the vegetated area of the disused sand pit.



Date: 19/03/19 Project: Sizewell C Site Walkover, Wickham Market

View of the north of the site, looking north-east.
Shows the unnamed woodland on the northeastern boundary of the site beyond.



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

Comments

View of one of the off-site ponds located within Whin Belt woodland adjacent to the west of the site.



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

Comments

View of the track leading into the disused sand pit area in the west of the site, looking from west to east.



Date: 19/03/19 Comments

Project: Sizewell C Site Walkover, Wickham Market

View within disused sand pit area, showing grass covered stockpiles.



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

#### Comments

View within disused sand pit area, showing grass covered stockpiles. The former pond was located in this area, but appears to have dried up.



Date: 19/03/19 Project: Sizewell C Site Walkover, Wickham Market

View of the canisters and containers (unknown contents) within disused sand pit area.



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

#### Comments

View looking east within the disused sand pit area towards the fenced off area (possibly a pheasant rearing pen). Corrugated iron structure and metal container (unknown contents).



Date: 19/03/19

Project: Sizewell C Site Walkover, Wickham Market

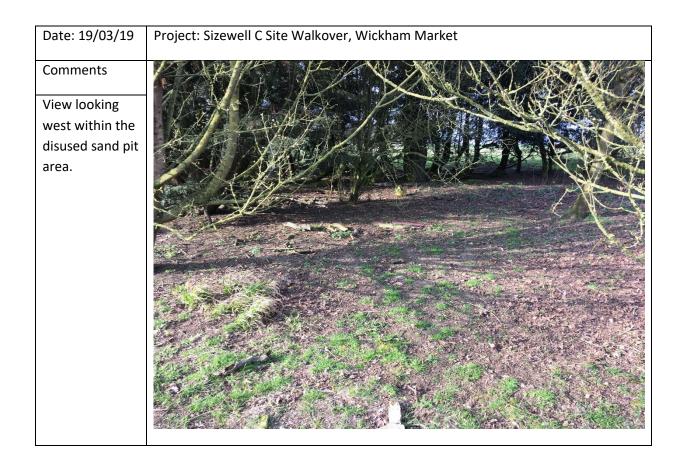
#### Comments

View of the drums (unknown contents) within disused sand pit area.



Date: 19/03/19 Project: Sizewell C Site Walkover, Wickham Market

View of containers (unknown contents) within disused sand pit area.



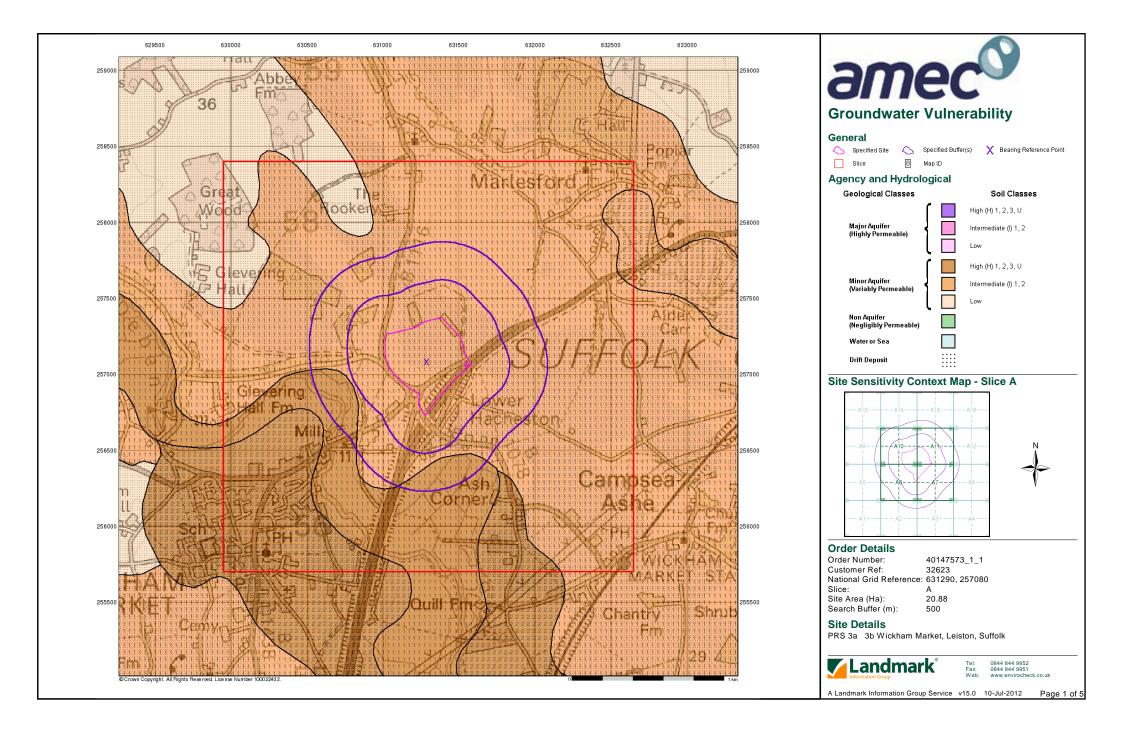
Date: 19/03/19 Project: Sizewell C Site Walkover, Wickham Market

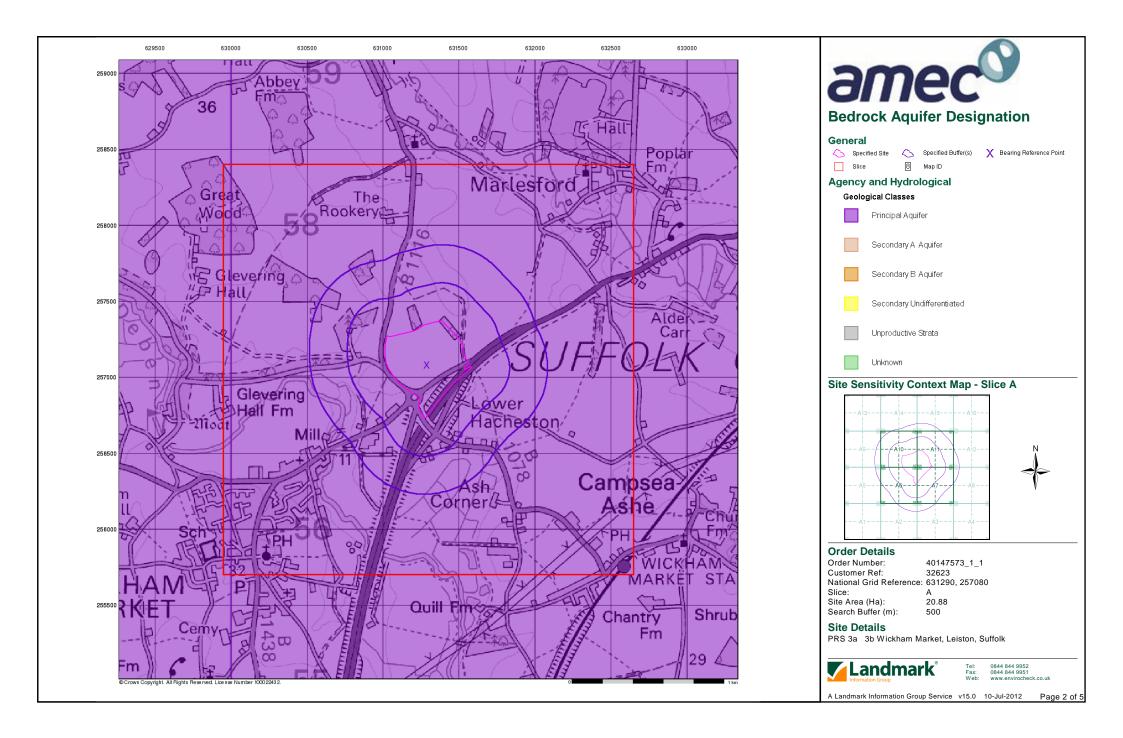
View of fly tipped material within disused sand pit area.

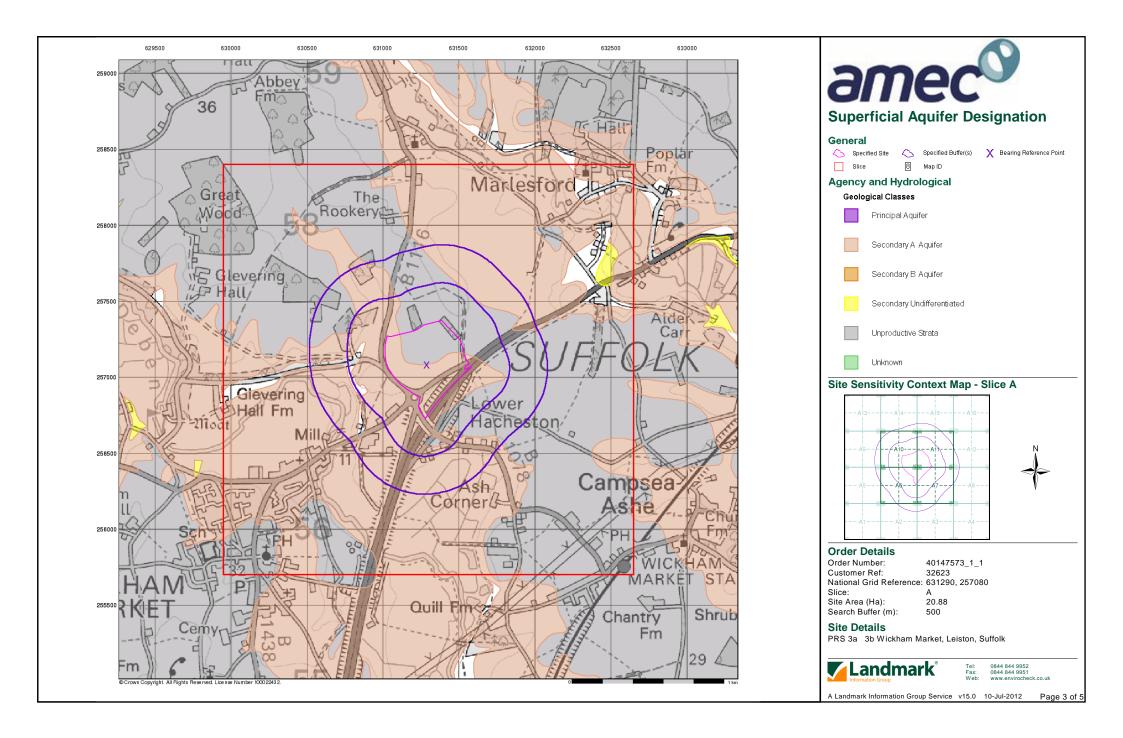


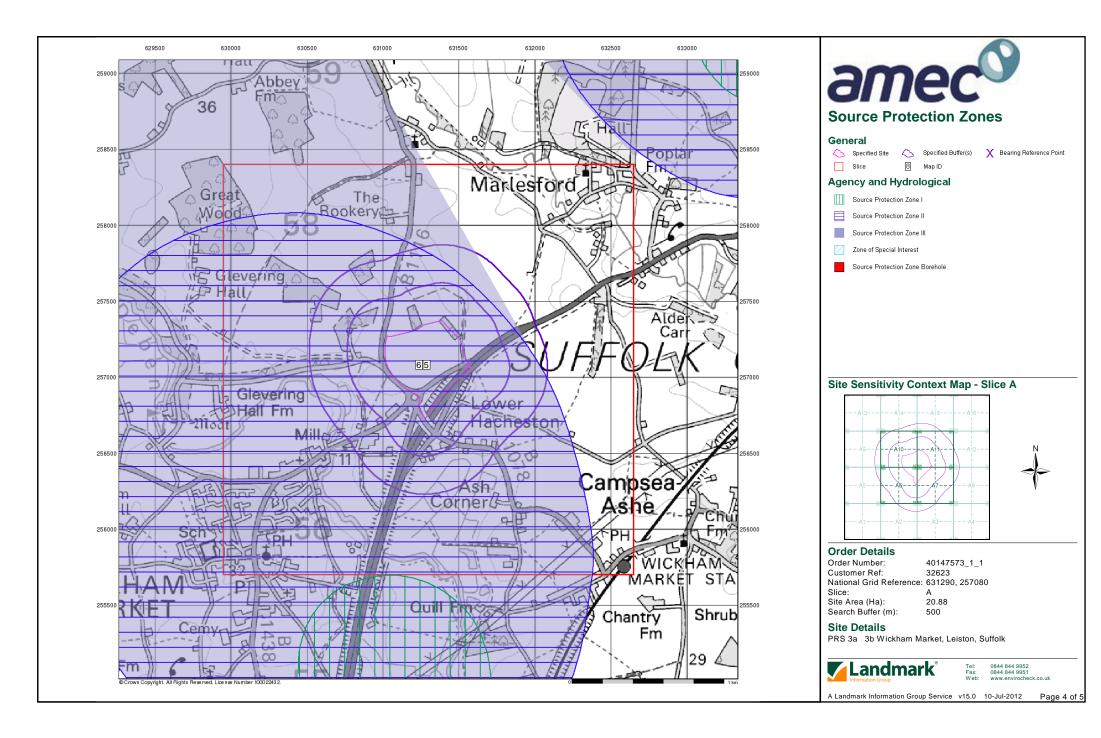


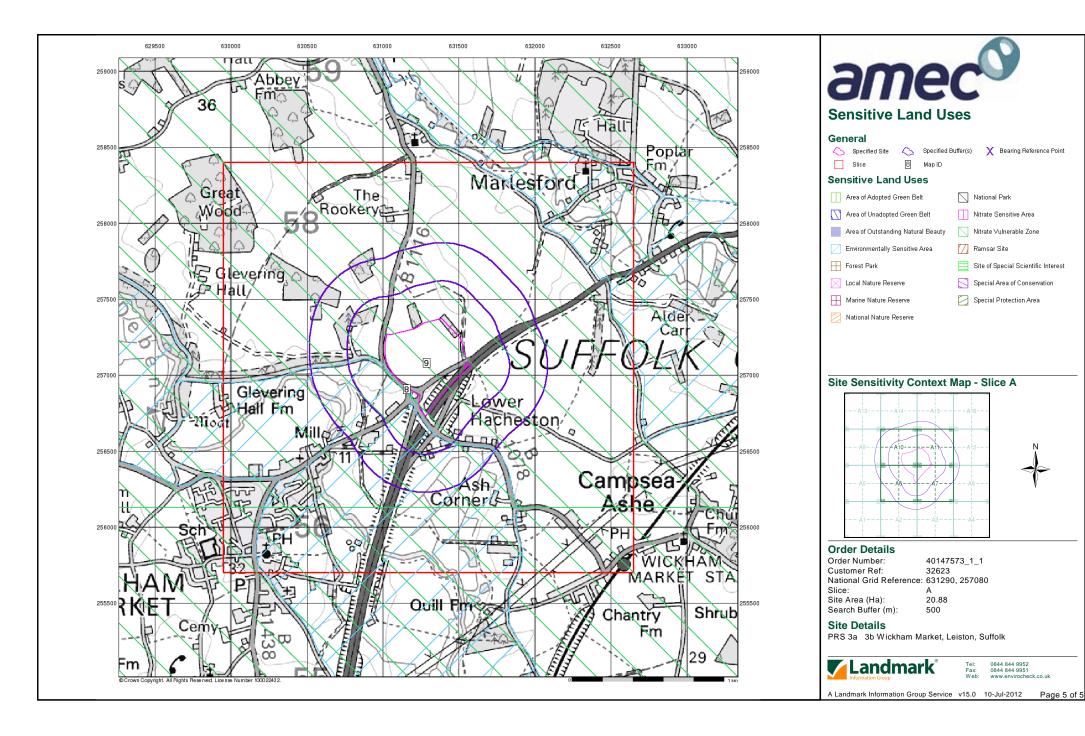
# Appendix C. Envirocheck Report













## **Envirocheck® Report:**

### **Datasheet**

#### **Order Details:**

**Order Number:** 

40147573\_1\_1

**Customer Reference:** 

32623

**National Grid Reference:** 

631290, 257080

Slice:

Α

Site Area (Ha):

20.88

Search Buffer (m):

500

#### **Site Details:**

PRS 3a 3b Wickham Market Leiston Suffolk

#### **Client Details:**

Miss D Shankar AMEC Environment & Infrastructure UK Ltd Unit 1, Long Barn Village Road Nercwys Mold Flintshire CH7 4EW



Order Number: 40147573\_1\_1





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	6
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#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

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

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## **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Agency & Hydrological				
Contaminated Land Register Entries and Notices				
Discharge Consents	pg 1		1	2
Enforcement and Prohibition Notices				
Integrated Pollution Controls				
Integrated Pollution Prevention And Control				
Local Authority Integrated Pollution Prevention And Control				
Local Authority Pollution Prevention and Controls				
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	pg 1	Yes		
Pollution Incidents to Controlled Waters				
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality	pg 1			1
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions	pg 2			2 (*10)
Water Industry Act Referrals				
Groundwater Vulnerability	pg 4	Yes	n/a	n/a
Bedrock Aquifer Designations	pg 5	Yes	n/a	n/a
Superficial Aquifer Designations	pg 5	Yes	n/a	n/a
Source Protection Zones	pg 5	2		
Extreme Flooding from Rivers or Sea without Defences	pg 5		Yes	n/a
Flooding from Rivers or Sea without Defences				n/a
Areas Benefiting from Flood Defences				n/a
Flood Water Storage Areas				n/a
Flood Defences				n/a
Waste				
BGS Recorded Landfill Sites				
Historical Landfill Sites				
Integrated Pollution Control Registered Waste Sites				
Licensed Waste Management Facilities (Landfill Boundaries)				
Licensed Waste Management Facilities (Locations)				
Local Authority Recorded Landfill Sites				
Registered Landfill Sites				
Registered Waste Transfer Sites				
Registered Waste Treatment or Disposal Sites				



## **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Hazardous Substances				
Control of Major Accident Hazards Sites (COMAH)				
Explosive Sites				
Notification of Installations Handling Hazardous Substances (NIHHS)				
Planning Hazardous Substance Consents				
Planning Hazardous Substance Enforcements				
Geological				
BGS 1:625,000 Solid Geology	pg 7	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 7	Yes	Yes	Yes
BGS Recorded Mineral Sites				
BGS Urban Soil Chemistry				
BGS Urban Soil Chemistry Averages				
Brine Compensation Area			n/a	n/a
Coal Mining Affected Areas			n/a	n/a
Mining Instability			n/a	n/a
Man-Made Mining Cavities				
Natural Cavities				
Non Coal Mining Areas of Great Britain				n/a
Potential for Collapsible Ground Stability Hazards	pg 11	Yes		n/a
Potential for Compressible Ground Stability Hazards	pg 11		Yes	n/a
Potential for Ground Dissolution Stability Hazards				n/a
Potential for Landslide Ground Stability Hazards	pg 11	Yes		n/a
Potential for Running Sand Ground Stability Hazards	pg 11	Yes	Yes	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 11	Yes	Yes	n/a
Radon Potential - Radon Affected Areas			n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a
Industrial Land Use				
Contemporary Trade Directory Entries	pg 13			1 (*9)
Fuel Station Entries				



## **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m (*up to 1000m)
Sensitive Land Use				
Areas of Adopted Green Belt				
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas	pg 14		1	
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 14	1		
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Discharge Consent	s				
1	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Bridge & Ivy Farms Ltd Arable Farming Bridge Farm Wickham Market, Woodbridge, Suffolk, Ip13 0aa Environment Agency, Anglian Region Catchment 29 Unknown Detail Gwelf50343 1 1st April 1999 16th May 2000 Not Supplied Trade Discharge - Agricultural And Surface Onto Land  Groundwater Deemed Groundwater Regulations Authorisation Located by supplier to within 10m	A11SW (NE)	55	1	631570 257230
	Discharge Consent	s				
2	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Tweed Developments Ltd Sewage Disposal Works - Other 37 Ash Road Hacheston, Woodbridge, Woodbridge, Suffolk, Ip13 0pb Environment Agency, Anglian Region Deben Estuary / Orwell Estuary Prenf16158 1 19th December 2003 19th December 2003 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  A Trib Of River Deben New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A7SW (SE)	356	1	631559 256507
	Discharge Consent	s				
3	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status:	Bridge And Ivy Farms Limited Domestic Property (Single)  12 Main Road Wickham Market, Woodbridge, Suffolk, Suffolk, Ip13 0ab Environment Agency, Anglian Region Deben Estuary / Orwell Estuary Npswqd003200  1 25th July 2008 25th July 2008 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  Tributary Of The River Deben New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A6SW (SW)	365	1	630858 256697
	Nearest Surface Wa	ater Feature				
			A10SE (NW)	0	-	631036 257231
	River Quality					
	Name: GQA Grade: Reach: Estimated Distance (km): Flow Rate: Flow Type: Year:	Deben River Quality D Glevering BridgeWhite Bridge Loudham 3.5  Flow less than 0.62 cumecs River 2000	A6NW (W)	282	1	630799 256906



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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Water Abstractions Operator:	Bridge & Ivy Farms Ltd	A6NW	413	1	630770
	Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date:	7/35/06/*S/0062 101  Marsh Drain At Bridge Fm,Hach. Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Storage Water may be abstracted from a single point Surface Not Supplied Not Supplied Hacheston, Suffolk 01 May 30 September 14th August 2001	(SW)			256720
	-	Not Supplied Located by supplier to within 10m				
4	-	Bridge & Ivy Farms Ltd 7/35/06/*S/0062 100 Marsh Drain At Bridge Fm,Hach. Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Storage Water may be abstracted from a single point Surface Not Supplied Not Supplied Status: Perpetuity 01 May 30 September 1st April 1985 Not Supplied Located by supplier to within 10m	A6NW (SW)	413	1	630770 256720
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Schreiber Farms An/035/0004/003 1 Borehole At Hacheston Suffolk Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Hacheston, Suffolk 01 April 31 October 1st April 2010 Not Supplied Located by supplier to within 10m	A12NW (NE)	635	1	631980 257670
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Schreiber Farms An/035/0004/001 1 Borehole At Hacheston Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Hatcheston Suffolk 01 April 31 October 4th March 2009 Not Supplied Located by supplier to within 10m	A12NW (NE)	635	1	631980 257670



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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator:	A Hayward & Son	A12NW	635	1	631980
	Licence Number: Permit Version: Location:	7/13/04/*G/0121 3 Borehole At Hacheston	(NE)	000	'	257670
	Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details:	Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Hatcheston Suffolk				
	Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	01 October 31 October 1st April 2008 Not Supplied Located by supplier to within 10m				
	Water Abstractions					
	-	P & C Westrope 7/35/04/*G/0122 1 Borehole At Hacheston Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Hacheston Suffolk 01 April 30 September 1st April 2008 Not Supplied Located by supplier to within 10m	A12NW (NE)	635	1	631980 257670
	Water Abstractions Operator: Licence Number:	A Hayward & Son 7/35/04/*G/0121	A12NW (NE)	635	1	631980 257670
	-	2 Borehole At Hacheston Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Hatcheston Suffolk 01 April 31 October 26th September 2006 Not Supplied Located by supplier to within 10m				
	Water Abstractions Operator:	A Hayward & Son	A12NW	635	1	631980
	Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date:	A rlaywald a Soli 7/35/04/*G/0110  100  Borehole At Hacheston Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied E chalk; Status: Temporary 01 April 31 October 1st October 1996 Not Supplied Located by supplier to within 10m	(NE)	000		257670



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	A Hayward & Son 7/35/06/*S/0061 100 Marsh Drains At Campsey Ash Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Surface Not Supplied Not Supplied Not Supplied Ot April 31 October 1st November 1979 Not Supplied Located by supplier to within 100m	A3NW (S)	643	1	631610 256180
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Bridge & Ivy Farms Ltd 7/35/04/*G/0116 1 Borehole At Bridge Farm, Wickham Market Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Wickham Market, Woodbridge 01 April 31 October 1st April 2006 Not Supplied Located by supplier to within 10m	A8NW (E)	672	1	632200 256800
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Bridge & Ivy Farms Ltd An/035/0004/013 1 Bridge Farm, Woodbridge, Suffolk Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied O1 April 31 October 22nd November 2011 Not Supplied Located by supplier to within 10m	A8NW (E)	741	1	632281 256818
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	A Hayward & Son 7/35/06/*G/0103 100 Bore Ashmoor Hall, Campsea Ash Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied Ot January 31 December 1st February 1992 Not Supplied Located by supplier to within 100m	A3SE (SE)	975	1	631790 255900
	Groundwater Vulne Soil Classification: Map Sheet: Scale:	rability Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants Sheet 33 East Suffolk 1:100,000	A10SE (NW)	0	1	631288 257080
	Drift Deposits Drift Deposit: Map Sheet:	Low permeability drift deposits occuring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Sheet 33 East Suffolk		0	1	631288 257080



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer De	esignations				
	Aquifer Desination:	Principal Aquifer	A10SE (NW)	0	2	631288 257080
	Superficial Aquifer	Designations				
	Aquifer Designation:	: Unproductive Strata	A10SE (N)	0	2	631287 257084
	Superficial Aquifer	Designations				
	Aquifer Designation:	Secondary Aquifer - A	A10SE (NW)	0	2	631288 257080
	Source Protection 2	Zones				
5	Name: Source: Reference: Type:	Pettistree Environment Agency, Head Office An210 Zone II (Outer Protection Zone): Either 25% of the source area or a 400 day travel time whichever is greater.	A10SE (NW)	0	1	631288 257080
	Source Protection 2	Zones				
6	Name: Source: Reference: Type:	Various Environment Agency, Head Office Not Supplied Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A10SE (NW)	0	1	631288 257080
	Name: Source: Reference: Type:	from Rivers or Sea without Defences				
	Type: Flood Plain Type: Boundary Accuracy:	Extent of Extreme Flooding from Rivers or Sea without Defences Fluvial Models As Supplied	A6NW (W)	247	1	630822 256936
	Flooding from Rive	ers or Sea without Defences				
	None					
	Areas Benefiting fro	om Flood Defences				
	None					
	Flood Water Storag	ge Areas				
	None					
	Flood Defences					
	None					

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## Waste

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Lar	ocal Authority Landfill Coverage				
	Name:	Suffolk County Council - Has supplied landfill data		0	6	631288 257080
	Local Authority Lar	cal Authority Landfill Coverage				
	Name:	Suffolk Coastal District Council - Had landfill data but passed it to the relevant environment agency		0	7	631288 257080

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid	d Geology				
	Description:	Norwich Crag, Red Crag and Chillesford Clay	A10SE (NW)	0	2	631288 257080
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 40 - 60 mg/kg <150 mg/kg	A10SE (N)	0	3	631287 257083
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 20 - 40 mg/kg	A10SE (NW)	0	3	631288 257080
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 20 - 40 mg/kg	A6NE (S)	0	3	631288 257000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 20 - 40 mg/kg	A10SE (W)	16	3	631000 257080
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 40 - 60 mg/kg	A7NW (SE)	61	3	631497 256845
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 20 - 40 mg/kg	A6NE (W)	62	3	631000 257000





	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A7SW (S)	109	3	631308 256628
Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration: Lead Concentration:					
Nickel Concentration:	15 - 30 mg/kg				
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A10SW (W)	135	3	630874 257187
Cadmium Concentration: Chromium	<1.8 mg/kg 20 - 40 mg/kg				
Concentration: Lead Concentration:					
Nickel Concentration:	<15 mg/kg				
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (SW)	197	3	630893 256917
Concentration: Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	20 - 40 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A7SW (S)	220	3	631357 256520
Concentration: Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	20 - 40 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (W)	225	3	630816 257000
Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	20 - 40 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
BGS Estimated Soil	Chemistry				
Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A10SW (NW)	233	3	630790 257314
Concentration: Cadmium	<1.8 mg/kg				
Concentration: Chromium Concentration:	40 - 60 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg 15 - 30 mg/kg				





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A7SW (S)	234	3	631432 256538
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:					
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A11NW (NE)	249	3	631614 257505
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration:	20 - 40 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (SW)	263	3	630846 256868
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	20 - 40 mg/kg				
	Nickel Concentration:	<15 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (SW)	263	3	630846 256868
	Concentration: Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	40 - 60 mg/kg				
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (W)	266	3	630769 257000
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	40 - 60 mg/kg				
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6SE (S)	294	3	631288 256438
	Concentration: Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration:	40 - 60 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg 15 - 30 mg/kg				





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6SE (S)	294	3	631246 256439
	Cadmium Concentration: Chromium	<1.8 mg/kg 20 - 40 mg/kg				
	Concentration: Lead Concentration:	<150 mg/kg				
	Nickel Concentration:	<15 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6SE (SW)	363	3	631000 256495
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration:	20 - 40 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6SE (SW)	401	3	631000 256441
	Concentration: Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	20 - 40 mg/kg				
	Nickel Concentration:	<15 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A12SW (E)	418	3	632000 257080
	Concentration: Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	40 - 60 mg/kg <150 mg/kg				
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A8NW (E)	423	3	632000 257000
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration: Lead Concentration:	40 - 60 mg/kg <150 mg/kg				
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A10NE (NW)	444	3	631000 257712
	Concentration: Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration:	40 - 60 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg 15 - 30 mg/kg				





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Source: Soil Sample Type:	British Geological Survey, National Geoscience Information Service Rural Soil	A12SW (E)	483	3	632000 257305
	Arsenic Concentration: Cadmium	<15 mg/kg <1.8 mg/kg				
	Concentration: Chromium Concentration:	20 - 40 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg <15 mg/kg				
	BGS Measured Urb	an Soil Chemistry				
	No data available					
	BGS Urban Soil Che No data available	emistry Averages				
	Coal Mining Affecte	d Areas				
	In an area that might	not be affected by coal mining				
	Non Coal Mining Ar No Hazard	eas of Great Britain				
	Potential for Collap	sible Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10SE (NW)	0	2	631288 257080
	Potential for Collap Hazard Potential: Source:	sible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A6NW (SW)	234	2	630848 256869
	Potential for Compi Hazard Potential: Source:	ressible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A10SE (NW)	0	2	631288 257080
	Potential for Compi Hazard Potential: Source:	essible Ground Stability Hazards  Moderate  British Geological Survey, National Geoscience Information Service	A7SW (S)	234	2	631435 256539
		d Dissolution Stability Hazards	(-)			
	Potential for Lands	ide Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10SE (NW)	0	2	631288 257080
		ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10SE (NW)	0	2	631288 257080
		ng Sand Ground Stability Hazards	A10SW	400	0	600076
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	(W)	132	2	630876 257186
	Hazard Potential:	ng Sand Ground Stability Hazards Low	A7SW	234	2	631435
	Source:	British Geological Survey, National Geoscience Information Service	(S)			256539
	Hazard Potential: Source:	ing or Swelling Clay Ground Stability Hazards  No Hazard  British Geological Survey, National Geoscience Information Service	A10SE (NW)	0	2	631288 257080
		ing or Swelling Clay Ground Stability Hazards Low	A10SE	0	2	631287
	Source:	British Geological Survey, National Geoscience Information Service	(N)			257084
	Potential for Shrink Hazard Potential: Source:	ing or Swelling Clay Ground Stability Hazards Low British Geological Survey, National Geoscience Information Service	A7SW (S)	108	2	631311 256629
		ing or Swelling Clay Ground Stability Hazards	(-)			
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A6NW (SW)	234	2	630848 256869
		adon Protection Measures  No radon protective measures are necessary in the construction of new dwellings or extensions	A10SE (NW)	0	2	631288 257080

Order Number: 40147573\_1\_1 Date: 10-Jul-2012 rpr\_ec\_datasheet v47.0 A Landmark Information Group Service Page 11 of 20



## **Geological**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential	- Radon Affected Areas				
	Affected Area:	The property is in a lower probability radon area, as less than 1% of homes are above the action level	A10SE (NW)	0	2	631288 257080
	Source:	British Geological Survey, National Geoscience Information Service				

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## **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries Suffolk Agricultural Centre Bridge Farm, Ash Road, Lower Hacheston, Woodbridge, Suffolk, IP13 0AA Agricultural Engineers Inactive Automatically positioned to the address	A6SW (SW)	432	-	630882 256547
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries  E R & R T Rackham Ltd  Deben Mills, Wickham Market, Woodbridge, Suffolk, IP13 0RG  Coal & Smokeless Fuel Merchants & Distributors  Inactive  Automatically positioned to the address	A6SW (SW)	576	-	630647 256613
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	Rackhams Ltd Deben Mills, Wickham Market, Woodbridge, Suffolk, IP13 0RG Road Haulage Services Active Automatically positioned to the address	A6SW (SW)	576	-	630647 256613
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries James Morford Ltd Brick Kiln Cottage, Campsea Ashe, WOODBRIDGE, Suffolk, IP13 0QL Agricultural Merchants Inactive Automatically positioned to the address	A8SW (SE)	803	-	632254 256623
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries  Vacattack Cleaning Service 188-192, High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Commercial Cleaning Services Inactive Automatically positioned to the address	A1NE (SW)	940	-	630389 256355
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries  Electronic Terminations Ltd High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Electronic Equipment - Manufacturers & Assemblers Active Automatically positioned to the address	A5SE (SW)	942	-	630347 256400
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	Modern Switchboards Ltd High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Control Panel Manufacturers Inactive Automatically positioned to the address	A5SE (SW)	942	-	630347 256400
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	Roland Plastics Ltd High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Plastics - Injection Moulding Inactive Automatically positioned to the address	A5SE (SW)	942	-	630347 256400
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	Modern Switchboards Ltd High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Control Panels Inactive Automatically positioned to the address	A5SE (SW)	942	-	630347 256400
	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	le Directory Entries Roland Plastics Ltd High Street, Wickham Market, Woodbridge, Suffolk, IP13 0RF Plastics - Injection Moulding Active Automatically positioned to the address	A5SE (SW)	942	-	630347 256400

Order Number: 40147573\_1\_1 Date: 10-Jul-2012 rpr\_ec\_datasheet v47.0 A Landmark Information Group Service Page 13 of 20



## **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Environmentally S	Sensitive Areas				
8	Name: Multiple Areas: Total Area (m2): Source:	Suffolk River Valleys Y 162490824.42 Natural England	A6NE (SW)	14	4	631157 256906
	Nitrate Vulnerable	Zones				
9	Name: Description: Source:	Not Supplied NVZ Area Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A10SE (NW)	0	5	631288 257080

Order Number: 40147573\_1\_1 Date: 10-Jul-2012 rpr\_ec\_datasheet v47.0 A Landmark Information Group Service Page 14 of 20



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices	0	Assess Dell's a Hardata
Suffolk Coastal District Council - Environmental Health Department	September 2011	Annual Rolling Update
Discharge Consents	A = = 1 0040	O constants
Environment Agency - Anglian Region	April 2012	Quarterly
Enforcement and Prohibition Notices	Luca 2040	O constants
Environment Agency - Anglian Region	June 2012	Quarterly
Integrated Pollution Controls	0.11.0000	N A
Environment Agency - Anglian Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Anglian Region	April 2012	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Suffolk Coastal District Council - Environmental Health Department	December 2011	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Suffolk Coastal District Council - Environmental Health Department	December 2011	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Suffolk Coastal District Council - Environmental Health Department	December 2011	Annual Rolling Updat
Nearest Surface Water Feature		
Ordnance Survey	December 2011	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Anglian Region	September 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Anglian Region	June 2012	Monthly
Prosecutions Relating to Controlled Waters		
Environment Agency - Anglian Region	June 2012	Monthly
Registered Radioactive Substances		
Environment Agency - Anglian Region	April 2012	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	January 2011	Annually
	Sandary 2011	Aimaily
River Quality Chemistry Sampling Points  Environment Agency - Head Office	January 2011	Annually
	January 2011	Aillidally
Substantiated Pollution Incident Register	A = #1 2042	Over when the
Environment Agency - Anglian Region - Eastern Area	April 2012	Quarterly
Water Abstractions		
Environment Agency - Anglian Region	April 2012	Quarterly
Nater Industry Act Referrals		_
Environment Agency - Anglian Region	April 2012	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 2011	Not Applicable
Orift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	September 2011	Annually
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	September 2011	Annually
Source Protection Zones		
Environment Agency - Head Office	April 2012	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	May 2012	Quarterly

Order Number: 40147573\_1\_1 Date: 10-Jul-2012 rpr\_ec\_datasheet v47.0 A Landmark Information Group Service Page 15 of 20



Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	May 2012	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	May 2012	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	May 2012	Quarterly
Flood Defences Environment Agency - Head Office	May 2012	Quarterly
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Anglian Region - Eastern Area	January 2012	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Anglian Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Eastern Area	April 2012	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Eastern Area	April 2012	Quarterly
Local Authority Landfill Coverage Suffolk Coastal District Council - Environmental Health Department Suffolk County Council	May 2000 May 2000	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Suffolk Coastal District Council - Environmental Health Department Suffolk County Council	May 2000 May 2000	Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Anglian Region - Eastern Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	May 2012	Bi-Annually
Explosive Sites Health and Safety Executive	June 2012	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Suffolk Coastal District Council Suffolk County Council - Environment and Transport	December 2011 February 2006	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Suffolk Coastal District Council Suffolk County Council - Environment and Transport	December 2011 February 2006	Annual Rolling Update Annual Rolling Update

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Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	January 2010	Variable
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2012	Bi-Annually
Brine Compensation Area		
Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Mining Report Service	August 2011	As notified
Mining Instability	_	
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	February 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	February 2011	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures	E-E-0044	A = == (f) = -1
British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	May 2012	Quarterly
Fuel Station Entries	F	
Catalist Ltd - Experian	February 2012	Quarterly

Order Number: 40147573\_1\_1 Date: 10-Jul-2012 rpr\_ec\_datasheet v47.0 A Landmark Information Group Service Page 17 of 20



Sensitive Land Use	Version	Update Cycle
Areas of Outstanding Natural Beauty		
Natural England	February 2012	Bi-Annually
Environmentally Sensitive Areas		
Natural England	February 2012	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	February 2012	Bi-Annually
Marine Nature Reserves		
Natural England	February 2012	Bi-Annually
National Nature Reserves		
Natural England	February 2012	Bi-Annually
National Parks		
Natural England	February 2012	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Annually
Ramsar Sites		
Natural England	February 2012	Bi-Annually
Sites of Special Scientific Interest		
Natural England	February 2012	Bi-Annually
Special Areas of Conservation		
Natural England	February 2012	Bi-Annually
Special Protection Areas		
Natural England	February 2012	Bi-Annually

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## **Data Suppliers**

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A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Ordnance Survey <sup>®</sup>
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SEPA Scottish Environment Protection Agency
The Coal Authority	THE COAL AUTHORITY
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Countryside Council for Wales	CYNGOR CEFN GWLAD CYMRU COUNTRYSIDE COUNCIL FOR WALES
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Health Protection Agency	Health Protection Agency
Ove Arup	ARUP
Peter Brett Associates	peterbrett



## **Useful Contacts**

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC)	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
	PO Box 544, Templeborough, Rotherham, S60 1BY	
2	British Geological Survey - Enquiry Service  British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	Landmark Information Group Limited 5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Telephone: 01392 441761 Fax: 01392 441709 Email: cssupport@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk
4	Natural England  Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
5	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)  Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
6	Suffolk County Council St Edmund House, County Hall, Ipswich, Suffolk, IP4 1LZ	Telephone: 01473 583000 Fax: 01473 230240 Website: www.suffolkcc.gov.uk
7	Suffolk Coastal District Council - Environmental Health Department Council Offices, Melton Hill, Woodbridge, Suffolk, IP12 1AU	Telephone: 01394 383789 extn 2238 Fax: 01394 385100 Website: www.suffolkcoastal.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited  The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

# **Historical Mapping Legends**

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

County Burgh Boundary (Scotland)

Rural District Boundary

····· Civil Parish Boundary

Co. Burgh Bdy.

R.D. Bdy.

#### Ordnance Survey Plan 1:10,000

Eum	Chalk Pit, Clay Pit or Quarry	0 % % % % % % % % % % % % % % % % % % %	Gravel Pit				
	Sand Pit	/\. \	、 Disused Pit ✓ or Quarry				
(0000000	Refuse or ′Slag Heap	<b></b>	Lake, Loch or Pond				
	Dunes		Boulders				
* * *	Coniferous Trees	$\triangle \triangle \triangle$	Non-Coniferous Trees				
ф ф	Orchard n n _	Scrub	∖Y₁v Coppice				
ਜ ਜ ਜ	Bracken	Heath '	、 , , , , Rough Grassland				
<u> </u>	MarshV///	Reeds	<u> 노</u> Saltings				
	Din.	#: <b>5</b> [] <b>5</b> }	W-4				
	Building	tion of Flow of V					
_	•		Shingle				
	>_	*//	Sand Sand				
	Glasshouse						
		Pylon					
		Fylon	Electricity				
toomer .	Olamina Managana		Transmission				
	Sloping Masonry	Pole	Line				
		• -	_				
Q.,44;	Foots and the						
			_ Standard Gauge Multiple Track				
		\\					
	Road ''' Road Level Foot Single Track Under Over Crossing Bridge						
			_ Siding, Tramway or Mineral Line				
	+ + + + +	<del></del>	+ Narrow Gauge				
	Geographical Co	unty					
	Administrative County, County Borough or County of City						
	Municipal Borough, Urban or Rural District, Burgh or District Council						
	Civil Parish Shown alternately when coincidence of boundaries occurs						
BP, BS	Boundary Post or Stone	Pol Sta	Police Station				
Ch	Church		ost Office				
СН	Club House		Public Convenience				
F E Sta	Fire Engine Station	PH F	Public House				
FB	Foot Bridge	SB S	Signal Box				
Fn	Fountain		Spring				
GP	Guide Post	TCB T	Felephone Call Box				

Mile Post

TCP

Telephone Call Post

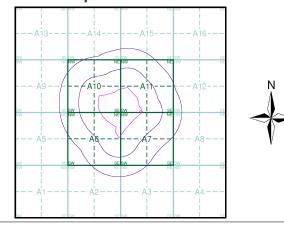
### 1:10,000 Raster Mapping

Gravel Pit	Refuse tip or slag heap
Rock	Rock (scattered)
Boulders	Boulders (scattered)
Shingle	Mud Mud
Sand Sand	( Sand Pit
Slopes	Top of cliff
General deta	il — — — — Underground detail
— — — Overhead de	tail +++++++++ Narrow gauge railway
Multi-track railway	Single track railway
County bound (England only District, Unite	boundary
Metropolitan, London Boro boundary	Constituency
Area of wood vegetation	Non-coniferous trees
△ Non-conifero	T /
	red) ↑ ↑ ↑ trees
Coniferous trees (scatte	red) *** trees Positioned
Coniferous	red) *** trees Positioned
Coniferous trees (scatte	red)
Coniferous trees (scatte	red)
Coniferous trees (scatte	red)  Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds
Coniferous trees (scatte trees (scatte)  Coniferous trees (scatte)  Conifer	red)  Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low
Coniferous trees (scatte trees (scatte)  Orchard  Rough Grassland  Co_ Scrub  Water featur  MHW(S) Mean high	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity  Transmission line
Coniferous trees (scatte trees (scatte trees)  Orchard  Rough Grassland  On_ Scrub  Water featur  MHW(S) Mean high water (spring	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation
Coniferous trees (scatted trees (scatted trees)  Coniferous trees (scatted trees)  Coniferous trees (scatted trees)  Rough Grassland  Coniferous trees (scatted trees)  Rough Grassland  Water featur  MHW(S)  Mean high water (spring the water (spring the water)  Telephone ling (where show)  Bench mark	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation station  Pylon, flare stack or lighting tower
Coniferous trees (scatted trees (scatted trees (scatted trees))  Orchard  Orchard  Orchard  Rough Grassland  On- Scrub  Water featur  MHW(S)  Mean high water (spring  Telephone lir (where show)  Where show  Point feature (e.g. Guide Feature)	Positioned tree  Coppice or Osiers  Heath  Marsh, Salt Marsh or Reeds  Flow arrows  MLW(S)  Mean low water (springs)  Electricity transmission line (with poles)  Triangulation station  Pylon, flare stack or lighting tower

# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Suffolk	1:10,560	1884	2
Suffolk	1:10,560	1905	3
Suffolk	1:10,560	1951	4
Ordnance Survey Plan	1:10,000	1957	5
Ordnance Survey Plan	1:10,000	1980 - 1982	6
10K Raster Mapping	1:10,000	2012	7

## **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

Slice:

Site Area (Ha): 20.88 Search Buffer (m): 500

#### **Site Details**

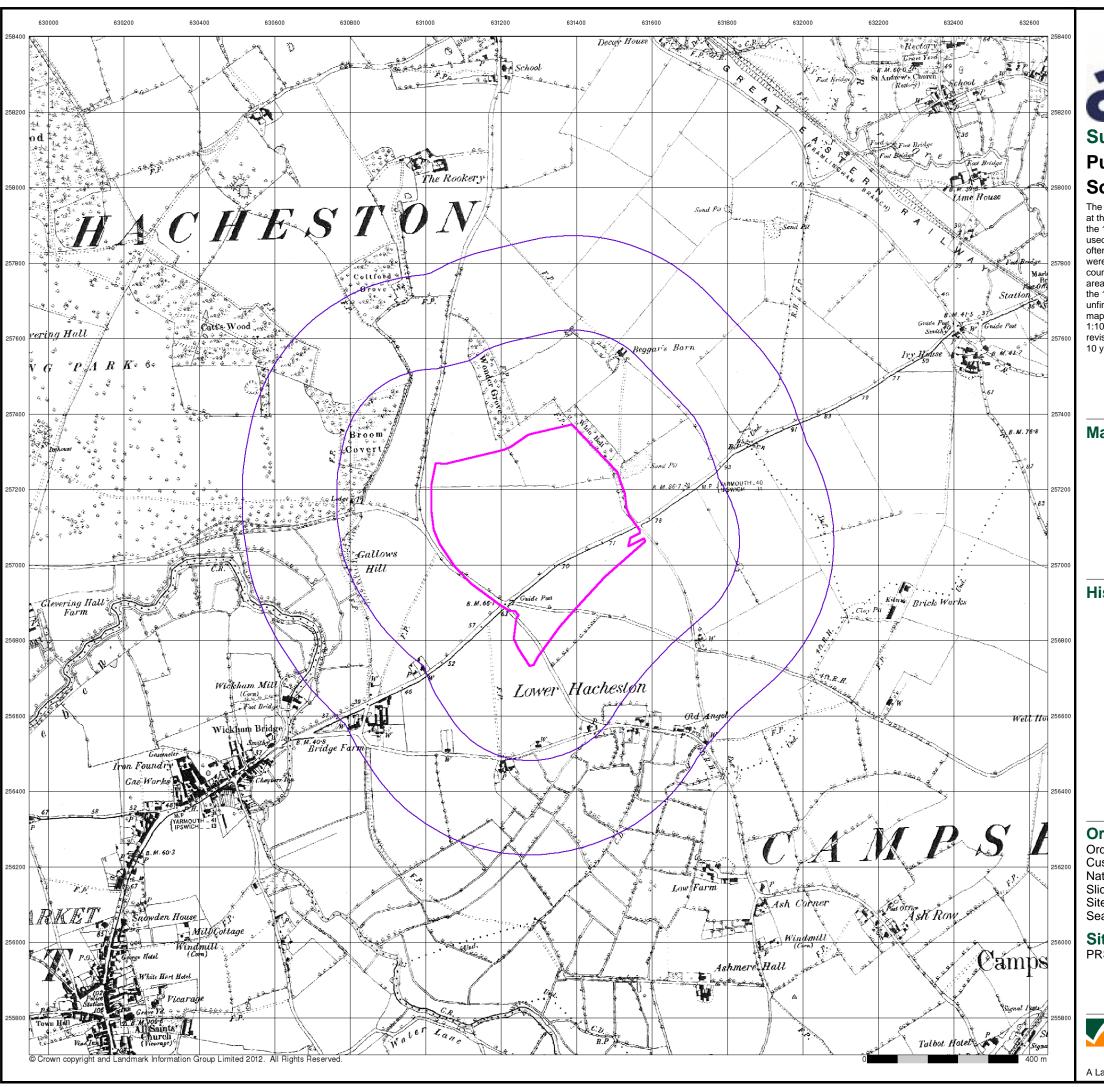
PRS 3a 3b Wickham Market, Leiston, Suffolk



Tel: Fax: 0844 844 9952 0844 844 9951

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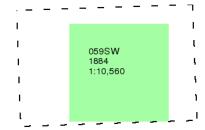




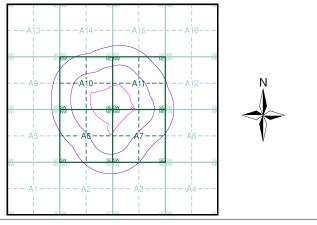
#### **Published 1884** Source map scale - 1:10,560

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

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



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): 20.88 Search Buffer (m): 500

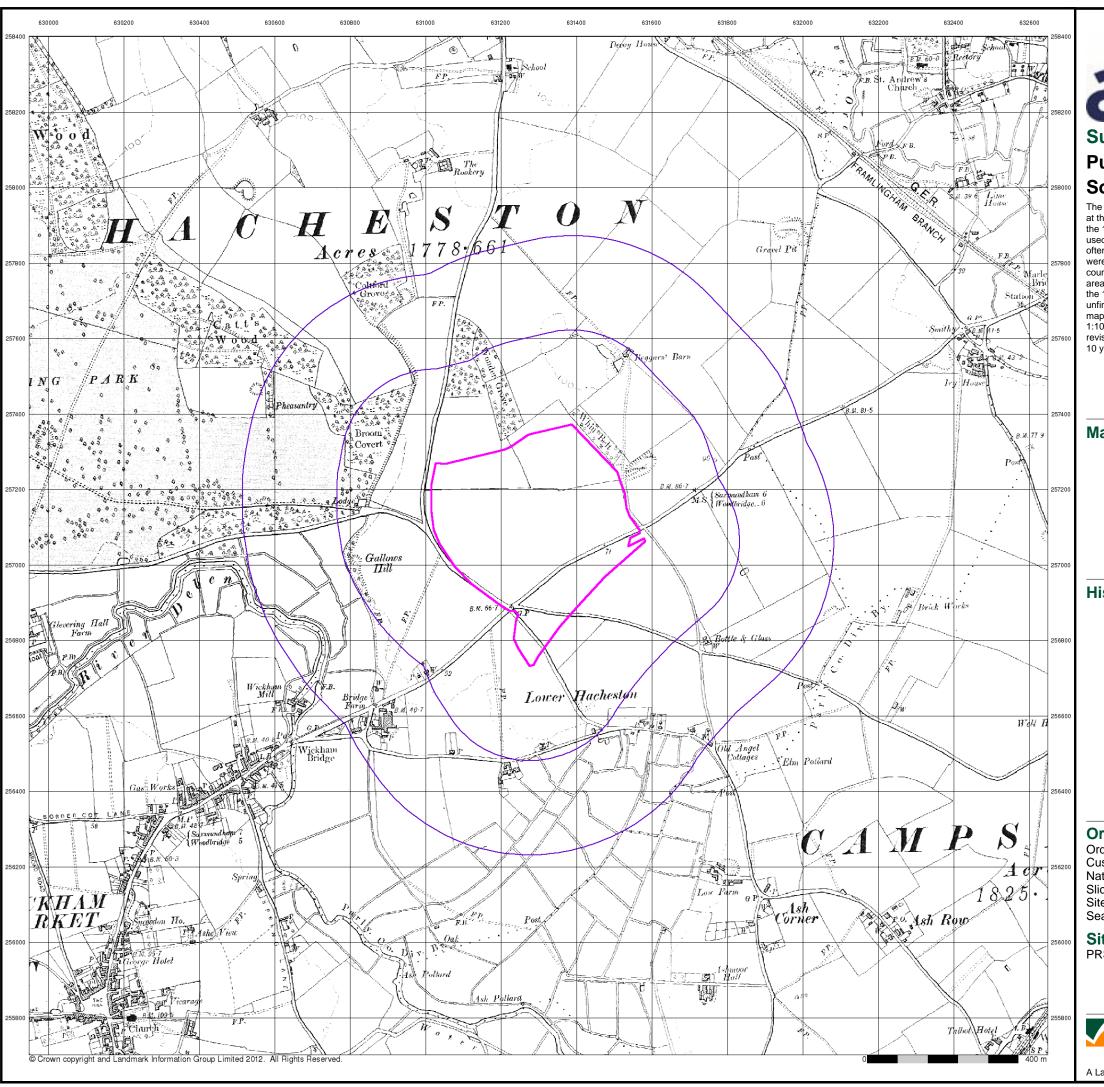
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



0844 844 9952 Tel: Fax: 0844 844 9951

A Landmark Information Group Service v47.0 10-Jul-2012 Page 2 of 7

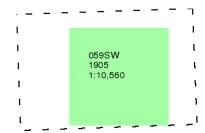




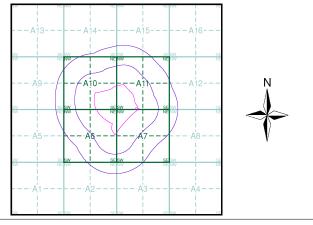
## **Published 1905** Source map scale - 1:10,560

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

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



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): 20.88 Search Buffer (m): 500

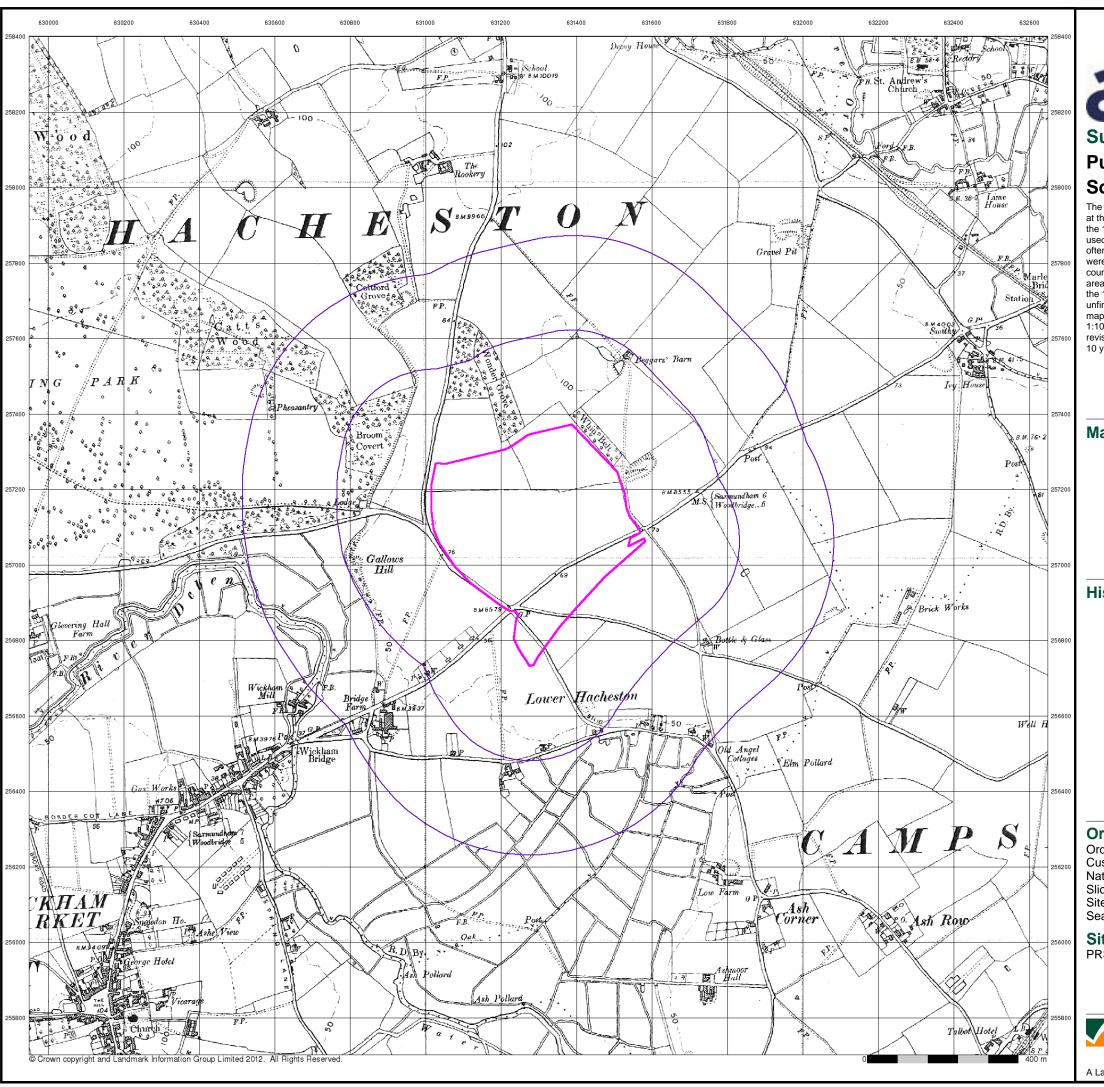
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



Tel: Fax: 0844 844 9952 0844 844 9951

A Landmark Information Group Service v47.0 10-Jul-2012 Page 3 of 7

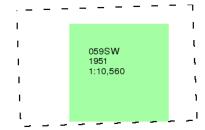




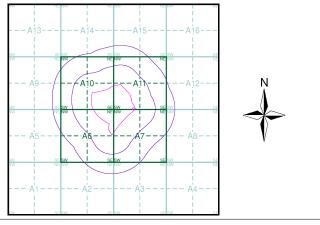
#### **Published 1951** Source map scale - 1:10,560

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

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



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice: 20.88

Site Area (Ha): Search Buffer (m): 500

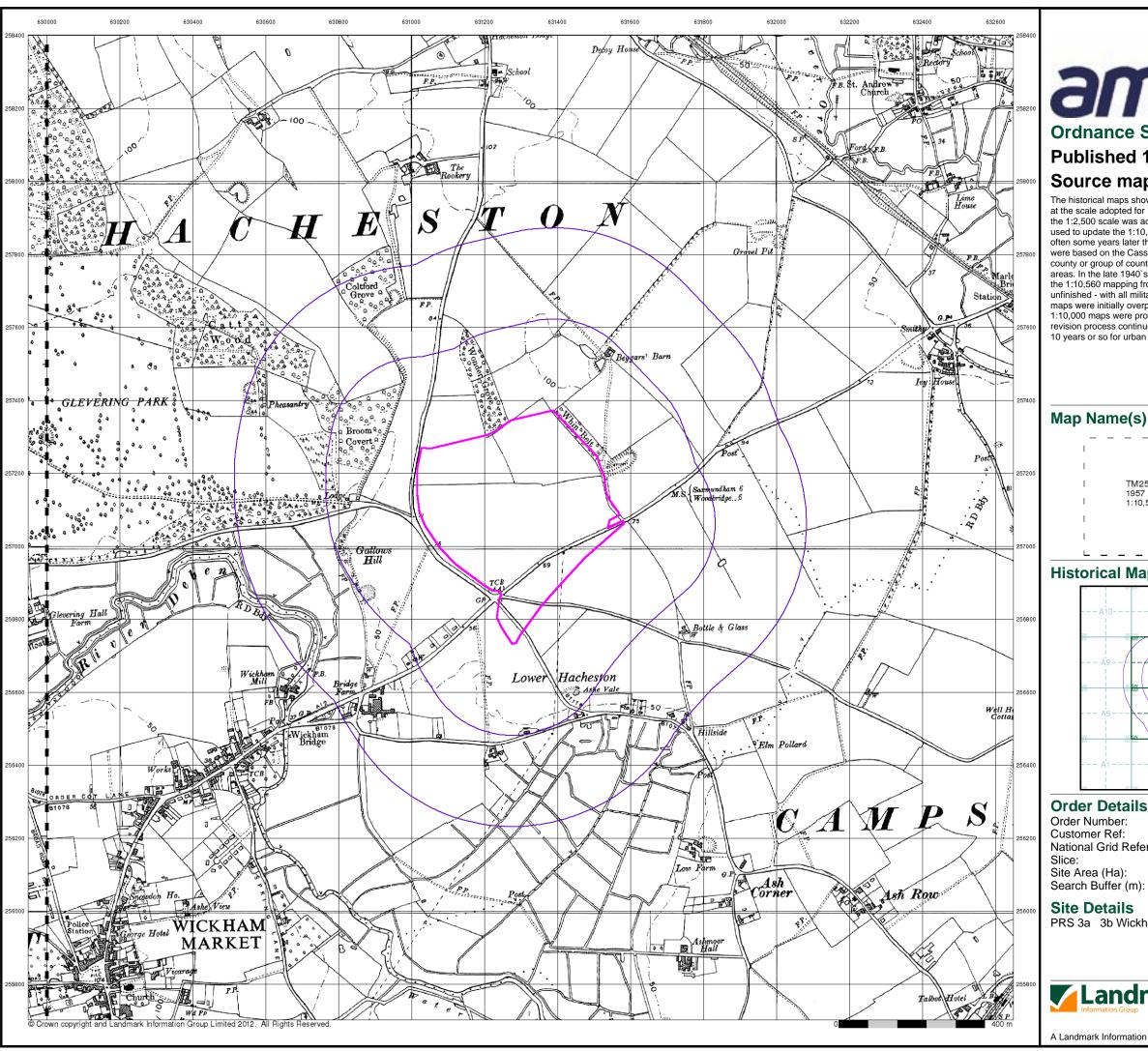
**Site Details** 

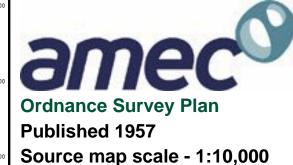
PRS 3a 3b Wickham Market, Leiston, Suffolk



Tel: Fax: 0844 844 9952 0844 844 9951

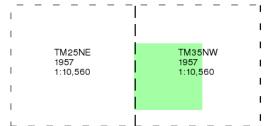
A Landmark Information Group Service v47.0 10-Jul-2012 Page 4 of 7



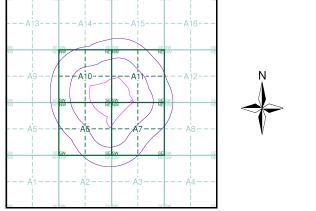


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

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



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

Site Area (Ha): 20.88 500

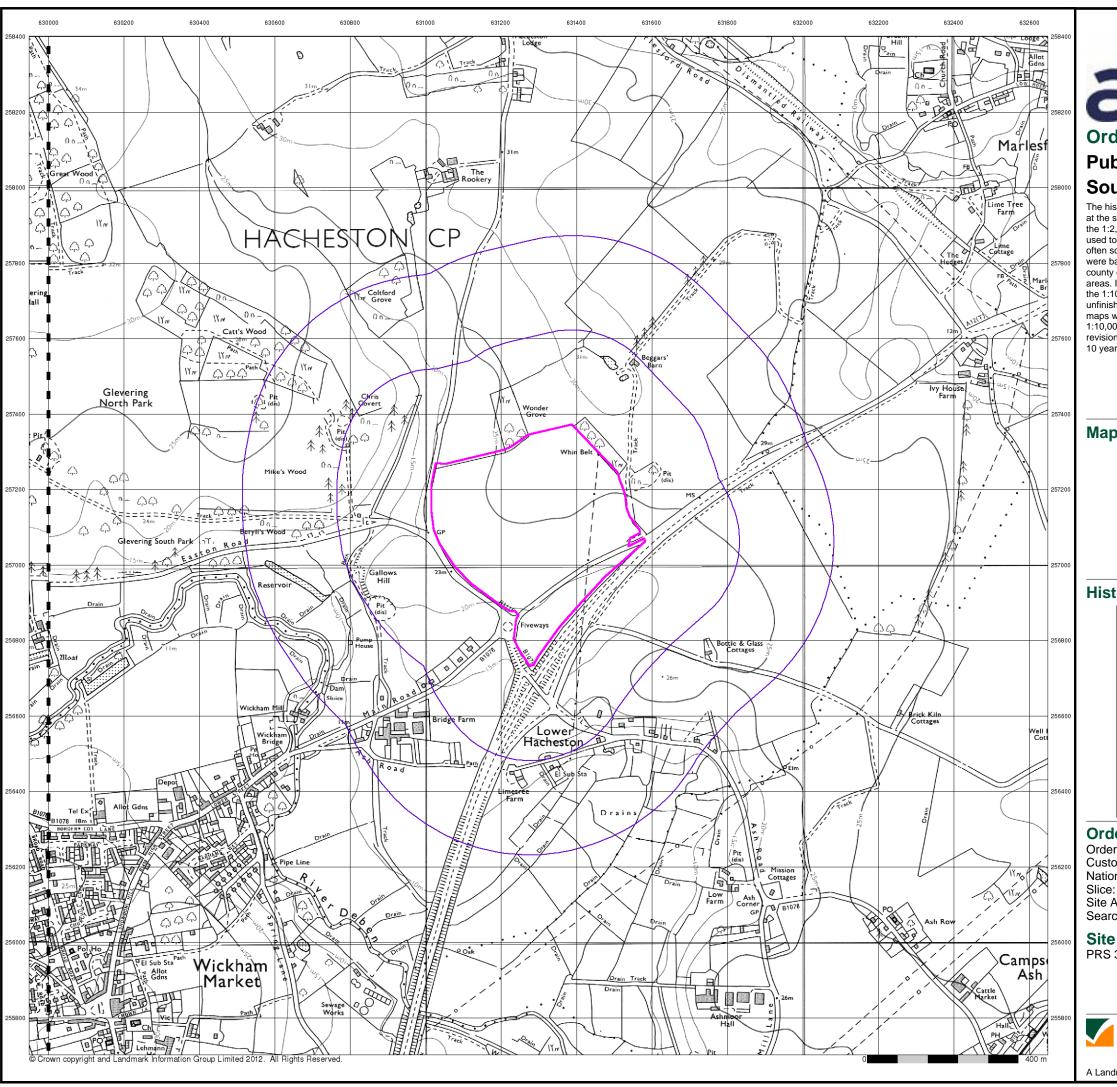
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



Tel: Fax: 0844 844 9952 0844 844 9951

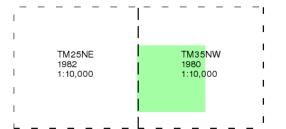
A Landmark Information Group Service v47.0 10-Jul-2012 Page 5 of 7



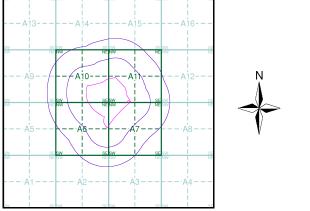


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

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



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

Site Area (Ha): 20.88 Search Buffer (m): 500

#### **Site Details**

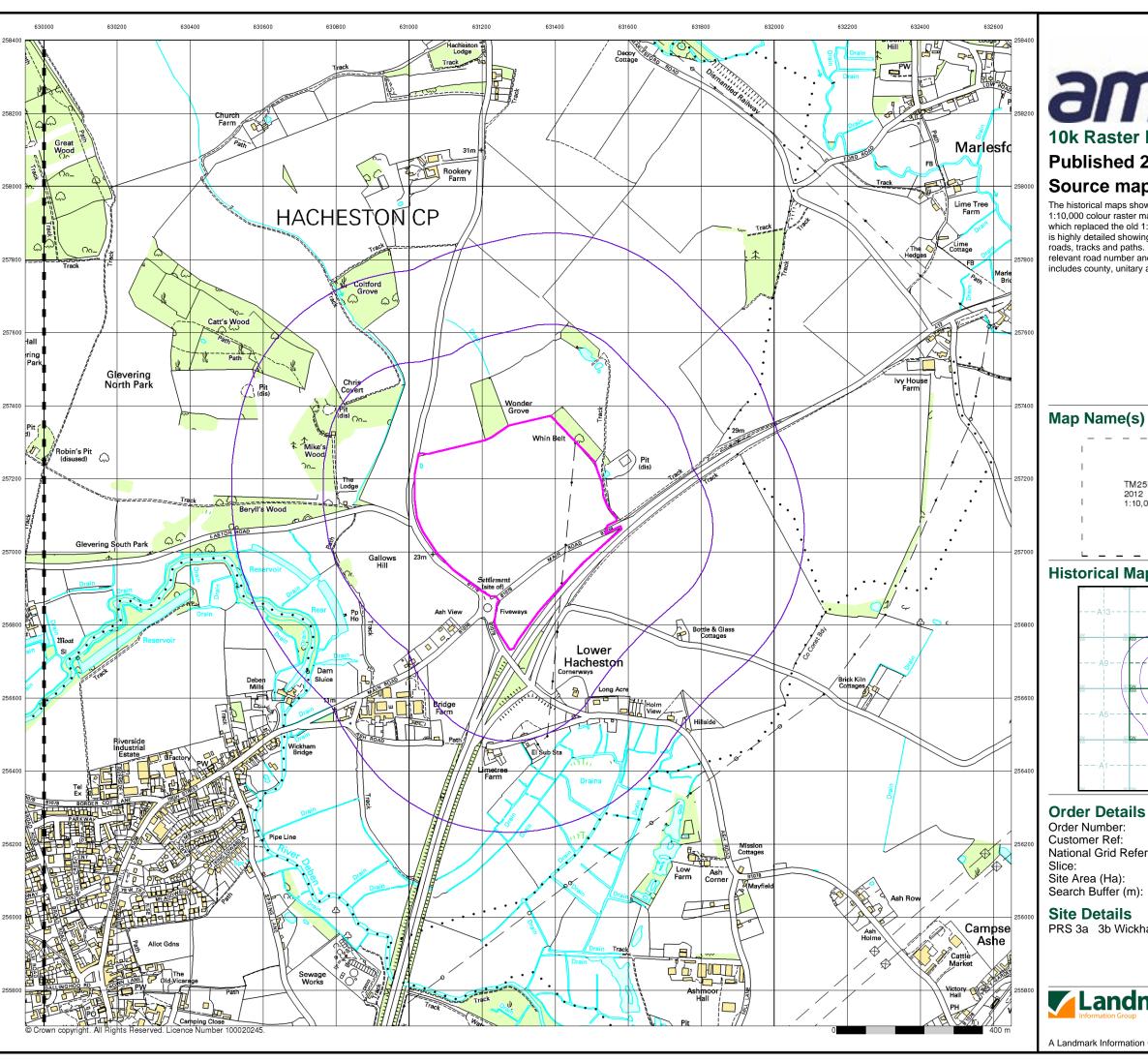
PRS 3a 3b Wickham Market, Leiston, Suffolk

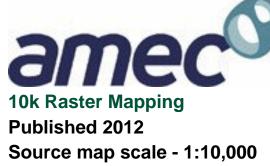


Tel: Fax: 0844 844 9952 0844 844 9951

A Landmark Information Group Service v47.0 10-Jul-2012

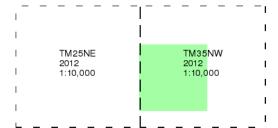
Page 6 of 7



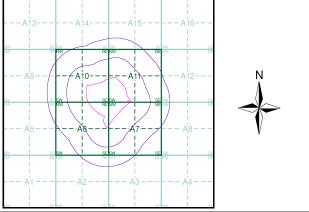


The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

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



#### **Historical Map - Slice A**



40147573\_1\_1 32623 National Grid Reference: 631290, 257080

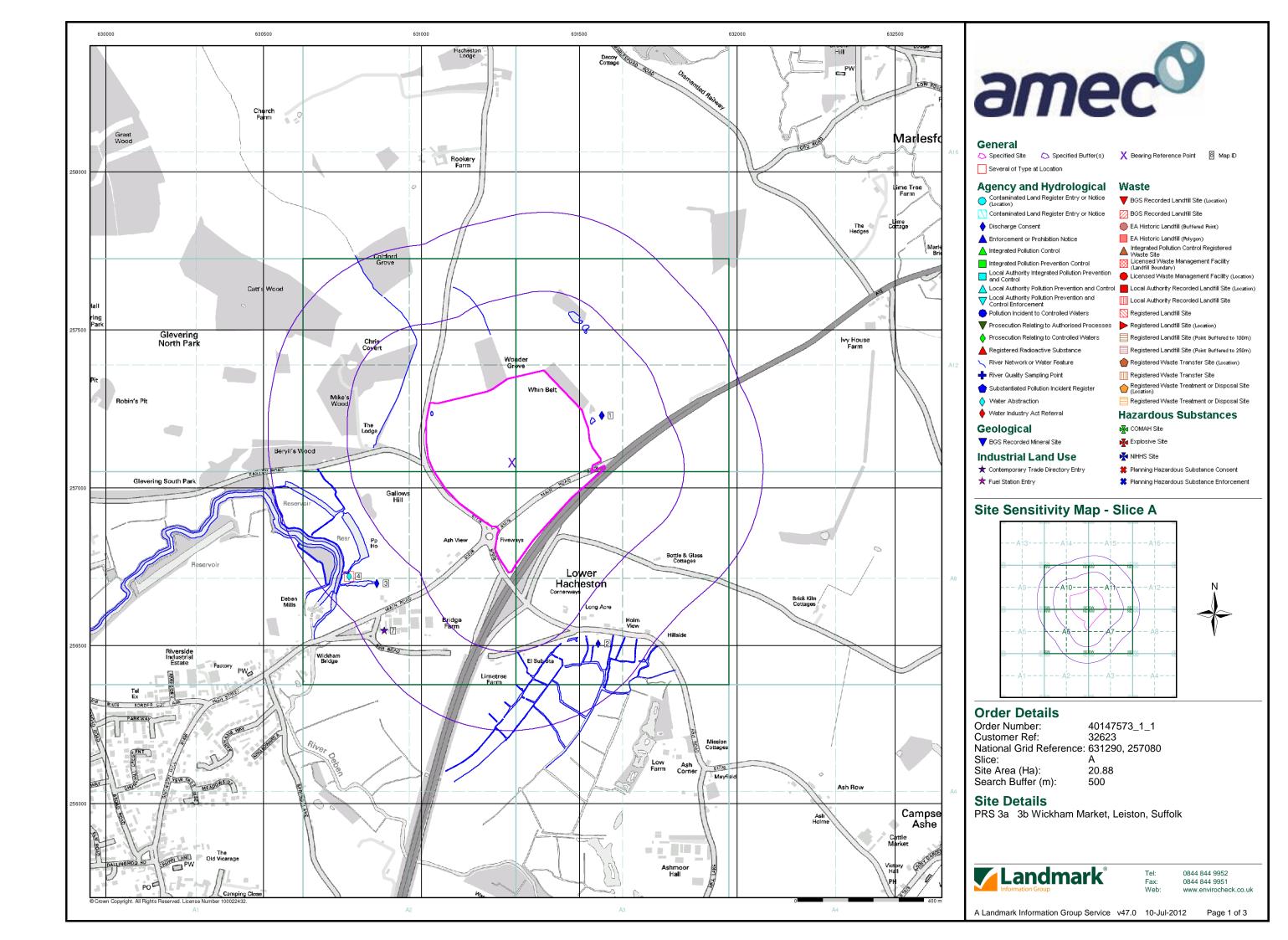
20.88 500

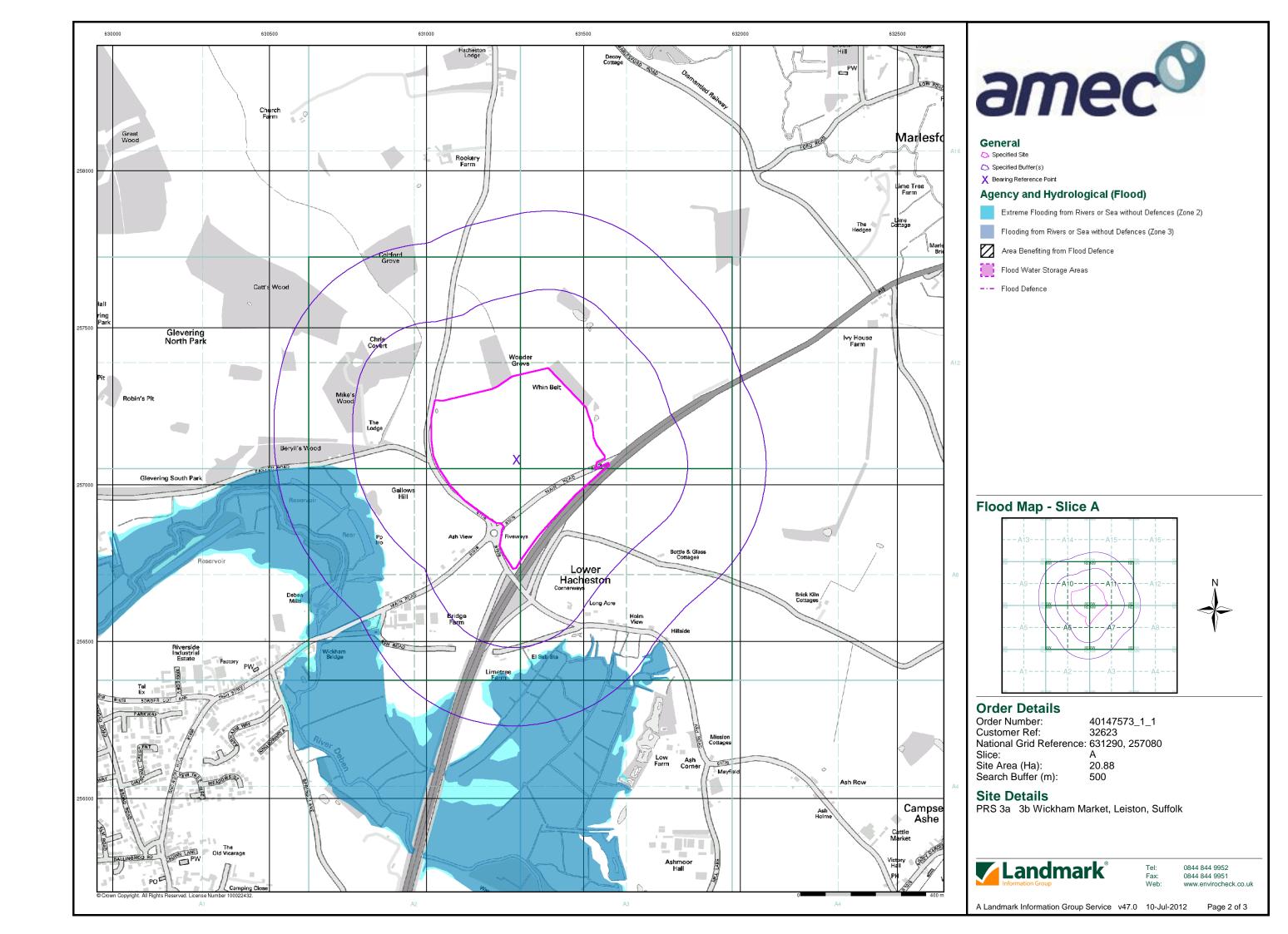
PRS 3a 3b Wickham Market, Leiston, Suffolk

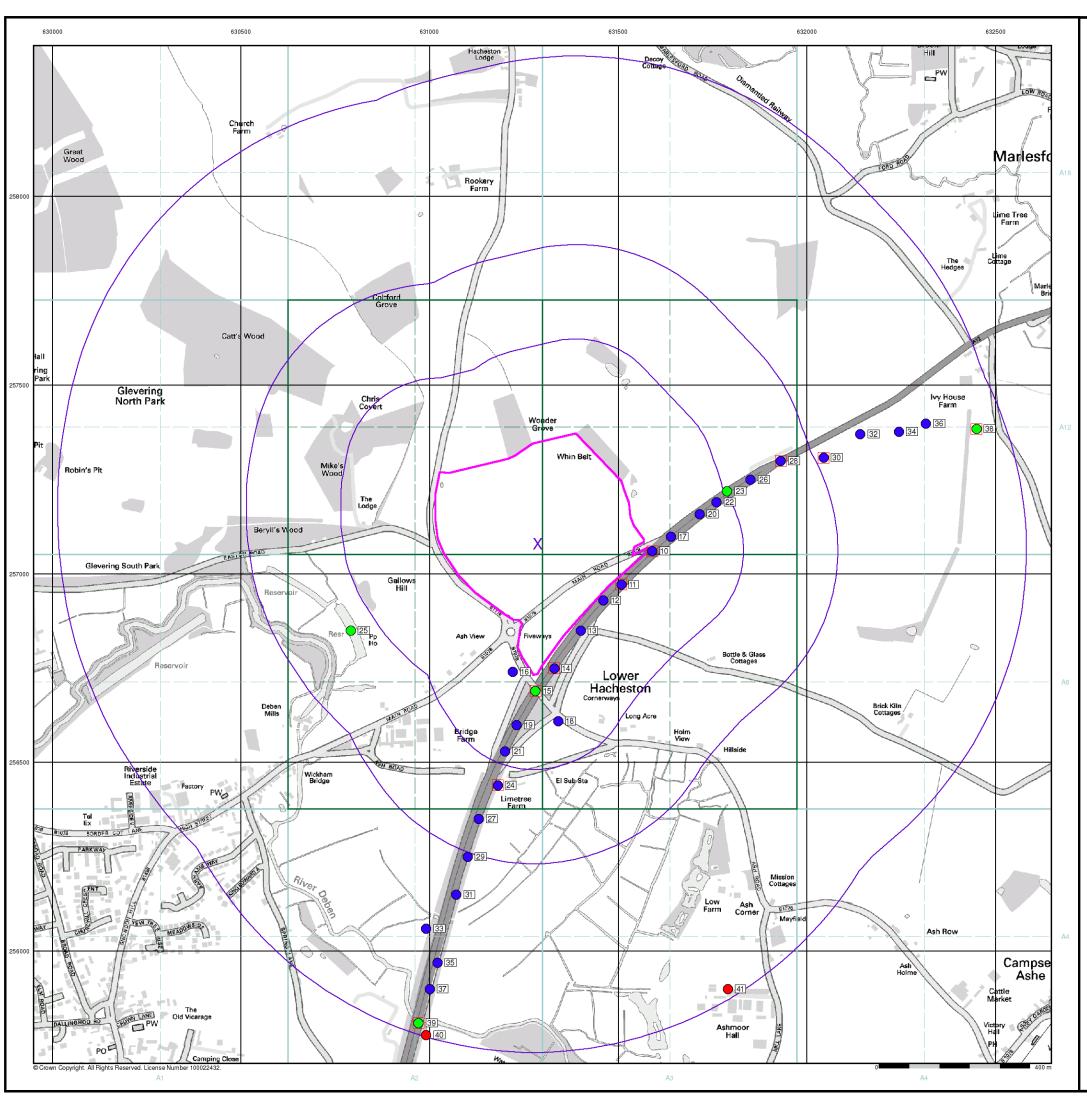


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A Landmark Information Group Service v47.0 10-Jul-2012 Page 7 of 7









#### General

Specified Site

Specified Buffer(s)

X Bearing Reference Point

8 Map ID

Several of Type at Location

#### Agency and Hydrological (Boreholes)

BGS Borehole Depth 0 - 10m

BGS Borehole Depth 10 - 30m

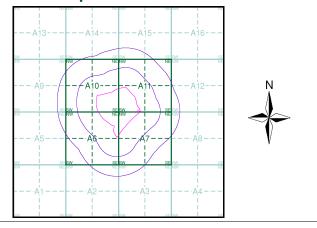
BGS Borehole Depth 30m +

ConfidentialOther

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

#### **Borehole Map - Slice A**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

Slice:

Site Area (Ha): 20.88 Search Buffer (m): 500

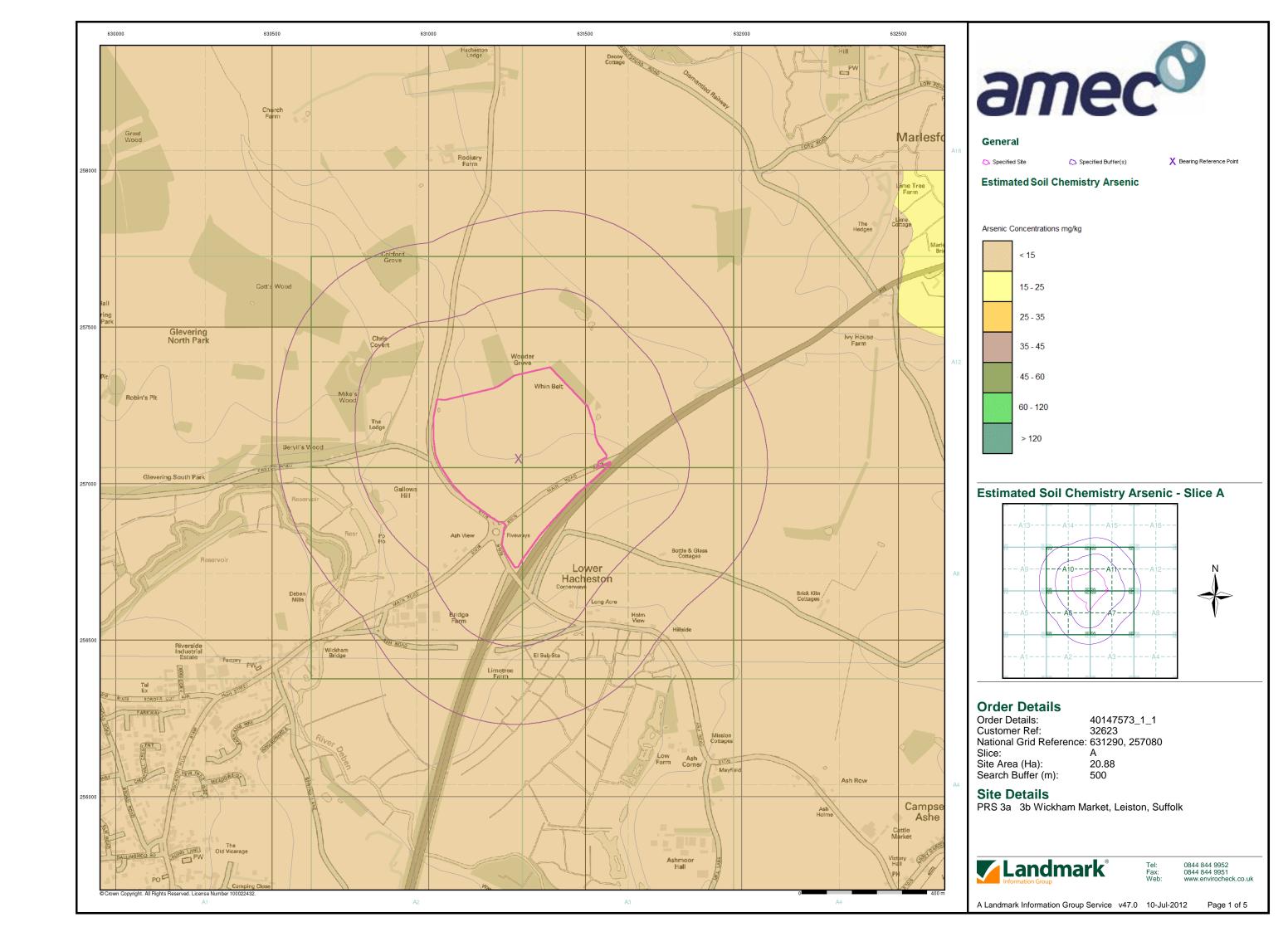
#### **Site Details**

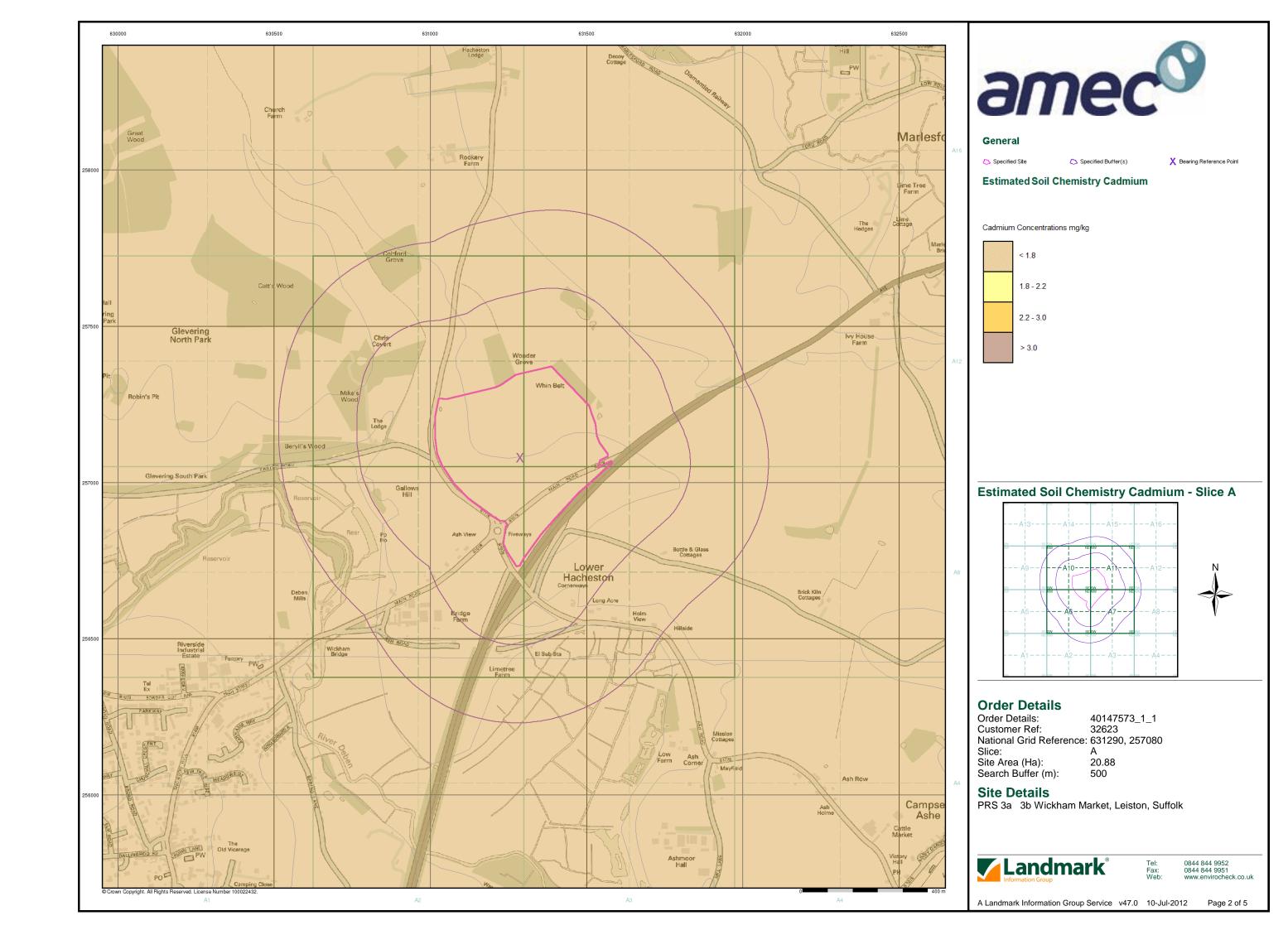
PRS 3a 3b Wickham Market, Leiston, Suffolk

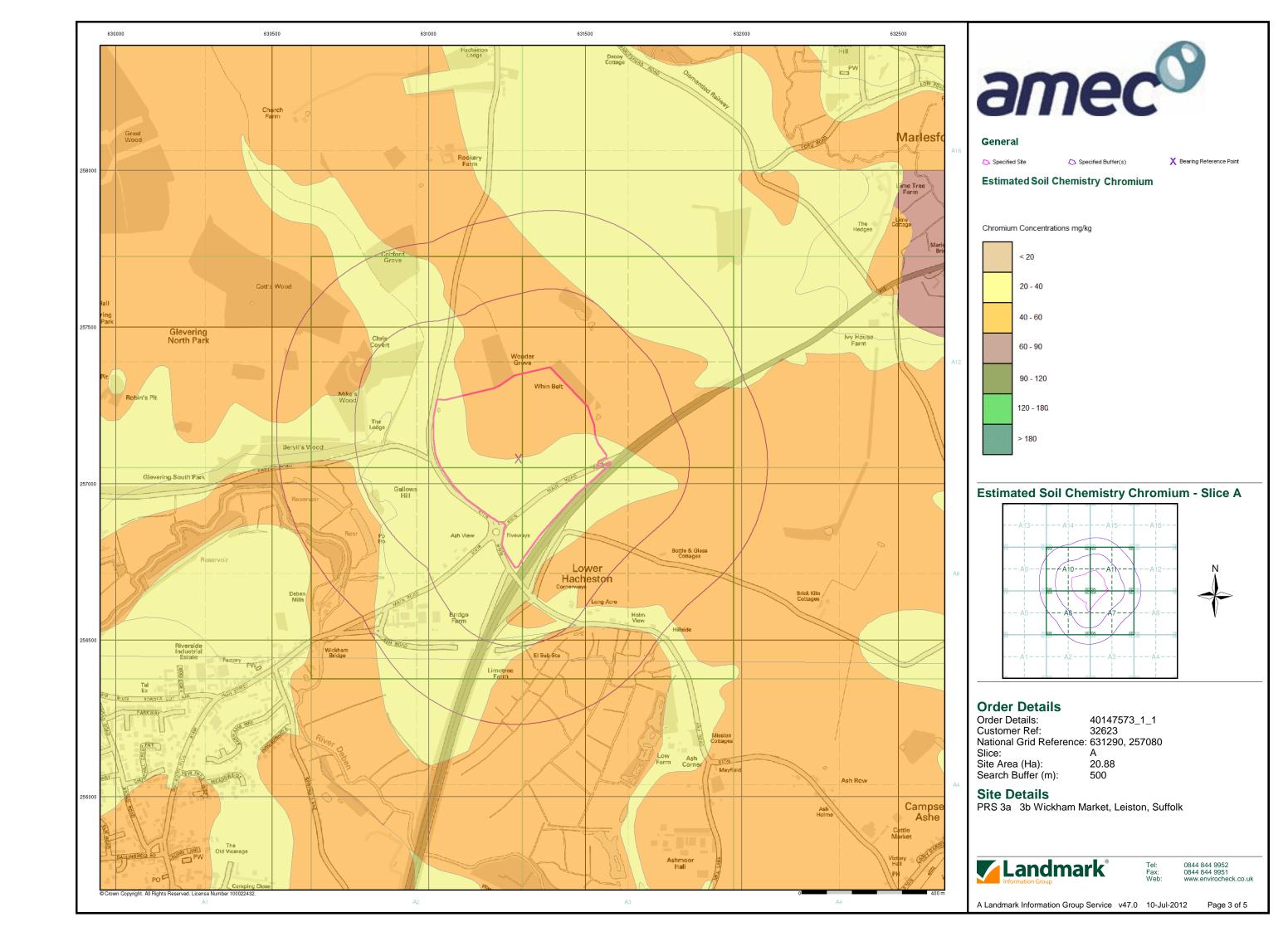


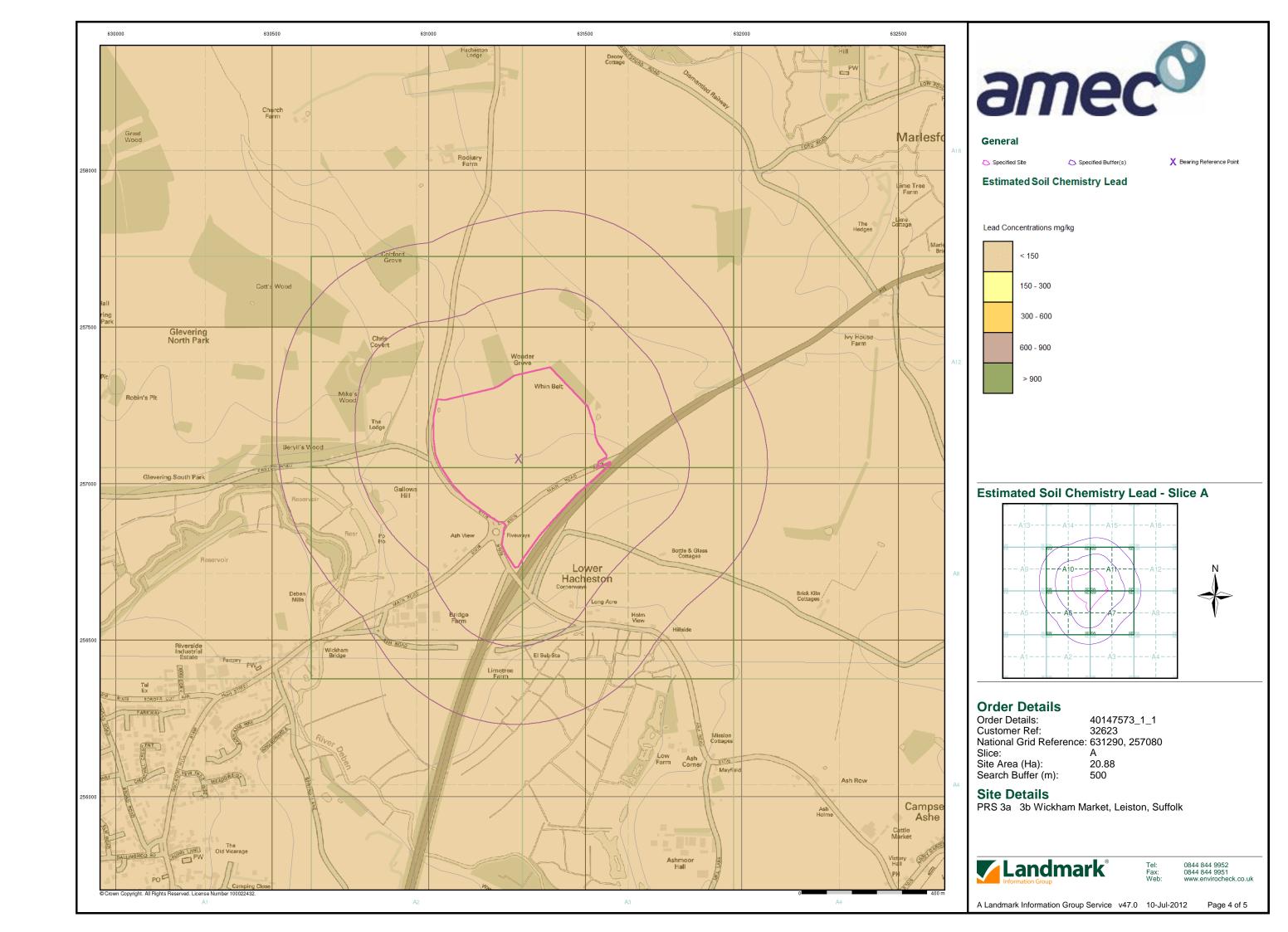
el: 0844 844 9952 ax: 0844 844 9951 /eb: www.envirocheck.c

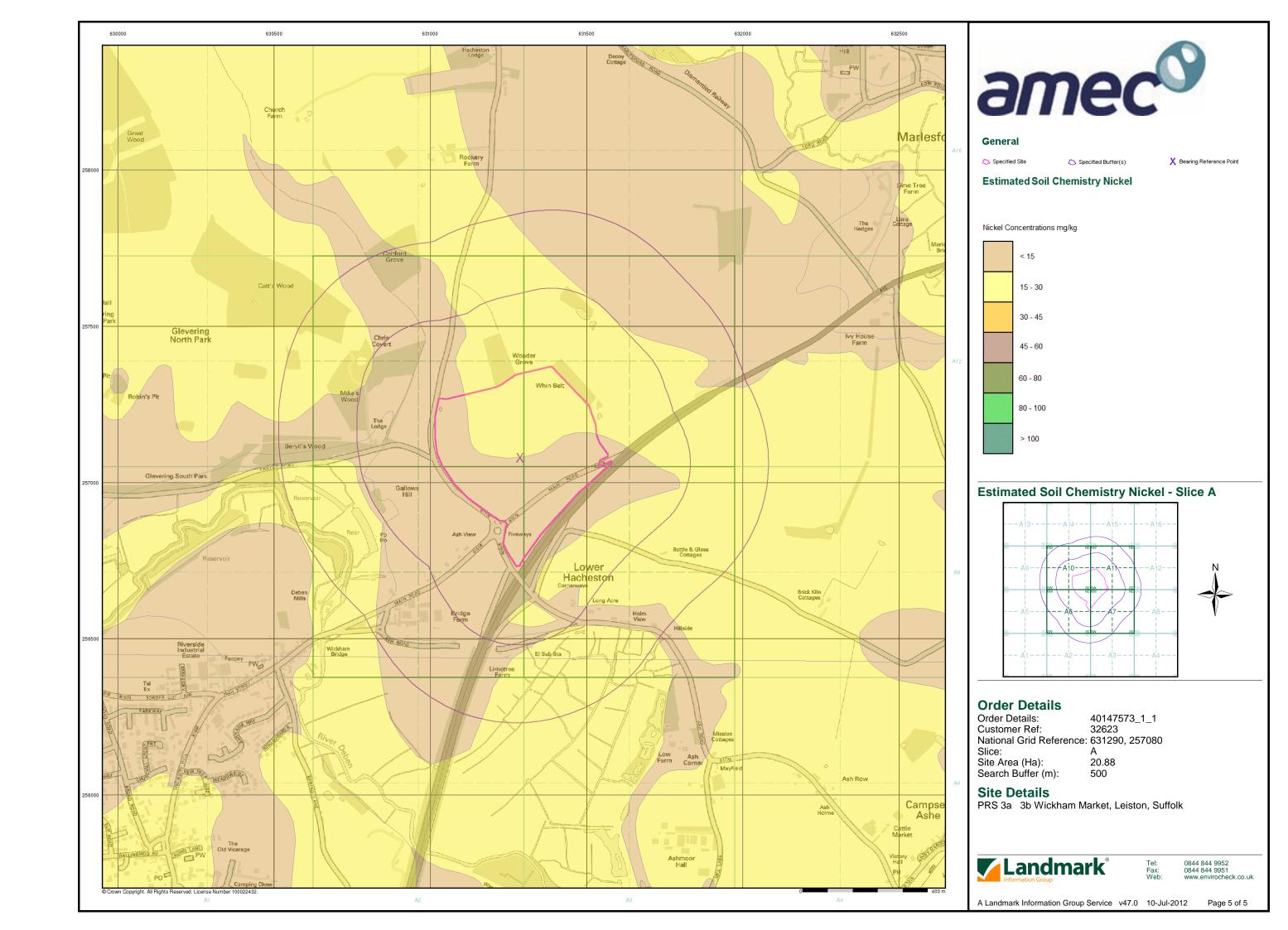
A Landmark Information Group Service v47.0 10-Jul-2012 Page 3 of 3





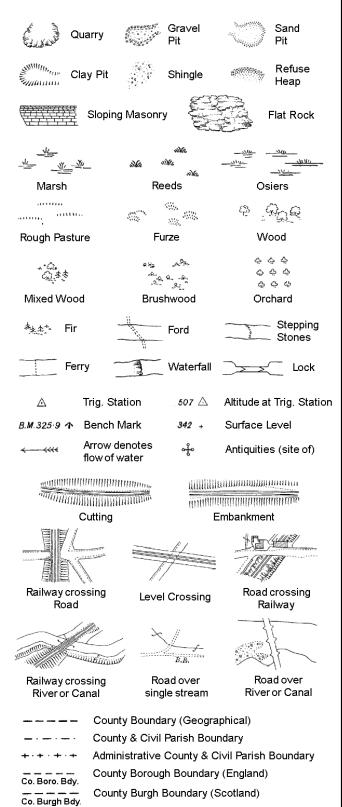






# **Historical Mapping Legends**

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



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

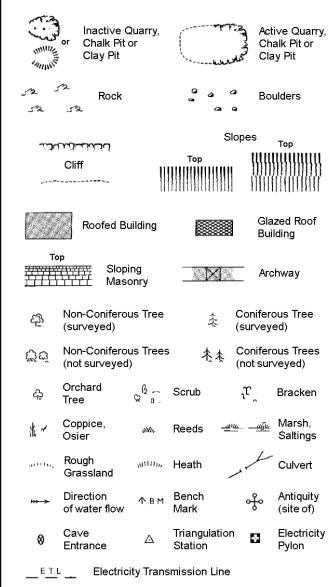
Mile Stone

M.P.M.R Mooring Post or Ring

Electricity Pylor

Guide Post or Board

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



			-	•
N. T.	•		<b>.</b>	where boundary
вн	Beer House		Р	Pillar, Pole or Post
BP, BS	Boundary Post or Ston	e	PO	Post Office
Cn, C	Capstan, Crane		PC	Public Convenience
Chy	Chimney		PH	Public House
D Fn	Drinking Fountain		Pp	Pump
EIP	Electricity Pillar or Post		SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar		SP, SL	Signal Post or Light
FB	Foot Bridge		Spr	Spring
GP	Guide Post		Tk	Tank or Track
Н	Hydrant or Hydraulic		TCB	Telephone Call Box
LC	Level Crossing		TCP	Telephone Call Post
MH	Manhole		Tr	Trough
MP	Mile Post or Mooring Po	st	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone		W	Well
	BP, BS Cn, C Chy D Fn EI P FAP FB GP H LC MH MP	BH Beer House BP, BS Boundary Post or Ston Cn, C Capstan, Crane Chy Chimney D Fn Drinking Fountain EI P Electricity Pillar or Post FAP Fire Alarm Pillar FB Foot Bridge GP Guide Post H Hydrant or Hydraulic LC Level Crossing MH Manhole MP Mile Post or Mooring Po	BH Beer House BP, BS Boundary Post or Stone Cn, C Capstan, Crane Chy Chimney D Fn Drinking Fountain EI P Electricity Pillar or Post FAP Fire Alarm Pillar FB Foot Bridge GP Guide Post H Hydrant or Hydraulic LC Level Crossing MH Manhole MP Mile Post or Mooring Post	BP, BS         Boundary Post or Stone         PO           Cn, C         Capstan, Crane         PC           Chy         Chimney         PH           D Fn         Drinking Fountain         Pp           EI P         Electricity Pillar or Post         SB, S Br           FAP         Fire Alarm Pillar         SP, SL           FB         Foot Bridge         Spr           GP         Guide Post         Tk           H         Hydrant or Hydraulic         TCB           LC         Level Crossing         TCP           MH         Manhole         Tr           MP         Mile Post or Mooring Post         Wr Pt, Wr T

Wd Pp

Wind Pump

County Boundary (Geographical)

Admin. County or County Bor. Boundary

Chy

Cis

EIP

FΒ

GVC

Dismtd Rlv

El Gen Sta

Fn/DFn

Cistern

El Sub Sta Electricity Sub Station

Filter Bed

Gas Governer

**Guide Post** Manhole

Dismantled Railway

Electricity Pole, Pillar

Fountain / Drinking Ftn.

Gas Valve Compound

Mile Post or Mile Stone

**Electricity Generating** 

County & Civil Parish Boundary

Civil Parish Boundary

London Borough Boundary

L B Bdy

NTL

Normal Tidal Limit

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

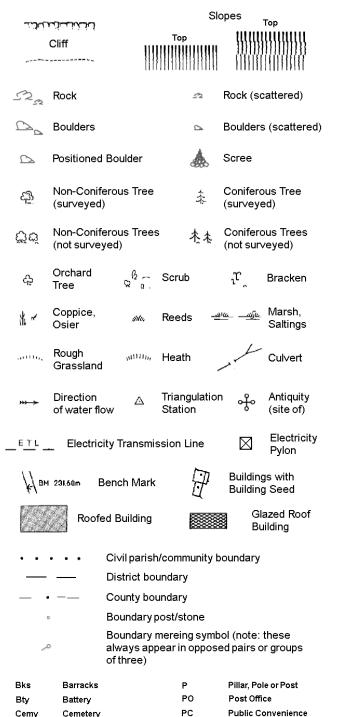
S.P

T.C.B

Sl.

 $T_T$ 

# 1:1,250



Ppg Sta

PW

Spr

Tr

Wd Pp

Wks

Pumping Station

Place of Worship

Signal Box or Bridge

Signal Post or Light

Works (building or area)

Sewage Ppg Sta Sewage

Spring

Trough

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

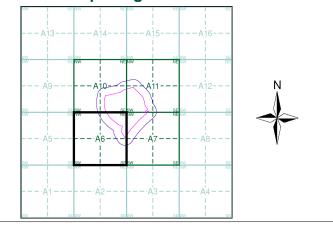
Tank or Track

Historical Mapping & Photography included					
Historical Mapping &	Pnotograph	y include			
Mapping Type	Scale	Date			
Suffolk	1:2,500	1883 - 1884			
Suffolk	1:2,500	1904			
Ordnance Survey Plan	1:2,500	1975			
Additional SIMs	1:2,500	1978			
Ordnance Survey Plan	1:2,500	1988			
Additional SIMs	1:2,500	1988			

1:2,500

#### **Historical Map - Segment A6**

Large-Scale National Grid Data



#### **Order Details**

Order Number: 40147573\_1\_1 32623 Customer Ref: National Grid Reference: 631290, 257080

Slice:

Site Area (Ha): 20.88 Search Buffer (m): 100

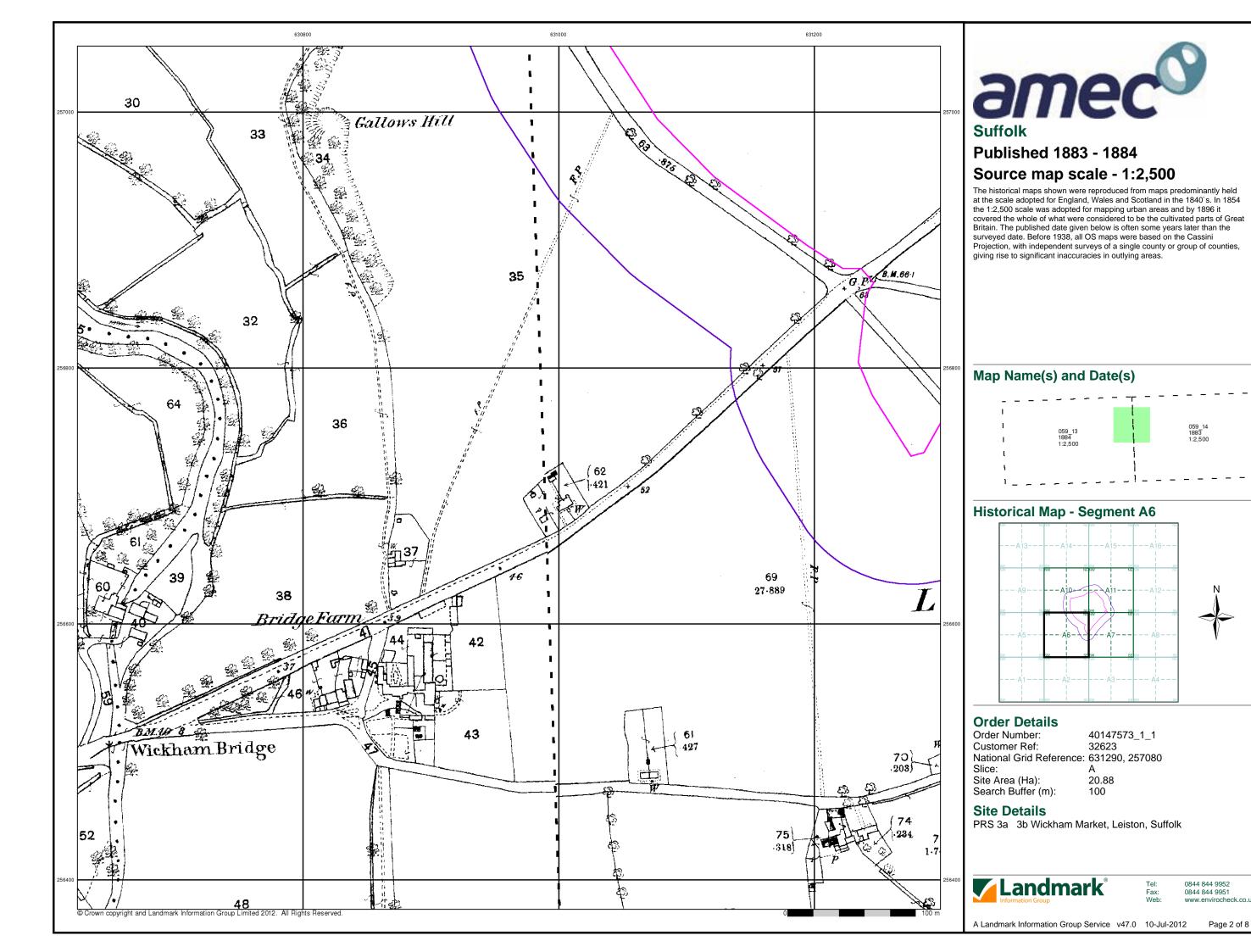
#### Site Details

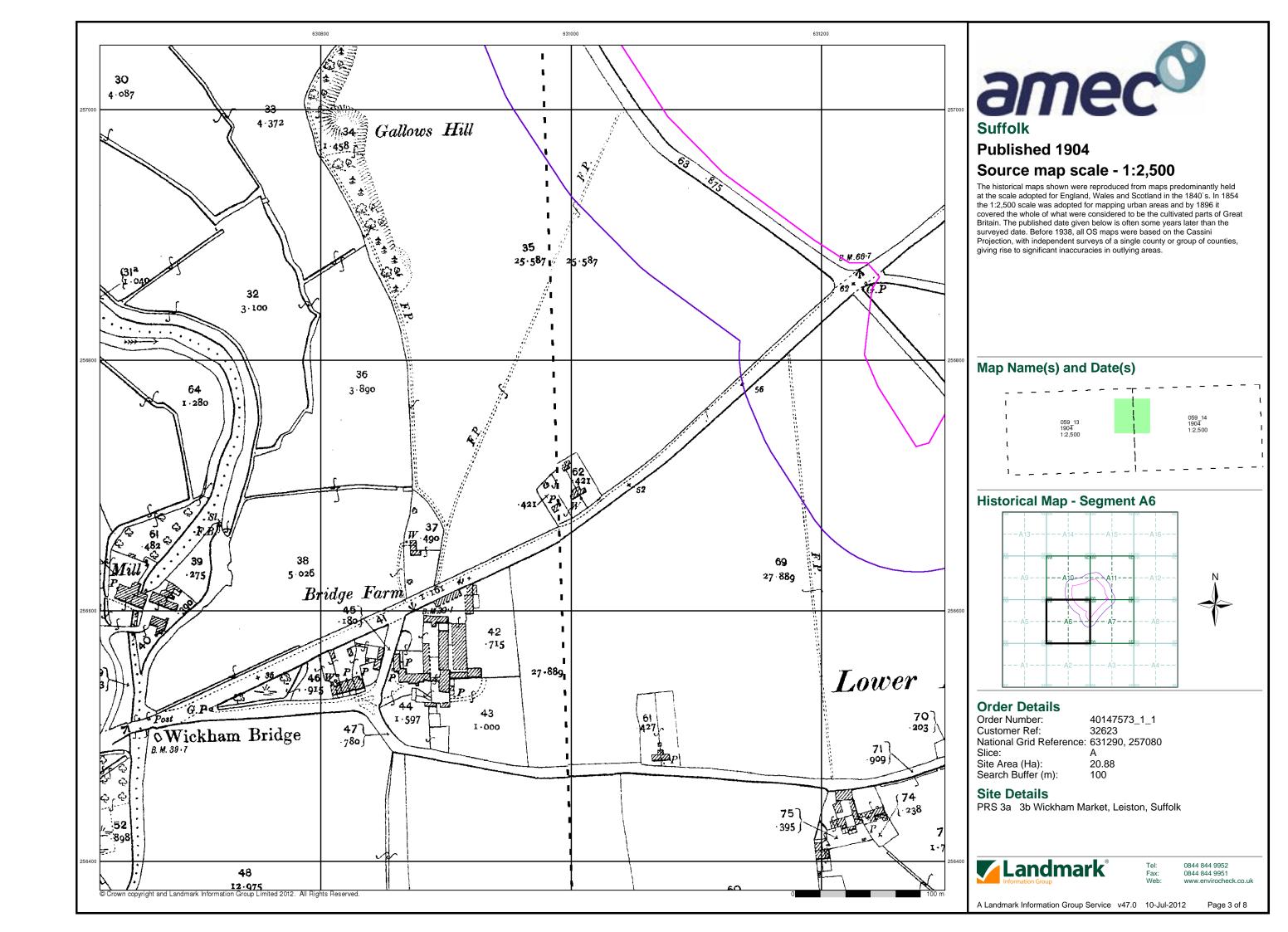
PRS 3a 3b Wickham Market, Leiston, Suffolk

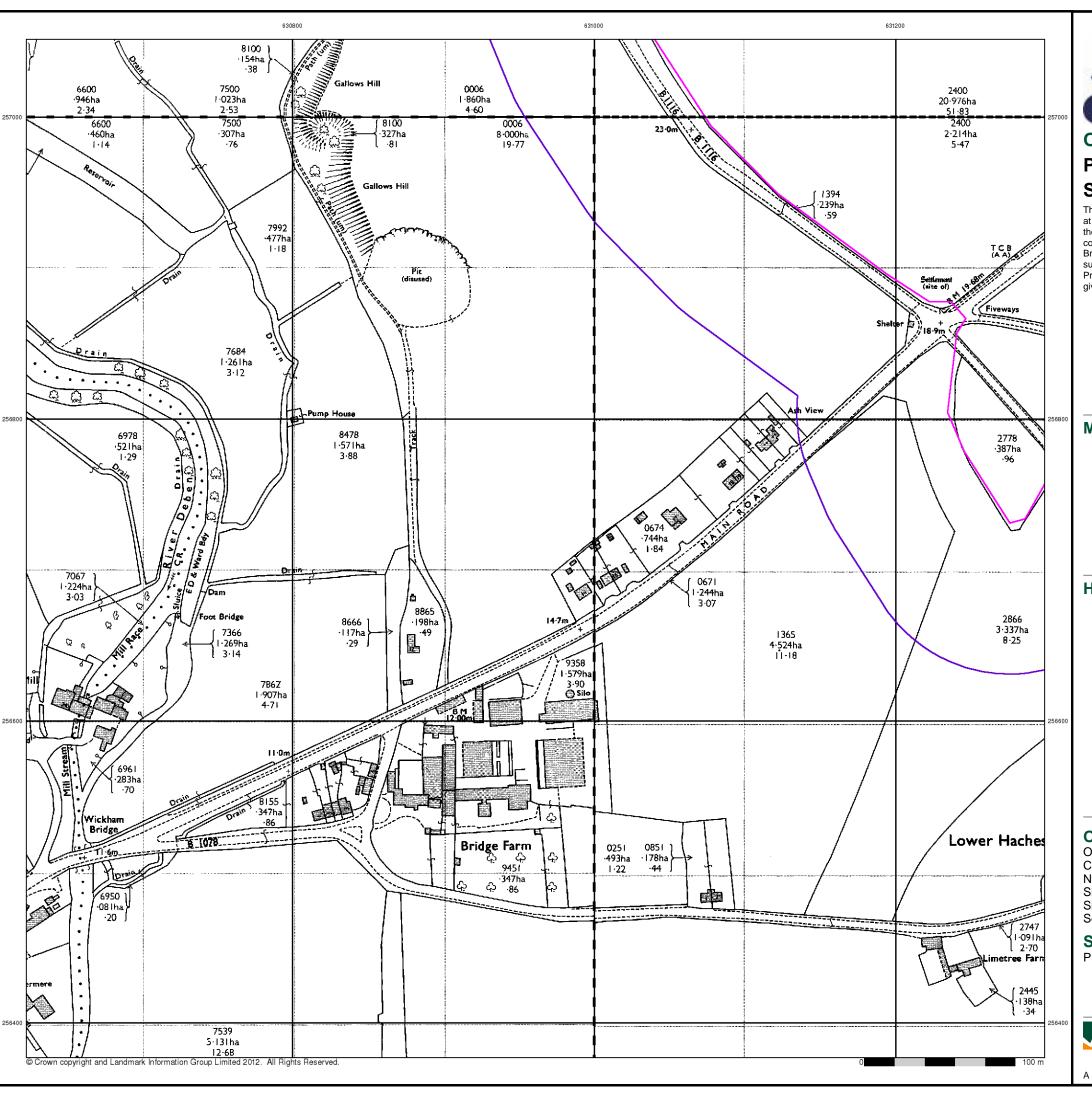


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Page 1 of 8





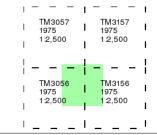




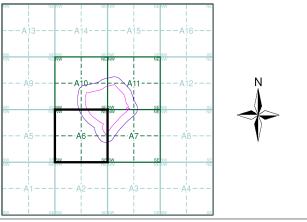
### **Published 1975** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A6**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): 20.88 Search Buffer (m): 100

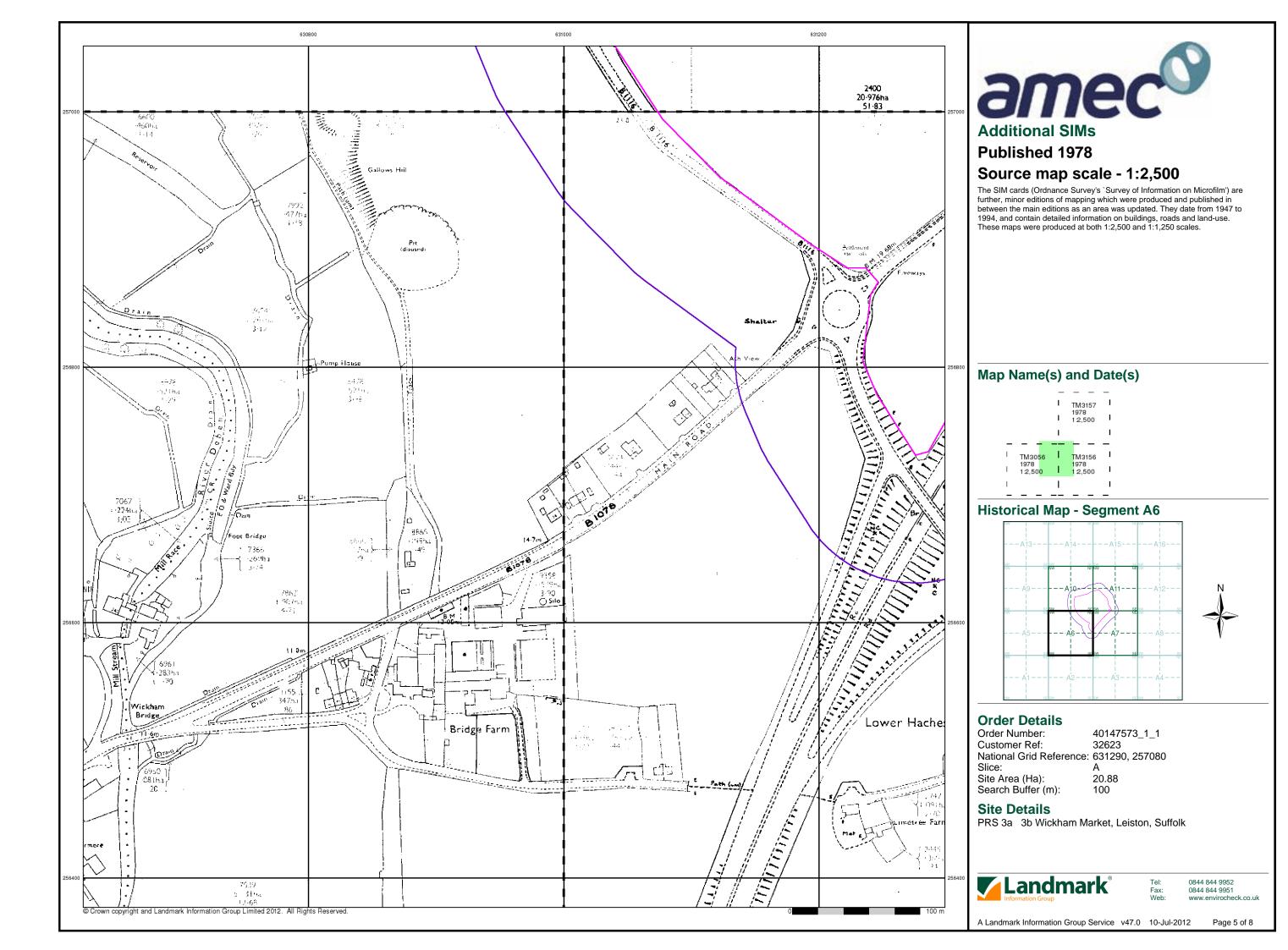
#### **Site Details**

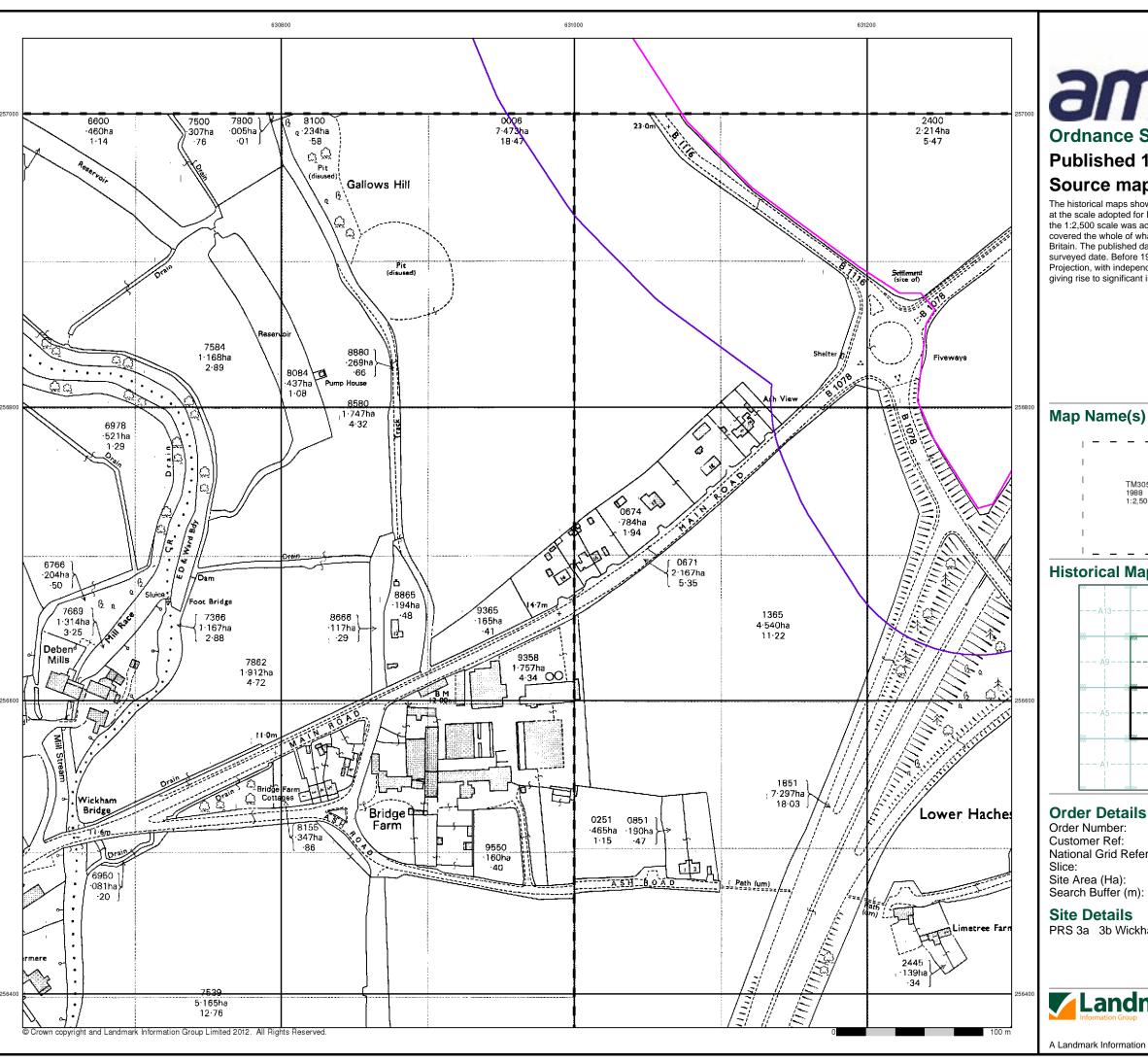
PRS 3a 3b Wickham Market, Leiston, Suffolk



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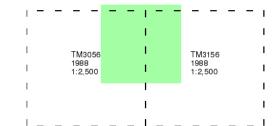




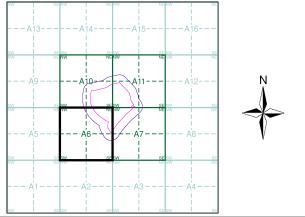
### **Published 1988** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A6**



40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

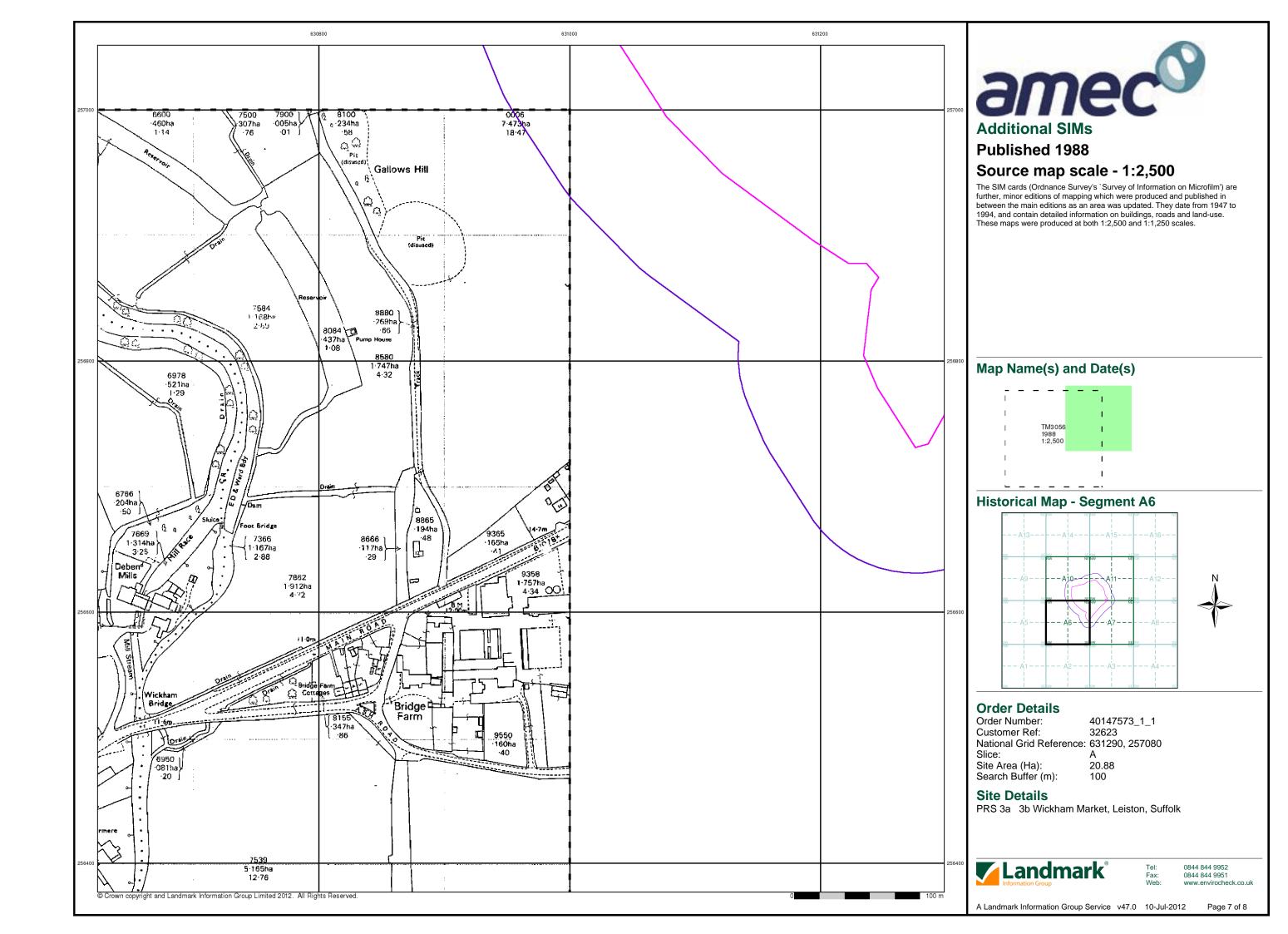
20.88 100

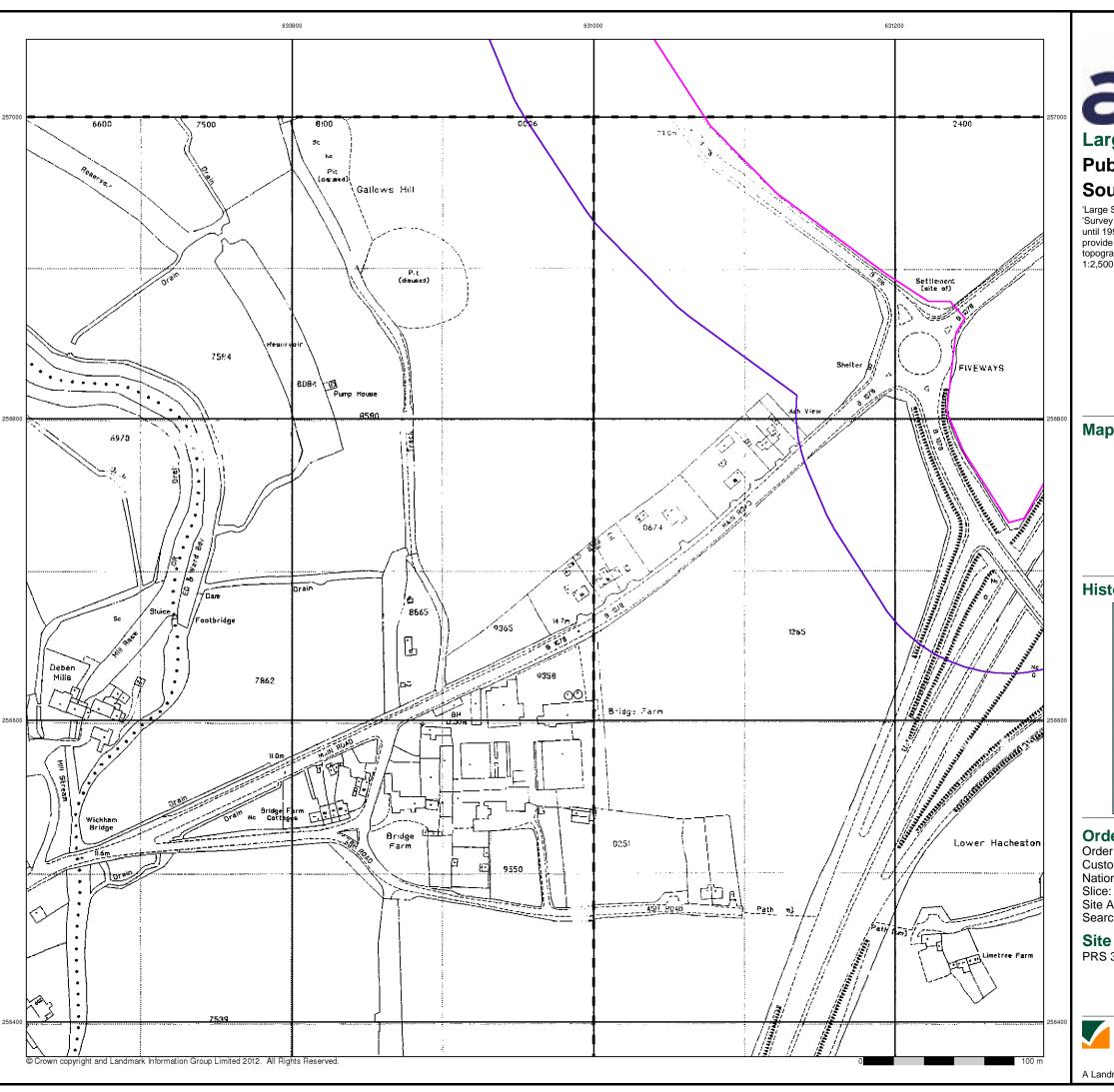
PRS 3a 3b Wickham Market, Leiston, Suffolk



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A Landmark Information Group Service v47.0 10-Jul-2012 Page 6 of 8





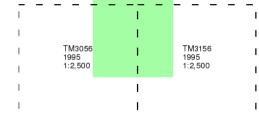


#### Published 1995

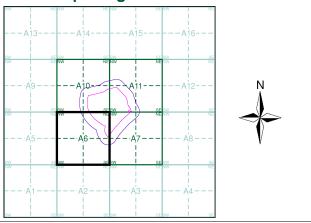
#### Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

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



#### **Historical Map - Segment A6**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080

ce:

Site Area (Ha): 20.88 Search Buffer (m): 100

#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk

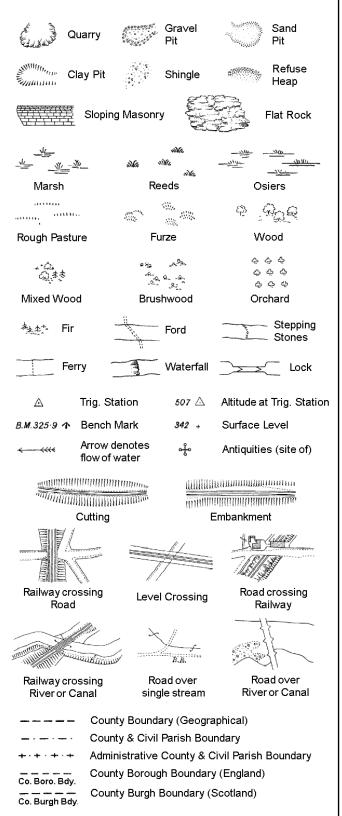


el: 0844 844 9952 ax: 0844 844 9951 (eb: www.envirocheck.c

Page 8 of 8

# **Historical Mapping Legends**

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



B.R.

E.P

F.B.

Bridle Road

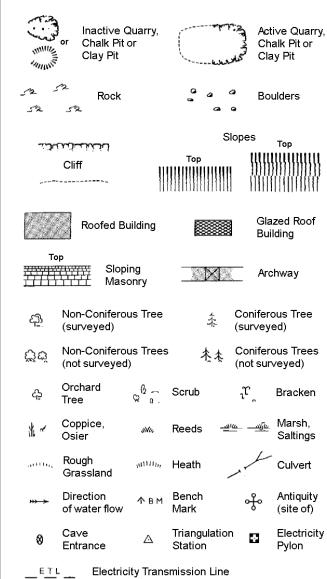
Foot Bridge

Mile Stone

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

Electricity Pylor

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



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

County Boundary (Geographical) County & Civil Parish Boundary

Admin. County or County Bor. Boundary

Symbol marking point where boundary

Civil Parish Boundary

London Borough Boundary

L B Bdy

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

S.P

Sl.

Tr:

# 1:1,250

		Slo	opes Top
	 Sitt Litishan	Top	\$\$\$\$\$\$\$ \$\$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$
52	Rock	<i>5</i> 2	Rock (scattered)
	Boulders	Δ	Boulders (scattered)
1.2			
	Positioned Boulder		Scree
C 53	Non-Coniferous Tree (sur∨eyed)	*	Coniferous Tree (surveyed)
പാധ	Non-Coniferous Tree: (not surveyed)	s 4.4	Coniferous Trees (not surveyed)
<i>A</i> 33	Orchard (2) a	Scrub	<sub>າ</sub> ຕຸ Bracken
	Coppice, Osier	Reeds 🛥	اهد <u>سیّاند</u> Marsh, Saltings
	Rough "աստ, Grassland	Heath	Culvert
***	Direction △ of water flow	Triangulatior Station	Antiquity (site of)
ETL _	Electricity Transmi	ssion Line	⊠ Electricity Pylon
\ <del>{</del> -\	231.60m Bench Mark		Buildings with Building Seed
	Roofed Building		Glazed Roof Building
	• • Civil parish	n/community b	oundary
	— District bo	undary	
_ •	— County bo	undary	
٥	Boundary	post/stone	
P			ol (note: these ed pairs or groups
Bks	Barracks	Р	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd RI	-	PW	Place of Worship
El Gen Sta	a Electricity Generating Station	Sewage P	pg Sta Sewage Pumping Station

Electricity Pole, Pillar

Fountain / Drinking Ftn.

Gas Valve Compound

El Sub Sta Electricity Sub Station

Filter Bed

Gas Governer

**Guide Post** 

Manhole

FΒ

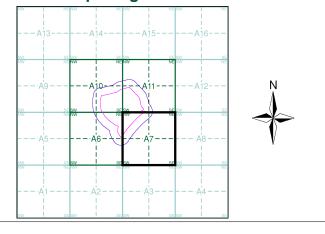
GVC

Fn/DFn

# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1883	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1975	4
Additional SIMs	1:2,500	1978	5
Ordnance Survey Plan	1:2,500	1988	6
Large-Scale National Grid Data	1:2,500	1995	7

#### **Historical Map - Segment A7**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Signal Box or Bridge

Signal Post or Light

Works (building or area)

Spring

Trough

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Tr

Wd Pp

Wks

Tank or Track

Site Area (Ha): 20.88 Search Buffer (m): 100

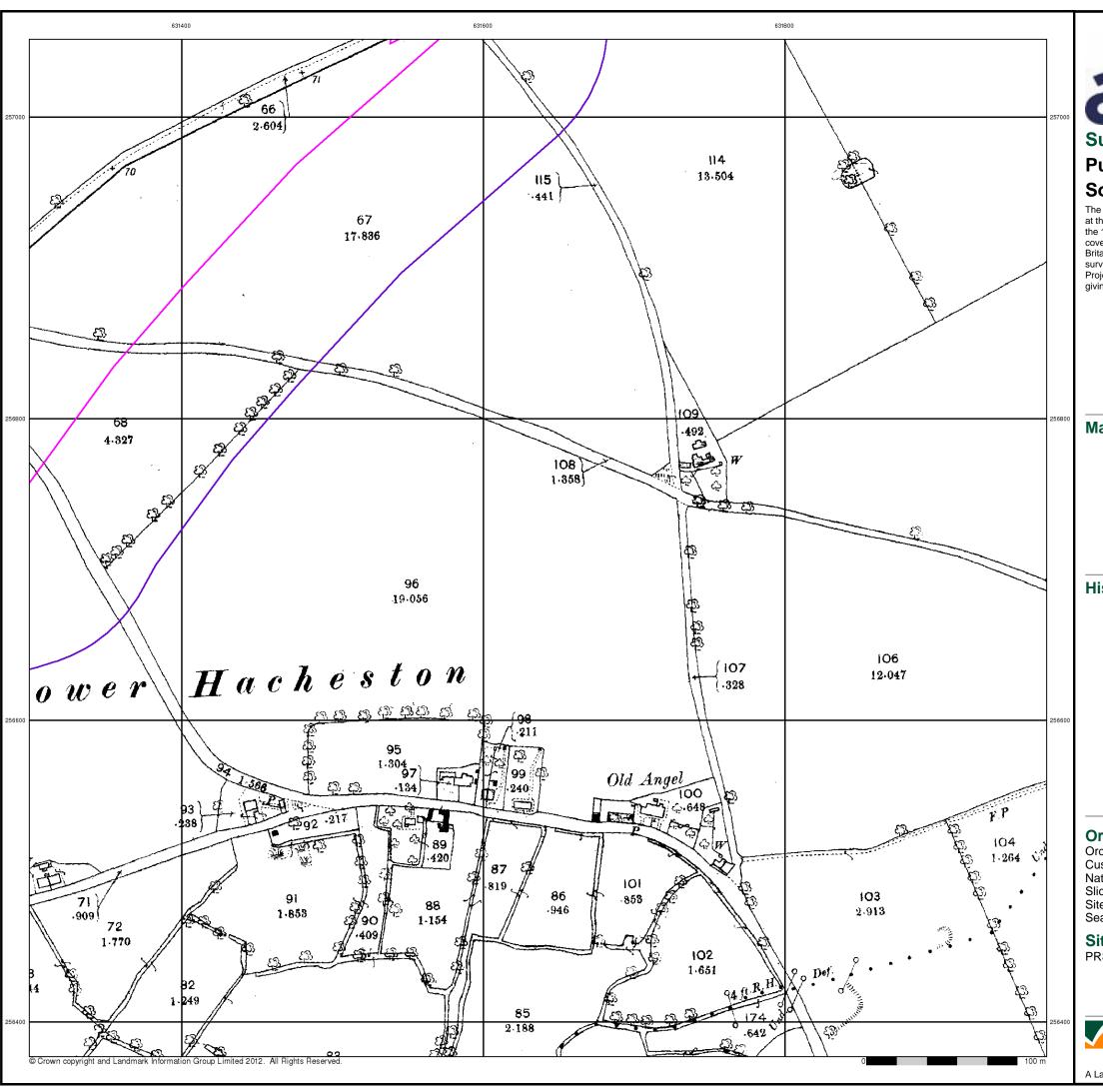
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



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Page 1 of 7

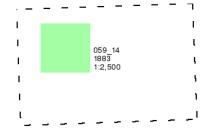




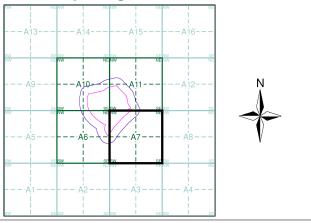
#### Published 1883 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A7**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080
Slice: A
Site Area (Ha): 20.88

aron Banor (m).

Site Area (Ha): 20.88 Search Buffer (m): 100

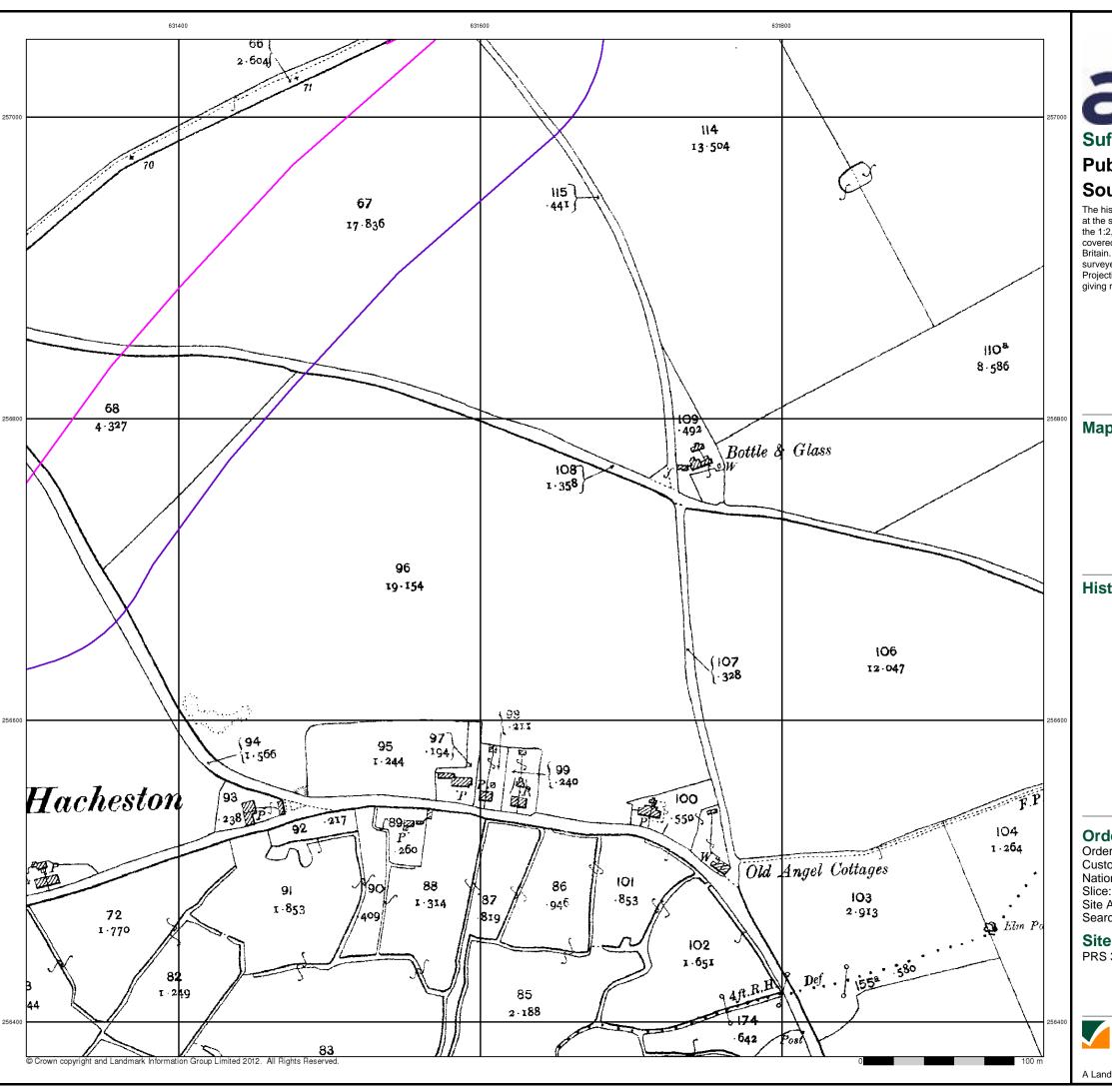
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



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A Landmark Information Group Service v47.0 10-Jul-2012 Page 2 of 7

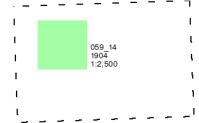




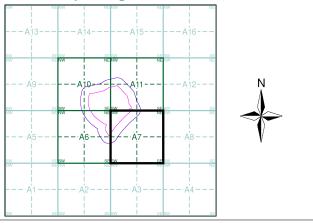
## Published 1904 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A7**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080

ce:

Site Area (Ha): 20.88 Search Buffer (m): 100

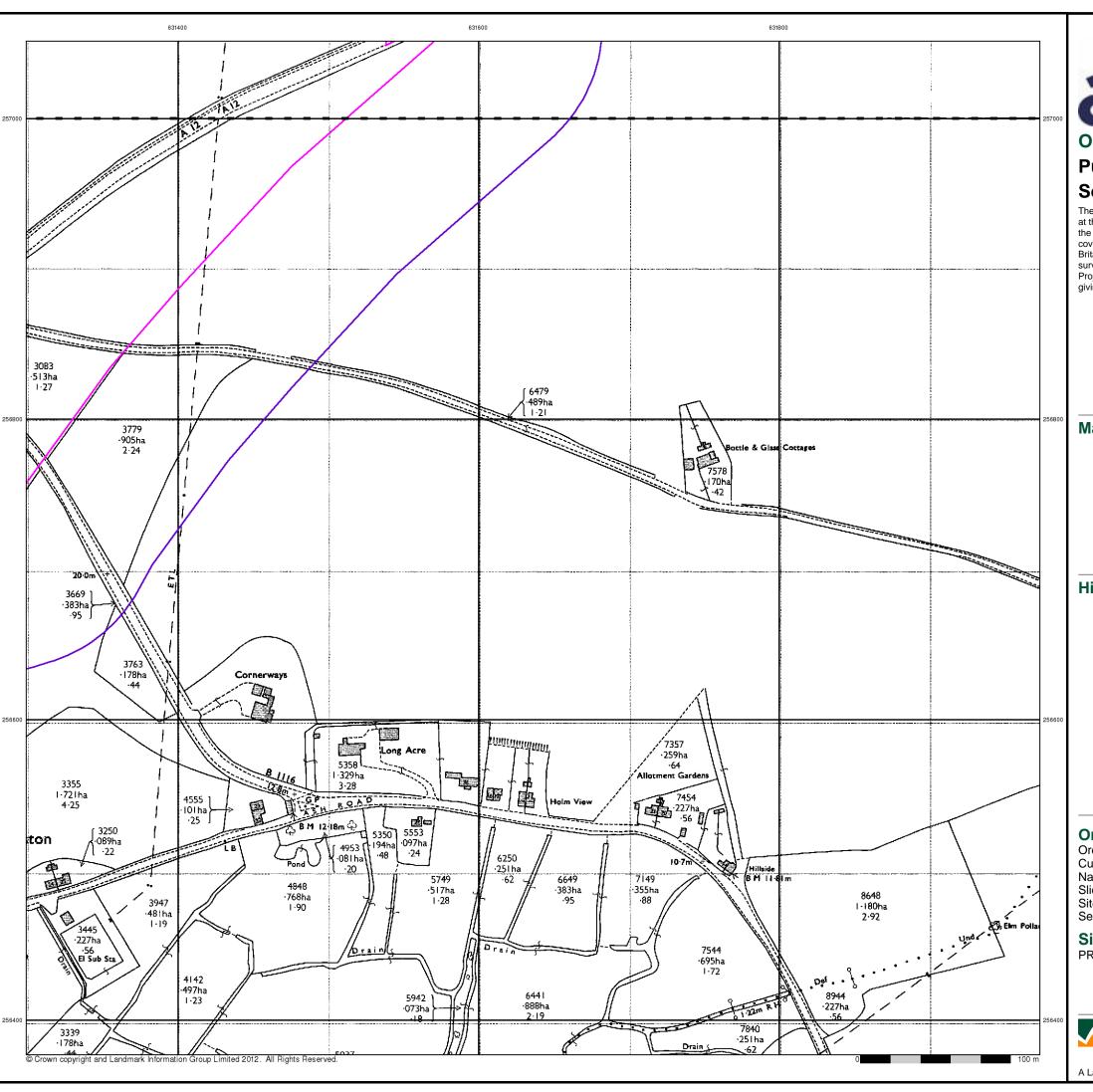
#### **Site Details**

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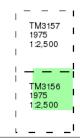




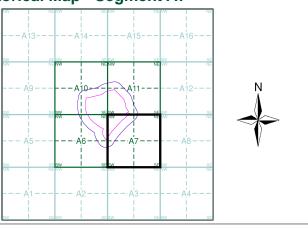
# Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A7**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080
Slice: A

Site Area (Ha): 20.88 Search Buffer (m): 100

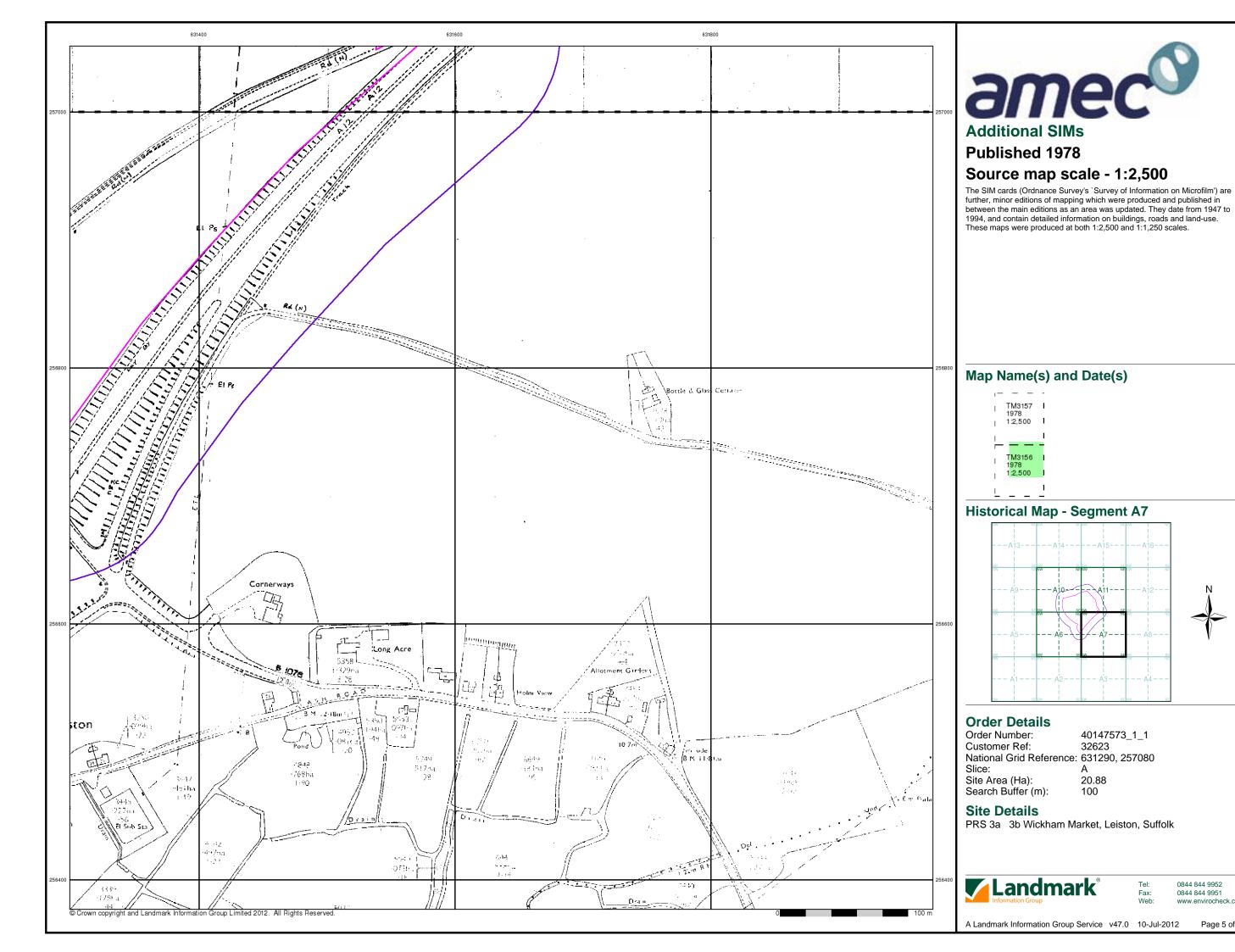
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



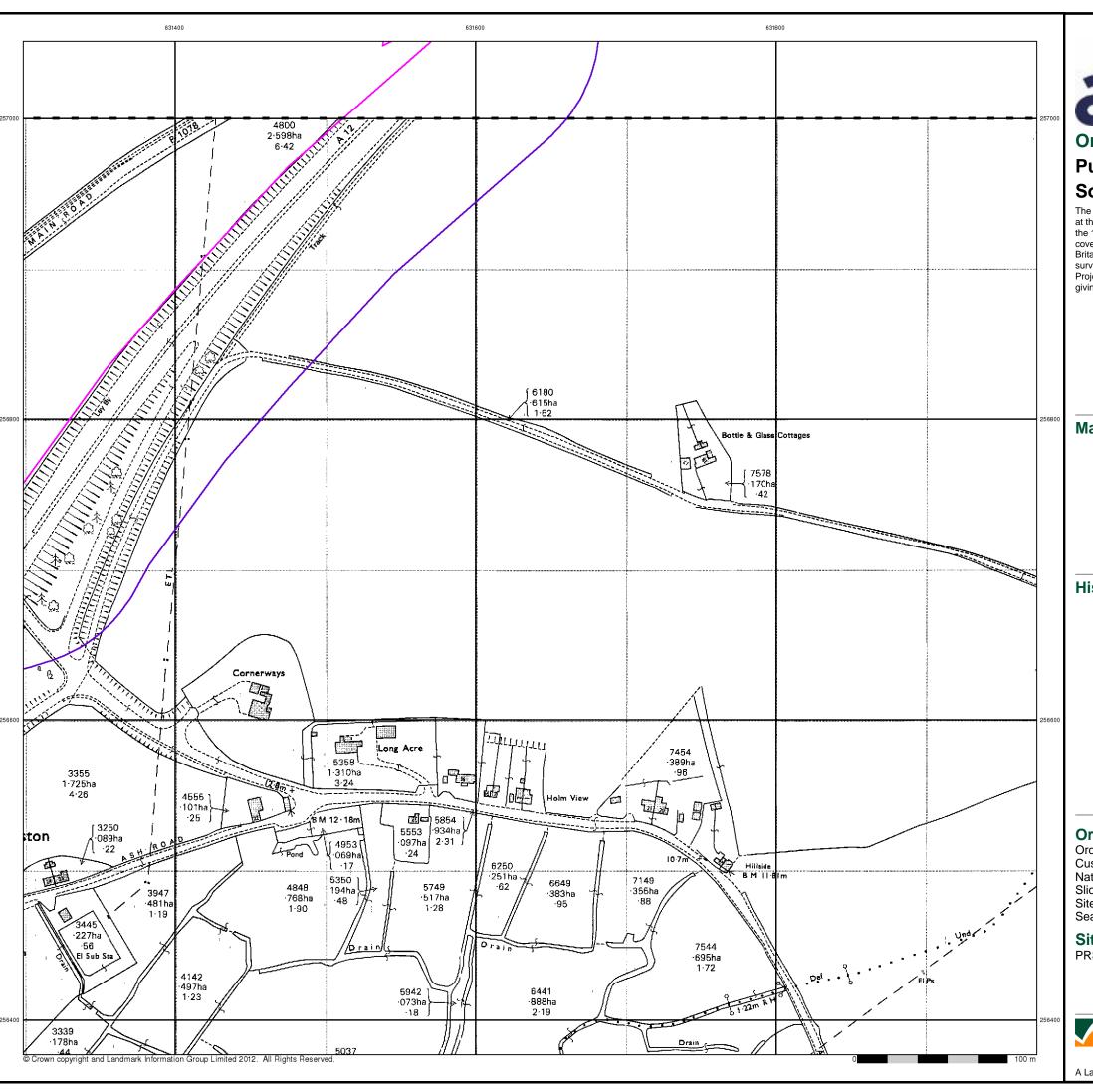
Tel: 0844 844 9952 Fax: 0844 844 9951 Web: www.envirocheck.c

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0844 844 9951

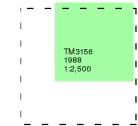




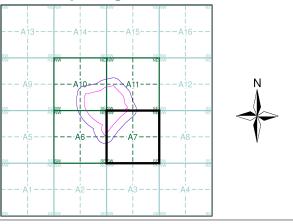
### **Published 1988** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A7**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): Search Buffer (m): 20.88 100

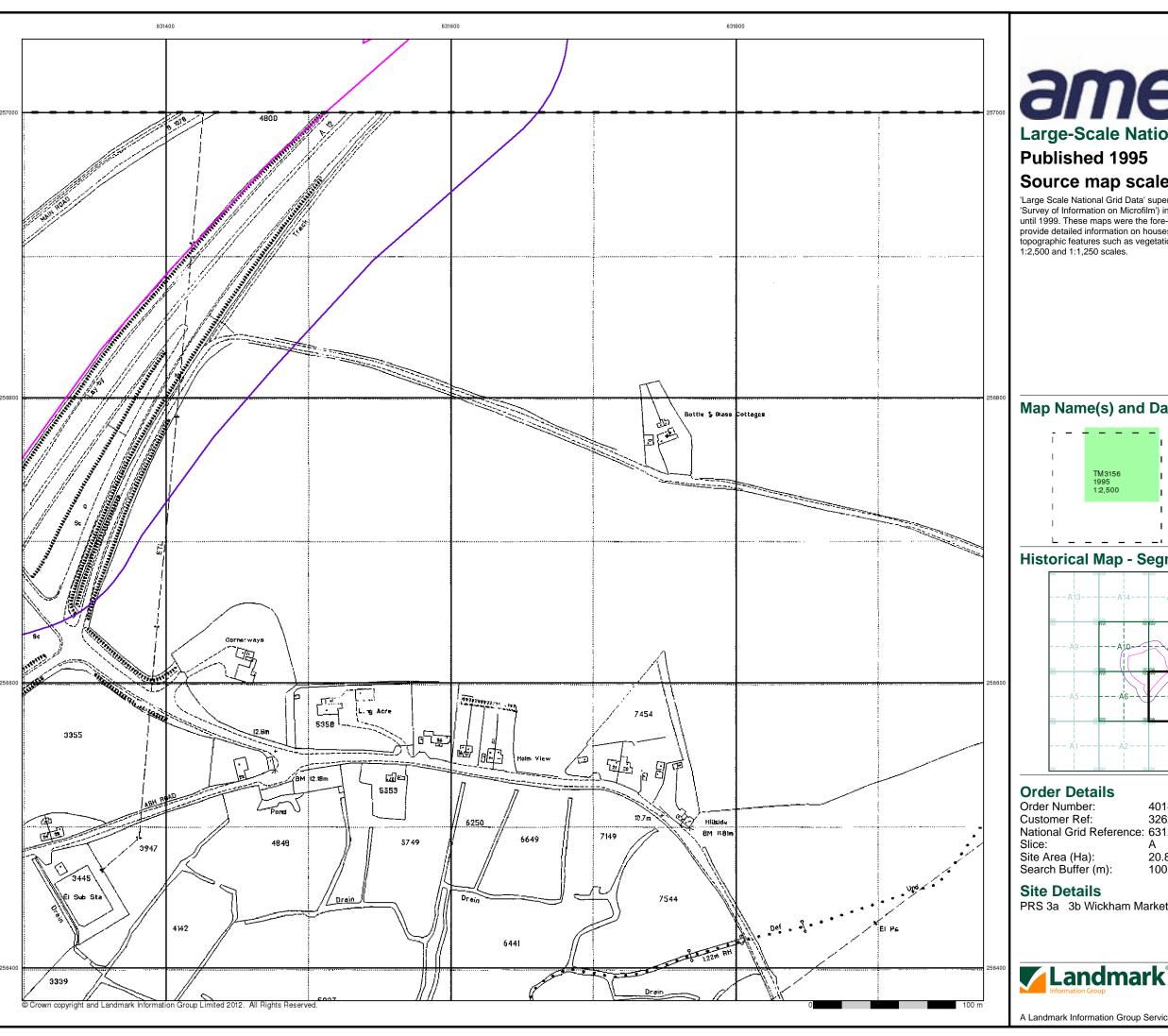
#### **Site Details**

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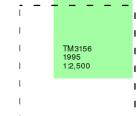




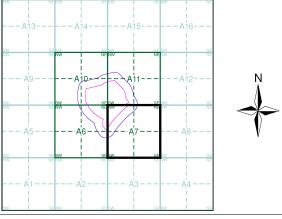
#### Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

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



#### **Historical Map - Segment A7**



40147573\_1\_1 32623 National Grid Reference: 631290, 257080 20.88

PRS 3a 3b Wickham Market, Leiston, Suffolk

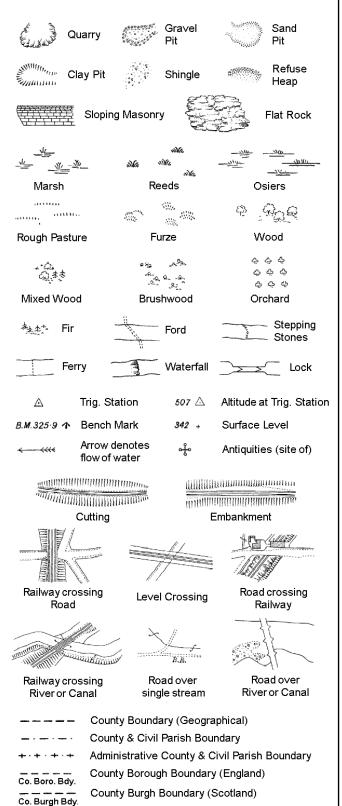


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# **Historical Mapping Legends**

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



B.R.

E.P

F.B.

M.S

Bridle Road

Foot Bridge

Mile Stone

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

Electricity Pylor

Guide Post or Board

Police Call Box

Telephone Call Box

MS

NTL

Mile Stone

Normal Tidal Limit

Signal Post

Pump

Sluice

Spring

Trough

Well

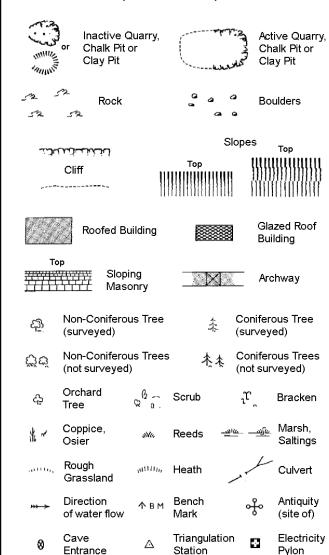
S.P

T.C.B

Sl.

 $T_T$ 

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



		Aumin. Cou	ity or Cour	ity bor. boundary
L B Bd	у <u>—</u>	London Boro	ough Boun	dary
24		Symbol mark mereing cha		where boundary
вн	Beer House		Р	Pillar, Pole or Post
BP, BS	Boundary Pos	st or Stone	PO	Post Office
Cn, C	Capstan, Crar	пе	PC	Public Convenience
Chy	Chimney		PH	Public House
D Fn	Drinking Four	ntain	Pp	Pump
EIP	Electricity Pills	ar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pill	ar	SP, SL	Signal Post or Light
FB	Foot Bridge		Spr	Spring
GP	Guide Post		Tk	Tank or Track
Н	Hydrant or Hy	draulic	TCB	Telephone Call Box
LC	Level Crossin	g	TCP	Telephone Call Post
MH	Manhole		Tr	Trough
MP	Mile Post or M	ooring Post	Wr Pt, Wr T	Water Point, Water Tap

**Electricity Transmission Line** 

County Boundary (Geographical)

Admin. County or County Bor. Boundary

Well

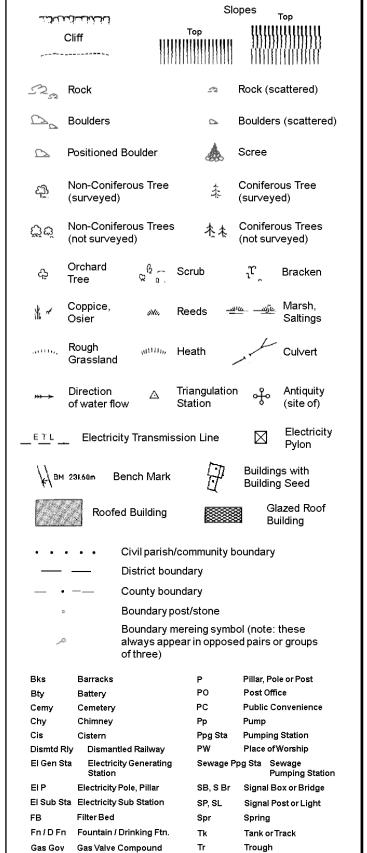
Wind Pump

Wd Pp

County & Civil Parish Boundary

Civil Parish Boundary

# 1:1,250



Gas Governer

Mile Post or Mile Stone

**Guide Post** 

Manhole

Wd Pp

Wks

Wind Pump

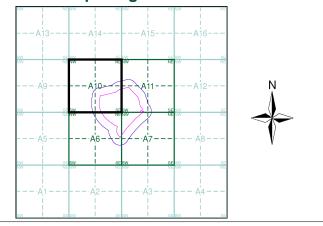
Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1883 - 1884	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1975	4
Additional SIMs	1:2,500	1978	5

#### **Historical Map - Segment A10**



#### **Order Details**

Order Number: 40147573\_1\_1 32623 Customer Ref: National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): 20.88 Search Buffer (m): 100

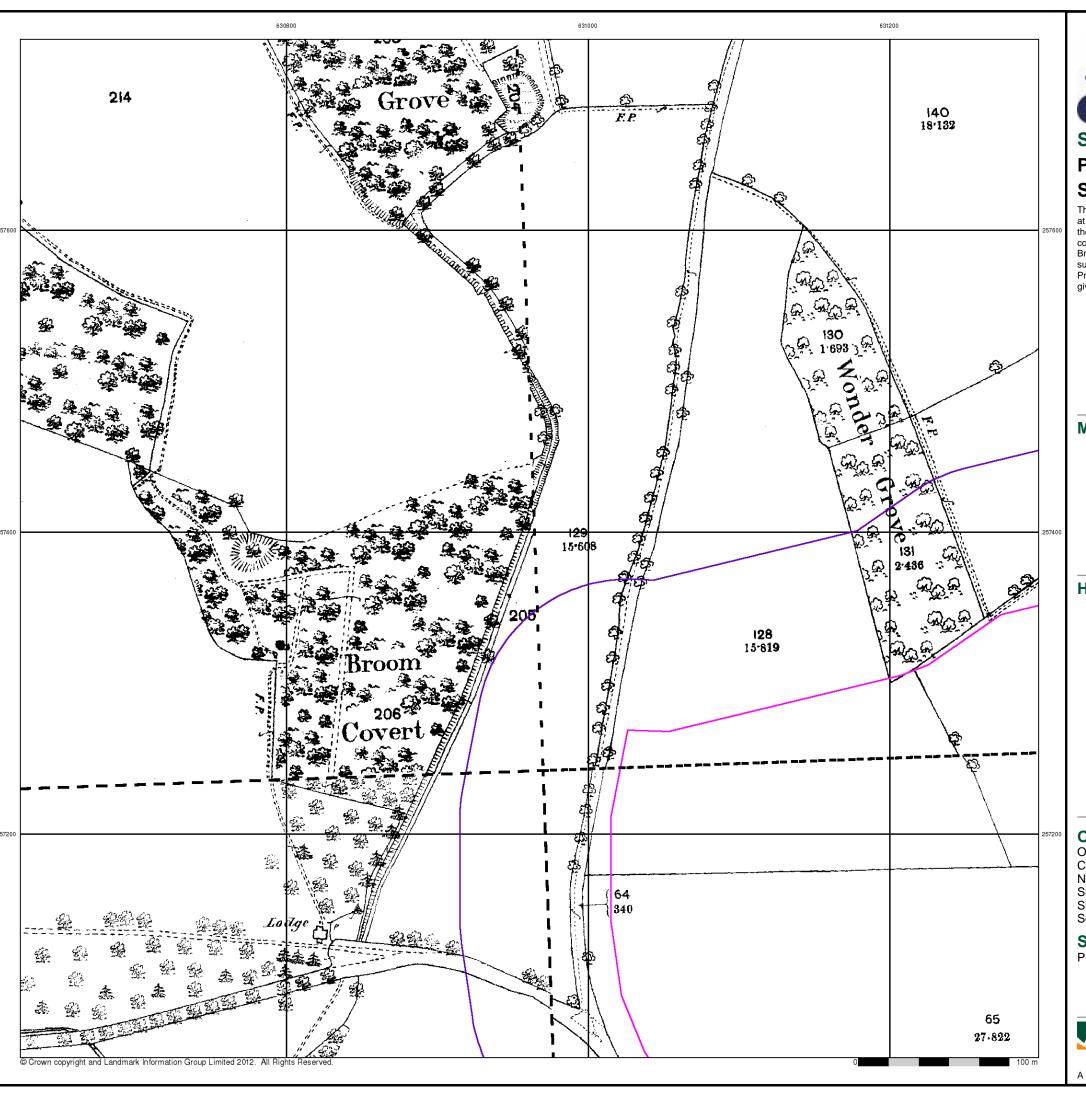
#### Site Details

PRS 3a 3b Wickham Market, Leiston, Suffolk



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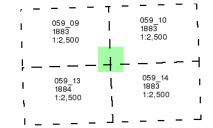




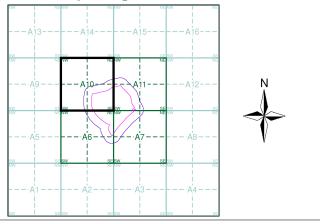
## Published 1883 - 1884 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A10**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080
Slice: A
Site Area (Ha): 20.88
Search Buffer (m): 100

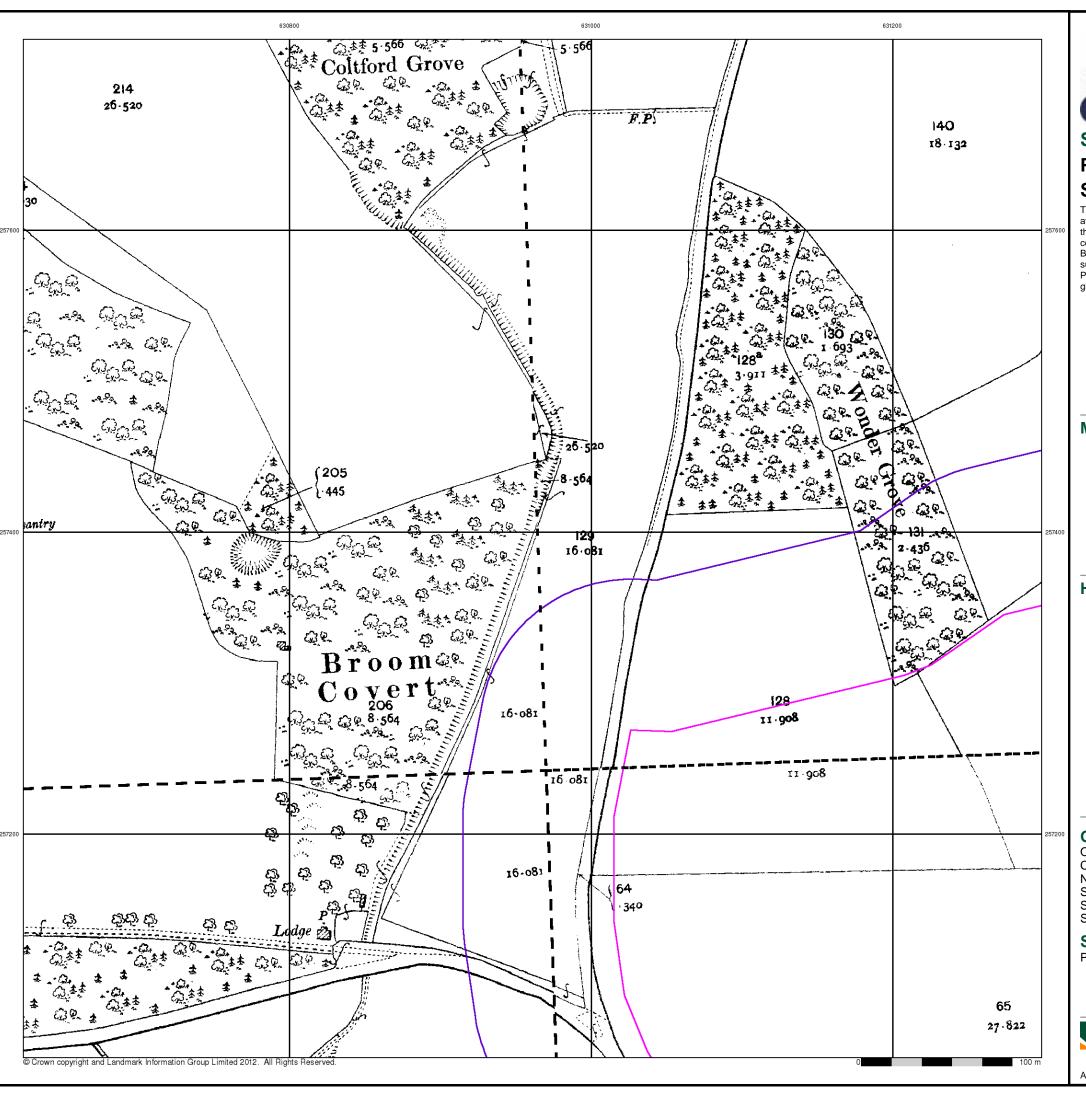
#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



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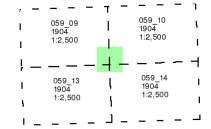




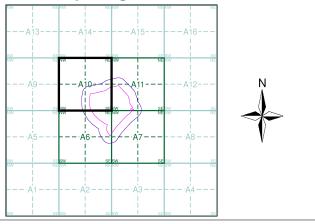
#### **Published 1904** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A10**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): Search Buffer (m): 20.88 100

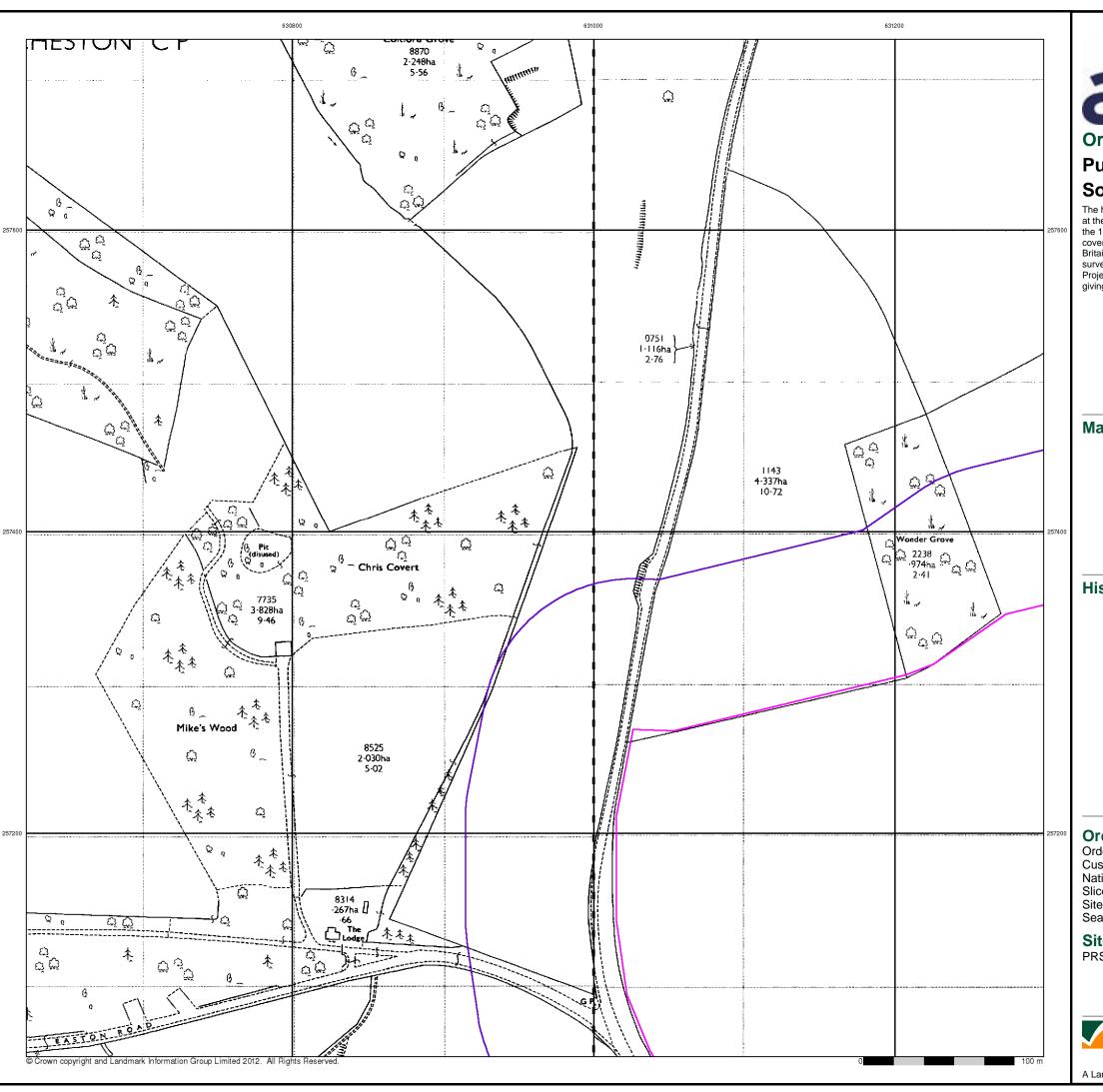
#### **Site Details**

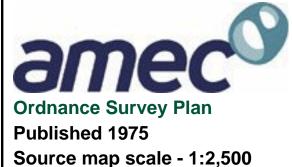
PRS 3a 3b Wickham Market, Leiston, Suffolk



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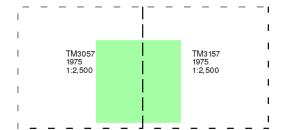
Page 3 of 5



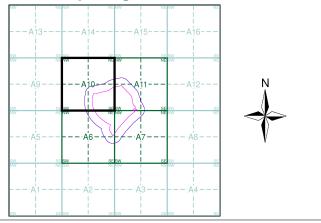


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A10**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080
Slice: A

Site Area (Ha): 20.88 Search Buffer (m): 100

Site Details

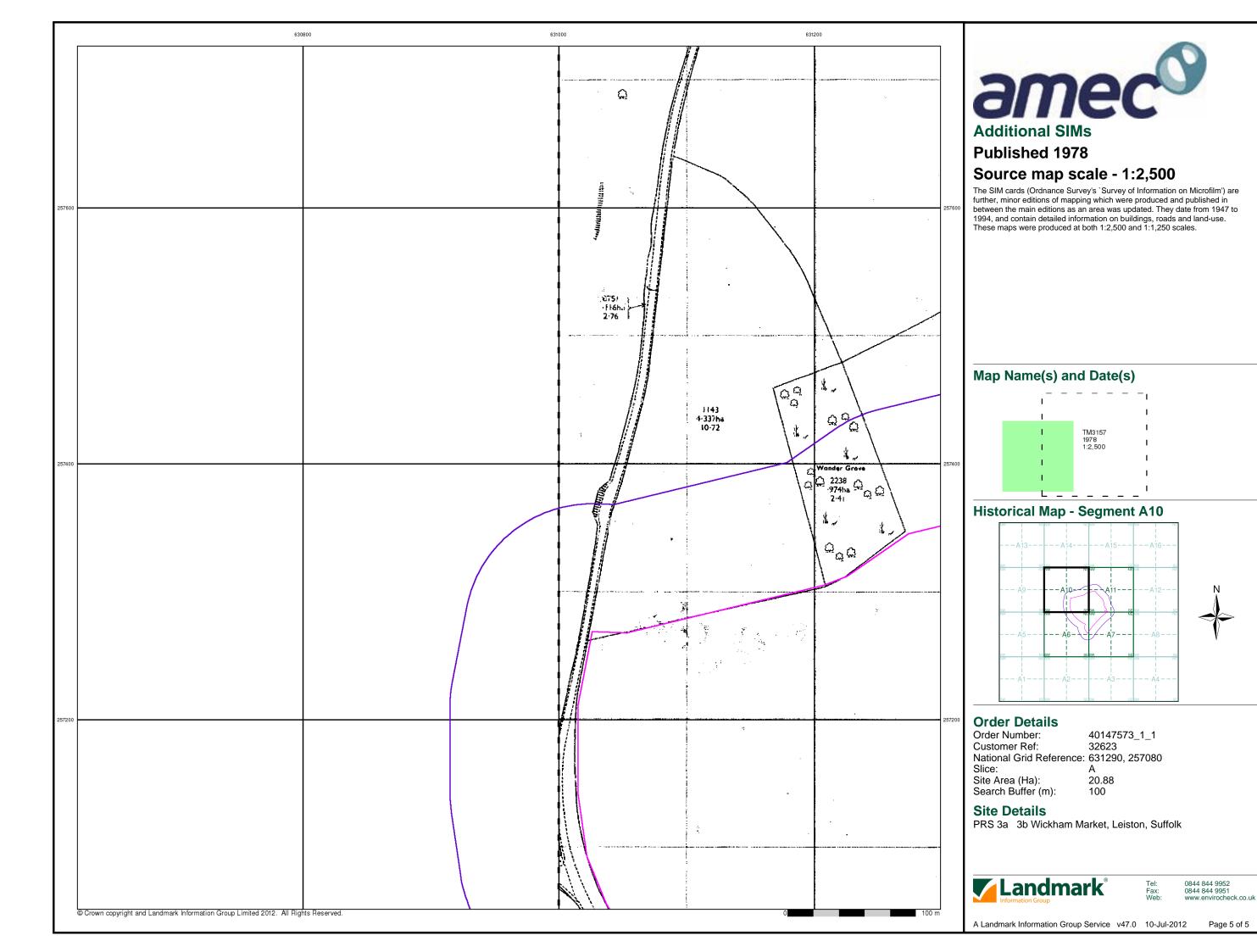
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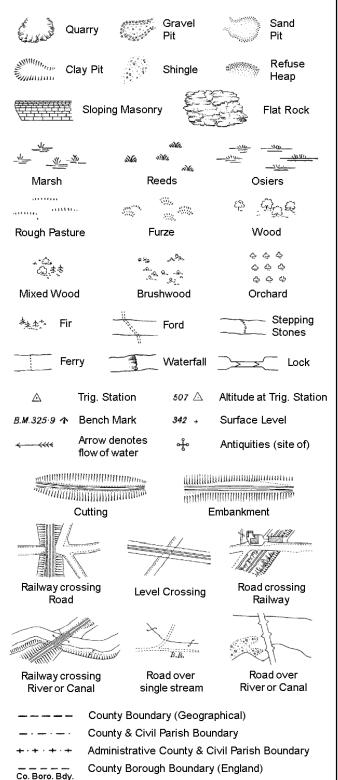
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# **Historical Mapping Legends**

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



County Burgh Boundary (Scotland)

S.P

T.C.B

Sl.

 $T_{T}$ 

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

Spring

Trough

Well

Co. Burgh Bdy.

Bridle Road

Foot Bridge

Mile Stone

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

Electricity Pylor

Guide Post or Board

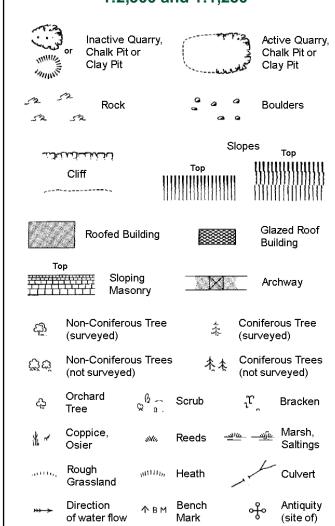
B.R.

E.P

F.B.

M.S

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



Entrance **Electricity Transmission Line** 

Cave

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

Triangulation

Electricity

GVC

MP, MS

Gas Governer

Mile Post or Mile Stone

**Guide Post** Manhole

Wd Pp

Wks

Wind Pump

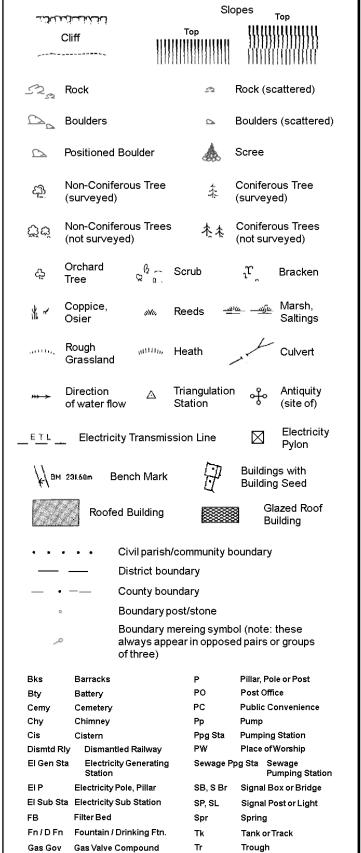
Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

÷

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

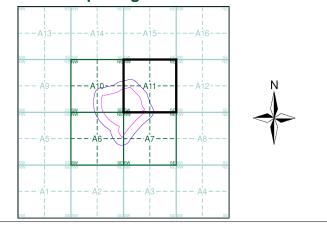
# 1:1,250



# **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1883	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1975	4
Additional SIMs	1:2,500	1978	5

#### **Historical Map - Segment A11**



#### **Order Details**

Order Number: 40147573\_1\_1 32623 Customer Ref: National Grid Reference: 631290, 257080 Slice:

Site Area (Ha): 20.88 Search Buffer (m): 100

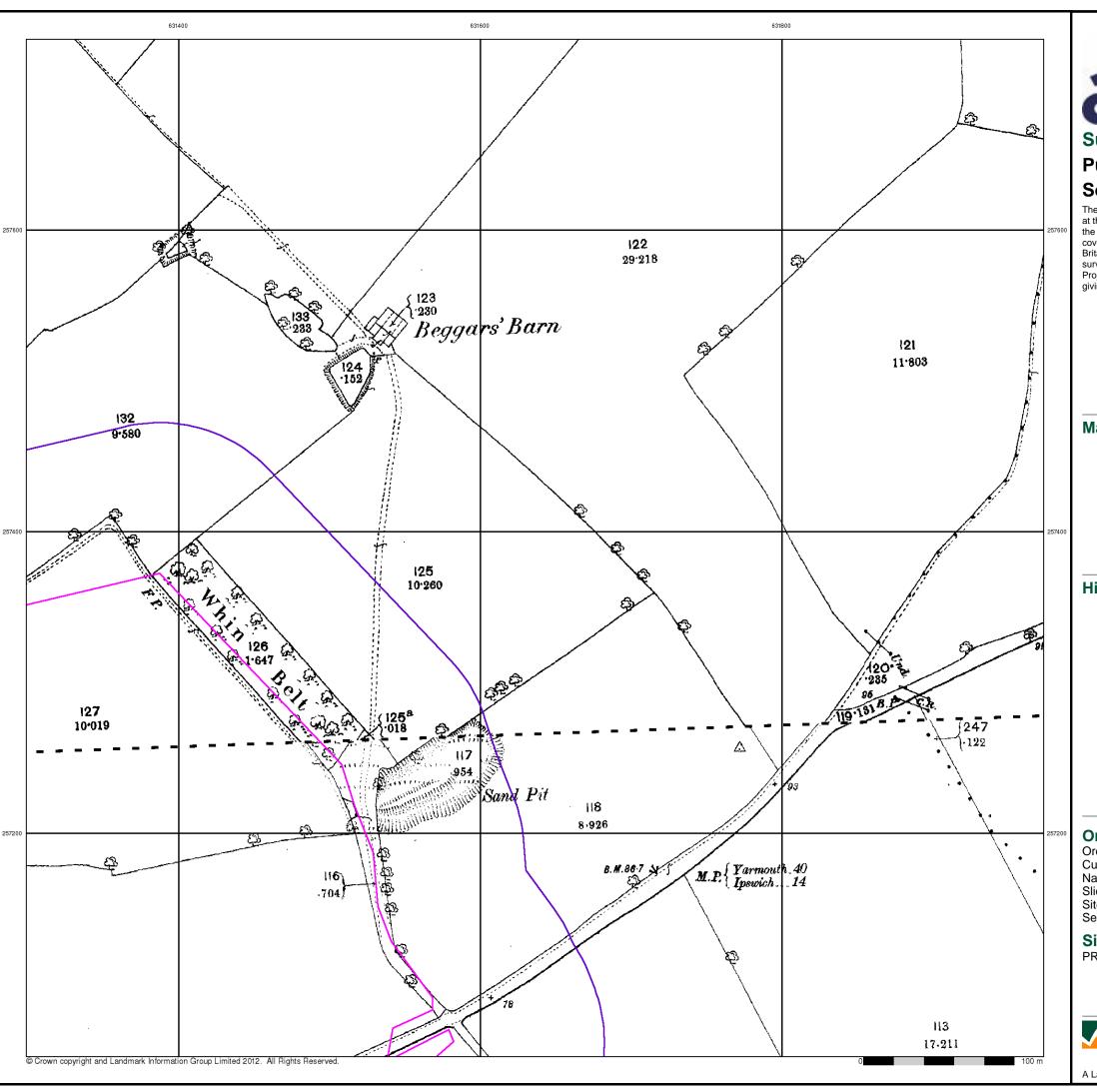
#### Site Details

PRS 3a 3b Wickham Market, Leiston, Suffolk



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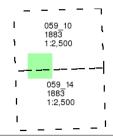




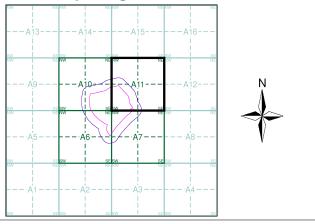
## **Published 1883** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A11**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice:

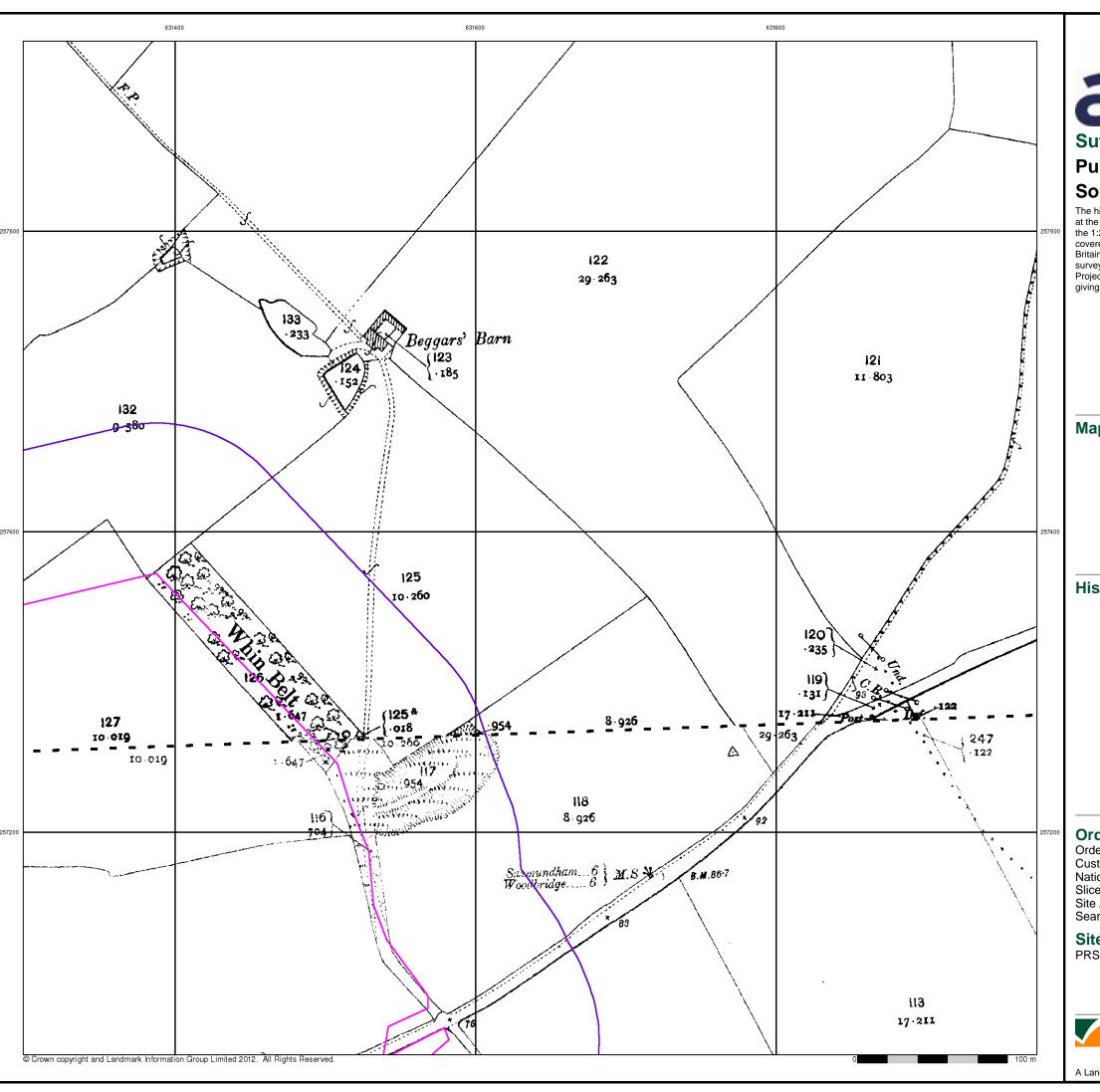
Site Area (Ha): Search Buffer (m): 20.88 100

#### **Site Details**

PRS 3a 3b Wickham Market, Leiston, Suffolk



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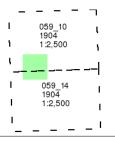




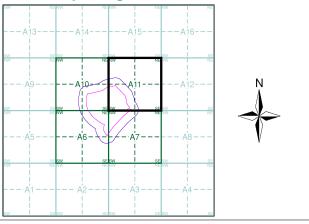
## Published 1904 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A11**



#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257080
Slice: A
Site Area (Ha): 20.88
Search Buffer (m): 100

#### **Site Details**

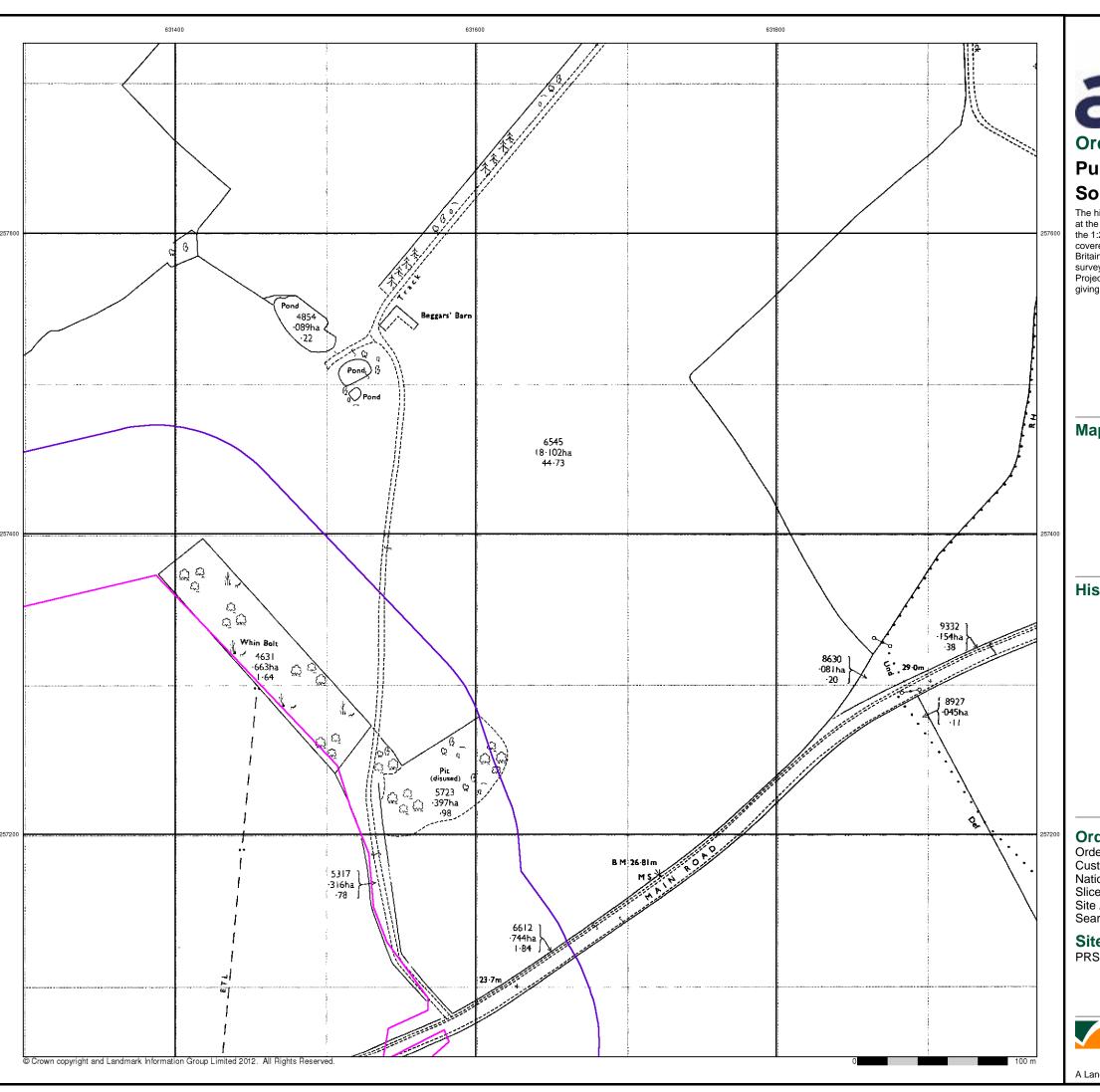
PRS 3a 3b Wickham Market, Leiston, Suffolk

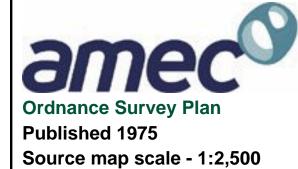


el: 0844 844 9952 ax: 0844 844 9951 (eb: www.envirocheck.co.uk

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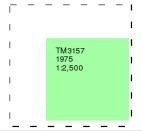
012 Page 3 of 5



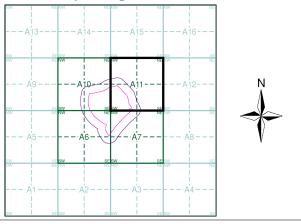


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveyes of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

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



#### **Historical Map - Segment A11**



#### **Order Details**

Order Number: 40147573\_1\_1 Customer Ref: 32623 National Grid Reference: 631290, 257080 Slice: 20.88

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

#### **Site Details**

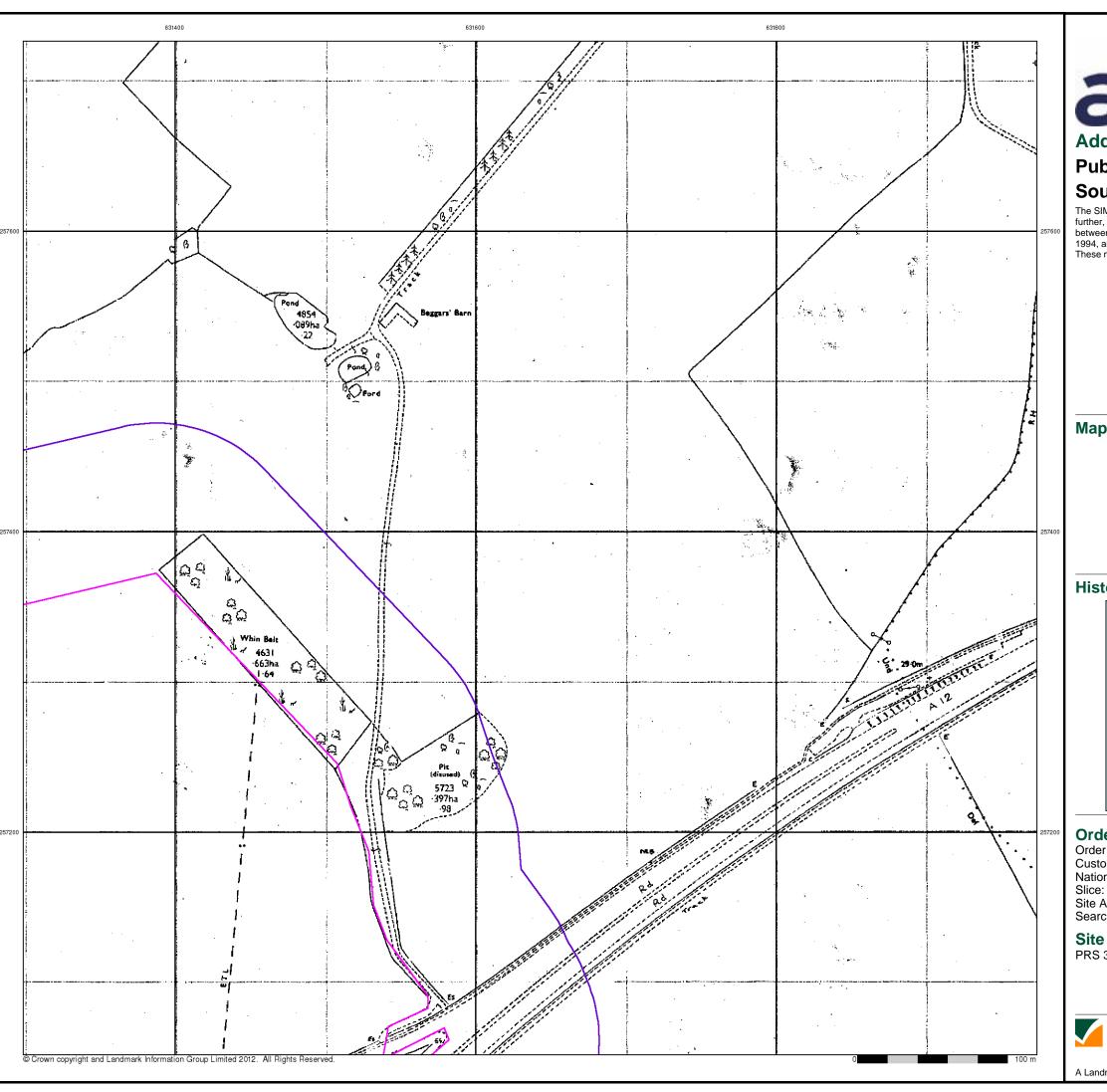
PRS 3a 3b Wickham Market, Leiston, Suffolk



0844 844 9952

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A Landmark Information Group Service v47.0 10-Jul-2012

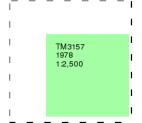




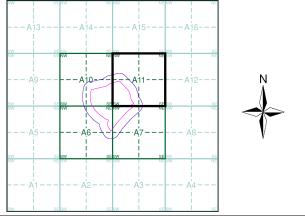
## **Published 1978** Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

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



#### **Historical Map - Segment A11**



#### **Order Details**

40147573\_1\_1 32623 Order Number: Customer Ref: National Grid Reference: 631290, 257080

Site Area (Ha): Search Buffer (m): 20.88 100

#### **Site Details**

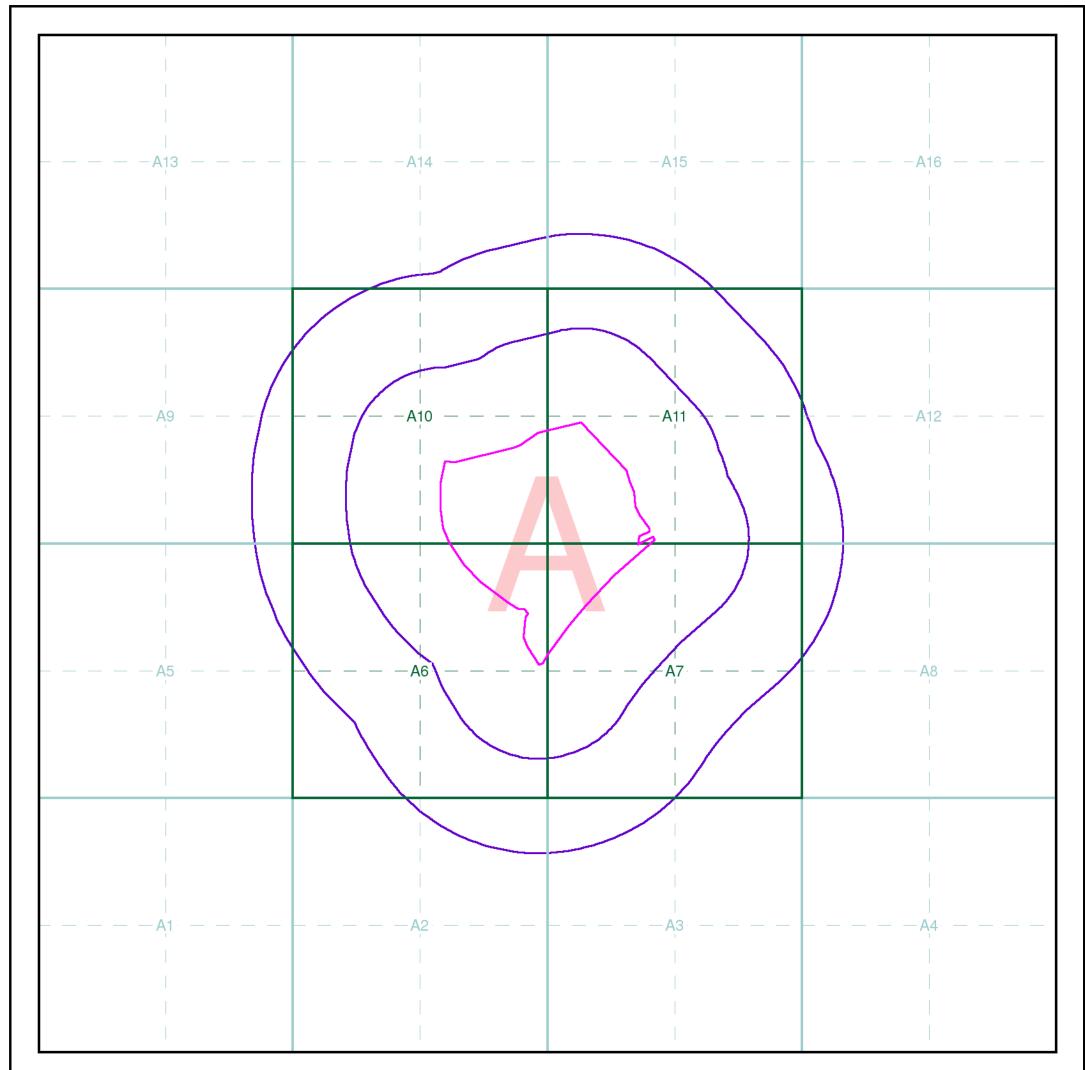
PRS 3a 3b Wickham Market, Leiston, Suffolk



0844 844 9952

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For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

#### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

#### Seamen

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

#### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:









Envirocheck reports are compiled from 136 different sources of data.

#### **Client Details**

Miss D Shankar, AMEC Environment & Infrastructure UK Ltd, Unit 1, Long Barn, Village Road, Nercwys, Mold, Flintshire, CH7 4EW

500

#### **Order Details**

Order Number: 40147573\_1\_1
Customer Ref: 32623
National Grid Reference: 631290, 257100
Site Area (Ha): 20.88

Search Buffer (m):

Site Details

PRS 3a 3b Wickham Market, Leiston, Suffolk

Full Terms and Conditions can be found on the following link: http://www.landmarkinfo.co.uk/Terms/Show/430



Tel: 0844 844 9952 Fax: 0844 844 9951 Web: www.enviroched

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# Appendix D. BGS Borehole Logs

	RILLING		SAMPLIN	G		31.	76 E 19 N	STRATA TM 35 NW 49	8	TES	TING	
ritish Geological	CASING	WATER	DEPTH	TYPE	KEY	DEPTH	LEVEL	DESCRIPTION	British Geolog	cal Surve	c g kn/p²	0
24.5.71	HA/0.2		0.4-1.0	В		0.3	26.6	Coarse SAND with gravel.	_			
	British G	eological S	1.7–2.3	В		1.3	2 <b>ទ</b> ឹល់ថ្នៃh (	Crey brown silty CLAY with chalk fragments and gravel.		E	Bitish Geo	ogical Survey
2.3	Nil_	Nil				2.3	24.6	End of Borchole.	_			
itish Geological	Survey	-	مامديدانييدانيدان		Britis	h Geological	Eurvey		British: Beolog	ical Surve	2 7	
	British G	e logical S	restratificatificati			يستلسسيلسي ليس	British (	Geological Survey		E	British Geo	logical Survey
itish Geological	Sulvey		طييناسيناسيا		Britis	h Geological	Survey		British Ceolog	ica Surve	èу	
	British G	eological Si	طسيخ المديد المبددال			عامين أيمييانيي	British (	Gedogical Survey		E	British Geo	log cal Survey
tish Geological	Survey		سلسسست		Britis	h Ge mogical	Survey	E	British Ge llog	ical Surve	≥y	
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-		oologisal-Si	ency	BORI	EHOL	E REC		Seological Survey	BORE (Sheet	EHOL.	E <sup>lis</sup> NO	legic <b>s:69</b> rvey
-		e	жplore					limited				es) 2 <sup>2</sup> .9 ;

emploration associates limited

Britisl		DRILLIES		SAMPLI	G	Deitials	Soologiaal	185 E	578474 TM 35 NW 49	Garatania	785	TING		
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		British G	ological Su	<b>0.9–1.3</b> vey	ŭ	X X X X X X X X X X X X X X X X X X		British G	Compact brown clayey sandy SILT with gravel and clay opgckets <sub>rey</sub>		Briti	sh Geolo	icalS	urvey
			1111111	1.7-1.8 1.8-2.3	D C.B.	X X X X X X X X X X X X X X X X X X X	1.8	25.8	•	(40)				
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		British G	eological S <u>t</u>	vey		•		British G	End of Borehole.		Bri	sh Geolog	icalS	urvey
Britis	n Geological §	Survey				British	Geological	Survey	British	3eologics	ıl Survey			
		British G	eological Str	vey				British 🤄	eological Survey		Brij	sh Geol <b>i</b> g	ica S	urvey
Britis	Geologica S	- Survey	بيبيلينيناسيات			Britis	Geologica!	Survey	British	Seologica	ıl Surve)			
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		British Gi	eologicarsul		EHO	LE R	ECORI			REHOI		O:H_0 )	<del>ios/-3</del>	ve)
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		British (	eological S	<b>0.9–1.3</b> irvey	;		المديدات	British G	Stiff brown silty sandy CLAY.	58	<b>14</b> Britis	<b>126 –</b> n Geological \$urve
				2.0-2.1 2.1-2.6	D C.E.		2.1	26.6	•	(43)		
ritis i (	Geological	Survey	liter free			⊜ritish	Seological :	urvey	Dense medium to coarse GRAVEL with some coarse sand.	sh Geological	Survey	
	4.1	3.8	N11 -	3.6-4.1	С.В.	0	4.1	23.6		(52)		
		British (	eological S	ırvey				British G	End of Borebole.		Briti	h Geological Surve
			*********									
itish (	Geological	Survey	استباستها			British	Geological	Survey	Britis	sh Geologica	Survey	
		British (	eological §	ırvey				British G	eological Survey		Brit	sh Geological Surve
			Luntini									
tish (	Geological	Survey	minim			Britis	Geological	Survey	Britis	sh Geological	Survey	
	review.	S							i	NTRACT:		HAM HARRET.
-			Beological Su		REHO	LE R	RECORI		enlopical Survey BO	OREHOI	E X	h Geological Surve
		<del> </del>	exp	loratio	o n	ass	ociate	es lin				res) 21.7 ~

	T			Equipment & Meth					m No.	7708						ENGI	NEER	ROUG	HTON A	ND PAR	TNERS			HOLE NUMBER		
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1			H					22.50		1.00	1.20	.	1 1		Joseth desaity	1	10			l	l	l		-		
İ				Orange brown :	very claymy fine to	coarse SAM	ID.			(0.55)		-			that carried out					l	l	l				
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										-																
		DRY								<u> </u>							L									
WATER			II	STRUMENT (PIEZ)			MPLE AND T							-	SPT N value V	Vere :	strength I	Mar.			The D	rector			HOLE NO	6
1	ret weter eist sbeequent we			Tubing Porous	A Concrete B Sund	D 8	Small dist				iltu vane leet indard penetration	tool			Number of blows where full	Peak/	Nemould	H			Eneter	m Constr		regramme Division		
3>			ľ	element	C Gravel	w	Water east	<b>ple</b>	_		T with solid cone members test		/2		300mm penetration not achieved PP Number of blowe where 150mm		firmed oon ometer o				40 - 5 Bedfo	3 Golding rd	pton Floa	4.	FIGURE	<b>A</b>
l v	Highest wa	ter level	II	Perforated	D Sentonite seal  E Sentonite /cement	_	(Blowcoun	d in field			ricesary teet sket (hand) penets	ometer	14	٠.	seating drive not achieved	(3) nue	mber of d	otor mine	utions in	range					Sheet	1
1 -	in open hol			eection	P Backill		records so	dumn)							Incremental blowcounts per 75mm <425	<b>Tempi</b>	** pass	mg 4204	un oneva	'	1				of	ij

	T		Π	Equipment & H	Sethods			Locatio	m No.	7706		_				т									1		
1		1	"		to base using Ford 555c wheeled sed. Logged on excavated meteria			Locatio								- 1	ENGIN	EER	ROUG	HTON A	ND PA	RTNERS			HOLE NUMBER		
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				in parts ve fissured CL subangular fine to coa flint grave occasional Fissures, p rought of G Below about stiff with orange brow (<10mm)	AY with much to subrounded rse chalk and 1 and cobbles. lanar and eological Survey 2.00m, very occasional	ed fill	int boulder (400m)	23.16		0.40 (#.40 (#.40 pen 3.00	1:50		Britis	Geo	logical Survey		64	15	15	37	22			Br	ฟิรh Geological S	Gurvey	
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1> First				Tubing Poroue element	A Concrete  B Send C Gravel	0 8 W	Small die	lurbed earns	nple .	9 (Star	tu vane teet idard penetration to with solid cone	<b>••</b> •			her of blows where full	Pe	ine etrer	oulded	m²	****	- 1		Constru		gramme Division	HOLE NO	7
v +	ligheat wate open hole	element C Gravel W Water D Bantonite seal U Undiet phoet water level Perforated E Bantonite /coment grout (Blowd						ed eample of in field	•	K Perm	neability test ket (hand) penetron	neter	(26	) Num	per of blowe where 180mm ng drive not achieved mental blowcounts per 75mm <42	(3)	netrome number	ter call of dete	brated in reinatio	kg/cm² ne in ra	_ I	ee - 53 Bedford		on Road,		FIGURE	^

		, -	T	Equipment & Methods	Local I.		708		_			-LENG	INEER	ROUG	HTON A	ND PA	RTNERS			HOLE NUMBER	1A	
			"	Dando 150 cable tool boring in 150mm diameter from G.L. to 20.00m. 150mm diameter casing set to 16.90m.	Location	٠,	12 VICKH	IAM MARKET TO S	SAXMUND	HAM IMPR	DVEMENT.	FIEL	DWORK	AND LO	GGED B	Y	SML			FIGURE		
DATE/TIME	DEPTH	DEPTH	1.						***		Date	- Lus	ORATOR	Y TESTI	NG BY		SML			SHEET 1	of	
AT	Britis	h G <sub>a</sub> aol	ogi <b>∉</b> a	Core ad set for Department of Iransport.	Ground	. A.O.D.	Britis	1824.4 €	01100	rvey	30.07.91	1			MTORY		m <del>Ge</del> o a	nogic	ar Sui			
ОЕРТН	CASING	WATER	z		27.76	1.0.0.		7200,6 H	ples/Tes	ıts .	te 31.07.91	-	Т	T	T	1	Bulk			OTHER TESTS	AND NOTES	
				Description	Reduced	Legend	Depth (Thick)	Depth	Sampl		field Records	*		PL.	l u	P1	Deneity	kN/m²	MCV			
	(m)	(m)				-	(10102)		Type	No.		<42	5 *	+*	<b>+</b> *	<del>  "</del>		NOW MIT				
31.07 \$1 .0000	3 00	ar		British Geological Survey Open holed to 5 00m.	27.76		(\$.00)			Britis	n Geological Survey									British Geologica	ıl Survey	
	Britis	n Geol	1	Dense light brown fine to coarse SAND with some subangular to rounded fine to medium gravel of flint and chalk with rare subangular coarse opavel of flint.	22.76		5.00 (1.00) Britis 6.00	4.75 5.00 - 5.50 h Geologic 6.00 - 6.50	al Su	9 H-5					E	Britis	Geo	ogic	il Sui	<b>-</b>	3178	TM:
				Medium dense becoming dense below 7.50m light brown fine to coarse SANO with rare subangular fine gravel of flint.			(3.80)	7.50 - 8.00	•		2,4/6,9,12,13									-	8 57214	35 NOW /5
				Dense light brown fine to coarse SAND and subangular to rounded fine to coarse GRAVEL of flint.	17.96		1,80	9.00 - 9.10 9.80		12 <b>#.5</b> Britis	n Geological Survey									British Geologica	il Survey	
WATER			N	STRUMENT (PIEZ) SAMPLE AND							ART 11	v v	e etrengti	. hW-F			The D	irector			HOLE NO	1A
	et water etri			Tubing A Concrete D Small d	inturbed of sturbed or			eltu vane leet andard penetration	teet		Number of blows where full	Pee	k/Remout	ded			Easte	rn Const		Programme Ohrleion		
2> 5ub 3>	beequent we	eler etriker	•	element C Gravel W Water 6	emple		C 8P	T with solid cone			300mm penetration not achieved		onfined or strometer				40 - 5 Bedfo		gion Ros	<b>M</b> .	FIGURE	^
		and bear	-		urbed earn ount in fiel			rmeability test cket (hand) penetr	rometer		Number of blows where 150mm seating drive not achieved	(3) r	number of	determi	natione k	range					Sheet	-
	Higheet we In open hol		11		oolumn)						Incremental blowcounts per 75mm <4 (or part thereof) in field records	26 <b>8e</b> m	ęła % pe	eeing 42	Sum eiev	•					of .	2

		- <sub>i</sub>			Equipment & Methods	Local	<b>.</b>	708						ENGI	NEER	ROVO	HTON	IND PAR	TNERS			HOLE NUMBER	1A	
	DEPTH	.   .	ОЕРТН		As sheet 1	Location		VIS AICK	HAM MARKET T	O SAXM	UNDHA	I IMPROVE	ENT.	FIELD	WORK A	ND LOC	OGED 8	Υ	OML			PIGURE	A	
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AT	-04				Department of Transport.				As she			,				LABOR	ATORY	TESTIN	•					_
DEPTH	CASING	۱,	WATER	1			Τ		l ''''	Samp less	Tests				Τ	Ī.,	Ι	_	Bulk		MCV	OTHER TEST	9 AND NOTES	9
					Description	Reduced	Legend	(Thick)	Depth		ep le	Test	Field Records	<425		PL	- L	F	Deneity Mg/m3	CU CU				
	(m)	-	(m)	Н			1.			Typ	<b>***</b>			1	1	<u> </u>	-	-	-					
					SAMD AND GRAVEL (As sheet 1)	17.26	1000	(0.70) 10.50																
						17.44			10.50 - 11.	∞   s	14	n-59	3,4/7,10,15,17		1				l					
- 1					David Mark have files to coope 5440 with		100	ŀ								1	ı					-		
- 1					Dense light brown fine to coarse SAMD with rare subangular fine to medium grave! of		20	(1.50)							1	1		l	1					
					flint.		•								1	1								
		1				15.76	1000	12.00								1	1	ı				-		
- 1					British Geological Survey		170	-	12.00 - 12.	<b>∞</b>   •	18	itish G	5,7/10,15,10,21 ological Survey	1			ı	ı				British Geologic:	al Survey	/
							\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\																	
					Very dense orangish brown coarse SAND with a little subangular to rounded gravel of flint.		300	(1.50)														-		
							1																	
						14.26	•	13.50			١.,	n-82					1							
							line.		13.50 - 14.0	× 1	16	m-62	4,6/9,12,14,17,					1				-		
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## Appendix E. Zetica UXO Map

#### **UNEXPLODED BOMB RISK MAP**

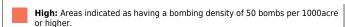


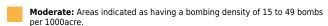
#### SITE LOCATION

Map Centre: 631717,257322



#### **LEGEND**





Low: Areas indicated as having 15 bombs per 1000acre or less.













transport





How to use your Unexploded Bomb (UXB) risk map?
The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment\* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment\* is necessary.

#### What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything? If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our pre-desk study assessments (PDSA)

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 email: uxo@zetica.com

web: www.zeticauxo.com

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (https://zeticauxo.com/downloads-and-resources/risk-maps/)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

\*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.





# Appendix F. Definitions of Probability and Consequence

Table F.1 - Risk estimation - classification of probability

Classification	Definition of the probability of harm / pollution occurring
High Likelihood	The contaminant linkage exists and it is very likely to result in harm / pollution in the short term, and/or will almost inevitably result in harm / pollution in the long term, and/or there is current evidence of harm/pollution. Likelihood is defined as more likely than not and meets the definition of 'significant possibility' within Part 2A Contaminated Land Statutory Guidance.
Likely	The source, pathway and receptor exist for the contaminant linkage and it is probable that harm / pollution will occur. Circumstances are such that harm / pollution is not inevitable, but possible in the short term and likely over the long term. Likelihood is defined as reasonably possible and meets the definition of 'significant possibility' within Part 2A Contaminated Land Statutory Guidance.
Low Likelihood	The source, pathway and receptor exist and it is possible that harm / pollution could occur. Circumstances are such that harm/pollution is by no means certain in the long term and less likely in the short term.
Unlikely	The source, pathway and receptor exist for the contaminant linkage but it is improbable that harm / pollution will occur even in the long term.

Table F.2 - Risk estimation - classification of consequence

	•
Classification	Definition of consequence
Human Health	Receptors – Site end user or other sensitive receptor
Severe	Acute damage to human health based on the effects on the critical human receptor. Concentrations of contaminants above appropriate site specific assessment criteria. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Medium	Chronic damage to human health based on the effects on the critical human receptor. Concentrations of contaminants above appropriate site specific assessment criteria. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Mild	No appreciable impact on human health based on the potential effects on the critical human receptor. Concentrations of contaminants above generic assessment criteria but below appropriate site specific assessment criteria.
Minor	No appreciable impact on human health based on the effects on the critical human receptor. Concentrations of contaminants below appropriate generic assessment criteria.
Human Health	Receptors – Site construction workers
Severe	Exposure to hazardous substances resulting in a reportable death, major injury, 3-day injury or illness/disease under RIDDOR.
Medium	Exposure to hazardous substances resulting in a dangerous occurrence reportable under RIDDOR. Exposure to hazardous substances resulting in exceedance of a workplace exposure limit.
Mild	Exposure to hazardous substances resulting in limited effects such as headache, dizziness, nausea. Exposures below the workplace exposure limits. Not reportable under RIDDOR.





	SINC*LAVALLIN Member of the SN
Classification	Definition of consequence
Minor	Minor exposure to hazardous substance resulting in no appreciable ill health effects.
Controlled Wa	ter Receptors
Severe	Pollution of a Principal Aquifer within a source protection zone or potable supply characterised by a breach of drinking water standards. Pollution of a surface water course characterised by a breach of an Environmental Quality Standard (EQS) at a statutory monitoring location or resulting in a change in General Quality Assessment (GQA) grade of river reach. Discharge of a List I or List II substance to groundwater. Pollution meets Part 2A Contaminated Land Statutory Guidance definition.
Medium	Pollution of a Principal Aquifer outside a source protection zone or a Secondary A Aquifer characterised by a breach of drinking water standards. Pollution of an industrial groundwater abstraction or irrigation supply that impairs its function. Substantial pollution but insufficient to result in a change in the GQA grade of river reach Pollution meets Part 2A Contaminated Land Statutory Guidance definition.
Mild	Low levels of pollution of a Principal Aquifer outside a source protection zone or an industrial abstraction, or pollution of a Secondary Aquifer. Low levels of pollution insufficient to result in a change in the GQA grade of river reach, pollution of a surface water course without a quality classification.
Minor	No appreciable pollution, or pollution of a low sensitivity receptor such as a non-aquifer or a surface water course without a quality classification
Property Rece	ptors – Buildings, Foundations and Services
Severe	Catastrophic damage to buildings, such as explosion. Catastrophic failure of foundations and services. Substantial damage to a Scheduled Monument significantly impairing the by reason of which the monument is scheduled. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Medium	Substantial damage to buildings and foundations rendering the structures unsafe. Substantial damage to services impairing their function. Significant damage to a Scheduled Monument significantly impairing the reason of which the monument is scheduled. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Mild	Significant damage to buildings and foundations but not resulting in them being unsafe for occupation. Damage to services but not sufficient to impair their function. Damage to a Scheduled Monument but no significant impairment to the reason of which the monument is scheduled.
Minor	Easily repairable damage to buildings, foundations and services.
Property Rece	ptors – Crops and Livestock and Ecological Receptors
Severe	Substantial loss in the value of crops or domestically-grown produce. Death to livestock, domesticated animals or wild animals subject to shooting or fishing rights. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Medium	Substantial diminution in yield (over 20% reduction) of crops or domestically-grown produce. Serious disease or other serious physical damage to livestock, domesticated animals or wild animals subject to shooting or fishing rights. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Mild	Harm to crops but not resulting in a substantial loss in value or diminution in yield (less than 20% reduction). Limited harm in terms of disease or other physical
	NOT PROTECTIVELY MARKED





	Classification	Definition of consequence
•		damage to livestock, domesticated animals or wild animals subject to shooting or fishing rights.
•	Minor	No appreciable harm, or harm to a low sensitivity receptor.





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#### SIZEWELL C PROJECT – ENVIRONMENTAL STATEMENT

#### **NOT PROTECTIVELY MARKED**

VOLUME 4, CHAPTER 11, APPENDIX B : CONCEPTUAL SITE MODELS



#### SIZEWELL C PROJECT – ENVIRONMENTAL STATEMENT

#### **NOT PROTECTIVELY MARKED**

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#### **Plates**

None provided.

#### **Figures**

None provided.



## **Conceptual Site Models**

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Table 1.1: Construction phase conceptual site model.

Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline			Constructio Mitigation.	n With Primary	And Tertiary	Secondary Mitigation	Construction Secondary Mi	With Primary, Titigation.	ertiary And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category
On-site:  Made Ground	Human health:	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Low likelihood.	Mild	Low risk.	Receptor not present.			investigation	Receptor not present.		
associated with the infilled disused sand pit, mounds and disturbed ground in the south-west	On-site.	Construction/ maintenance workers.	soil, soil-derived dust and water.  Inhalation of contaminants in soil, soil-derived dust, fibres	Receptor not present.			Low likelihood.	Mild	Low risk.	undertaken post planning to inform the detailed design	Unlikely	Mild	Very low risk.
of site:		Users of the new park and ride.	and gas/ vapours.	Receptor not present.			Receptor not present.			and confirm the ground	Receptor not present.		
Beggars Barn in north- west of the site,	Human health:	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	conditions and contamination status of the site	Unlikely	Minor	Very low risk.
cattle and dairy farming.  Fly-tipped waste in the south-west of the site	Off-site.	Pedestrians, cyclist, horse riders accessing public bridleway and local roads.	soil-derived dust and water which may have migrated off-site.  Inhalation of contaminants in soil-derived dust, fibres and gas/ vapours which may	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	including soil and groundwater sampling and monitoring.  Remediation of	Unlikely	Minor	Very low risk.
(including drums, intermediate containers, etc.).		Occupants of residential and commercial properties in the surrounding area.	have migrated off-site.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	soil and groundwater contamination prior to construction (e.g. source	Unlikely	Minor	Very low risk.
Made Ground associated with the construction of the B1078 (Main Road), A12 and B1078 slip road	Controlled Waters.	Principal bedrock aquifer and secondary A and secondary	Leaching/ migration of contaminants in soil to groundwater in underlying aquifers.	Low likelihood.	Medium	Moderate/ low risk.	Likely	Medium	Moderate risk.	removal, treatment or capping) if deemed necessary.	Low likelihood.	Mild	Low risk.
within the south and south-west of the site as well as activities associated with their operation.  Farmland within site		undifferentiated superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Likely	Medium	Moderate risk.	necessary.	Unlikely	Mild	Very low risk.
boundary. Potential for unmapped farmers tips:  Range of contaminants		Surface water bodies off-site (River Ore, ponds, ditches, and drains).		Low likelihood.	Mild	Low risk.	Likely	Mild	Moderate/ low risk.		Low likelihood.	Minor	Very low risk.
including asbestos, metals, hydrocarbons, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic			Discharge of contaminants entrained in groundwater and/ or surface water run-off followed by overland flow and discharge.		Mild	Low risk	Likely	Mild	Moderate/ low risk.		Low likelihood.	Minor	Very low risk.



Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline			Constructio Mitigation.	n With Primary A	And Tertiary	Secondary Mitigation	Construction Secondary M	With Primary, T	ertiary And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category.
Hydrocarbons (PAHs), solvents, fuels, oils, exhaust particulates, herbicides, pesticides, silage, effluent. Ground	Property / services	Existing on-site and off-site services and structures including listed buildings.	Direct contact of contaminants in soil and/ or groundwater with buried services.	Unlikely	Minor	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
gases including methane, carbon dioxide, carbon monoxide, hydrogen sulphide.			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
		Future on-site services and structures.	Direct contact of contaminants in soil and/ or groundwater with buried services.	Receptor not present.			Receptor not present.				Receptor not present.		
			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. such as service routes or differentially permeable strata.	Receptor not present.			Receptor not present.				Receptor not present.		
		Crops and livestock (on-site).	Migration of contaminated waters/ dust/ fibres and	Low likelihood.	Mild	Low risk.	Receptor not present.				Receptor not present.		
		Crops and livestock (off-site).	subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
Off-site:  Made Ground	Human health:	Farmers and workers on agricultural land.	Dermal contact with and/ or ingestion of contaminants in	Unlikely	Mild	Very low risk.	Receptor not present.				Receptor not present.		
associated with the construction of the A12 to the south-west of the site and former railway	On-site.	Construction/ maintenance workers.	windblown soil-derived dusts and water that may have migrated onto site. Inhalation of contaminants in	Receptor not present.			Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
located 420 metres (m) north-east as well as activities associated with their operation, and with residential properties		Users of the new park and ride.	soil, soil derived dust, fibres and vapours which may have migrated onto site.	Receptor not present.			Receptor not present.				Receptor not present.		
within 250m of the site.  Farmland surrounding the site.	Controlled Waters.	Principal bedrock aquifer and secondary A and secondary	Leaching/ migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate/ low risk.		Unlikely	Medium	Low risk.
Made Ground associated with the		undifferentiated superficial aquifer.	Migration of contaminated water through preferential pathways such as	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate/ low risk.		Unlikely	Medium	Low risk.

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Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline			Construction.	n With Primary A	And Tertiary	Secondary Mitigation	Construction Secondary M	With Primary, T itigation.	ertiary And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category.
disused sand pits 70m and 130m to the northeast.			underground services, pipes and granular material to groundwater in underlying aquifers.										
Electrical substation 250m south of the site.  Contaminants including hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and	Property/ services	Existing on- services.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. such as service routes or differentially permeable strata.		Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the roads, plus exhaust particulates.		Future on- services structures.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	not present.			Receptor not present.				Receptor not present.		
		Crops and lives (on-site).	Migration of contaminated waters/ dust/ fibres and subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.		Mild	Very low risk.	Receptor not present.				Receptor not present.		

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Table 1.2: Operation phase conceptual site model.

Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline				Primary And Terti mitigation prop undertaken).				ertiary And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.
On-site: Made Ground associated with	Human health:	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Low likelihood.	Mild	Low risk.	Receptor not present.			Receptor not present.		
the infilled disused sand pit, mounds and disturbed ground in the south-west of site:	On-site.	Construction/ maintenance workers.	soil, soil-derived dust and water. Inhalation of contaminants in	Receptor not present.			Unlikely	Mild	Very low risk.	Unlikely	Mild	Very lov risk.
Beggars Barn in north-west of		Users of the new park and ride.	soil, soil-derived dust, fibres and gas and/ or vapours.	Receptor not present.			Unlikely	Mild	Very low risk.	Unlikely	Mild	Very lov risk.
the site, previously used for cattle and dairy farming.	Human health:	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	Unlikely	Minor	Very low risk.
Fly-tipped waste in the south- west of the site (including drums, intermediate bulk	Off-site.	Pedestrians, cyclist, horse riders accessing public bridleway and local roads.	soil-derived dust and water which may have migrated offsite. Inhalation of contaminants in soil-derived dust, fibres and	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	Unlikely	Minor	Very low risk.
Made Ground associated with the construction of the B1078		Occupants of residential and commercial properties in the surrounding area.	gas and/ or vapours which may have migrated off-site.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	Unlikely	Minor	Very low risk.
(Main Road), A12 and B1078 slip road within the south and south-west of the site as well as activities associated with their operation.	Controlled waters.	Principal bedrock aquifer and secondary A and secondary undifferentiated	Leaching/ migration of contaminants in soil to groundwater in underlying aquifers.	Low likelihood.	Medium	Moderate/ low risk.	Low likelihood.	Mild	Low risk.	Low likelihood.	Mild	Low risk.
Farmland within site boundary. Potential for unmapped farmers tips:  Range of contaminants including ashestes metals.		superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very lov risk.
including asbestos, metals, hydrocarbons, PCBs, PAHs, solvents, fuels, oils, exhaust particulates, herbicides, pesticides, silage, effluent.		Surface water bodies off-site (River Ore, ponds, ditches, and drains).	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.		Mild	Low risk.	Low likelihood.	Minor	Very low risk.	Low likelihood.	Minor	Very low risk.
Ground gases including methane, carbon dioxide, carbon monoxide, hydrogen sulphide.			Discharge of contaminants entrained in groundwater and/ or surface water run-off followed by overland flow and discharge.		Mild	Low risk.	Low likelihood.	Minor	Very low risk.	Low likelihood.	Minor	Very lov risk.
	Property/ services	Existing on-site and off- site services and structures including listed buildings.	Direct contact of contaminants in soil and/ or groundwater with buried services.	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.

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Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline				Primary And Ter mitigation pro undertaken).				With Primary, T litigation.	ertiary	And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Catego	ory.	Probability	Consequence	Risk Categ	ory.
			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk.	Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very risk.	low
		Future on-site services and structures.	Direct contact of contaminants in soil and/ or groundwater with buried services.	Receptor not present.			Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very risk.	low
			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. such as service routes or differentially permeable strata.	Receptor not present.			Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very risk.	low
		Crops and livestock (onsite).	Migration of contaminated waters/ dust/ fibres and	Low likelihood.	Mild	Low risk.	Receptor not present.				Receptor not present.			
		Crops and livestock (offsite).	subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.	Unlikely	Mild	Very low risk.	Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very risk.	low
Off-site: Made Ground associated with	Human health:	Farmers and workers on agricultural land.	Dermal contact with and/ or ingestion of contaminants in	Unlikely	Mild	Very low risk.	Receptor not present.				Receptor not present.			
the construction of the A12 to the south-west of the site and former railway located 420m	On-site.	Construction/ maintenance workers.	windblown soil-derived dusts and water that may have migrated onto site. Inhalation	Receptor not present.			Unlikely	Mild	Very risk.	low	Unlikely	Mild	Very risk.	low
north-east as well as activities associated with their operation, and with residential properties within 250m of the site.		Users of the new park and ride.	of contaminants in soil, soil derived dust, fibres and vapours which may have migrated onto site.	Receptor not present.			Unlikely	Mild	Very risk.	low	Unlikely	Mild	Very risk.	low
Farmland surrounding the site.	Controlled Waters.	Principal bedrock aquifer and secondary A and secondary undifferentiated	Leaching/ migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Unlikely	Mild	Very risk.	low	Unlikely	Mild	Very risk.	low
Made Ground associated with the disused sand pits 70m and 130m to the north-east.  Electrical substation 250m south of the site.		superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Unlikely	Mild	Very risk.	low	Unlikely	Mild	Very risk.	low

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Source	Receptor		Contaminant Exposure/ Migration Pathway.	Baseline				Primary And Tertia mitigation propo undertaken).				ertiary And
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.
nydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the	Property/ services	Existing on-site services.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.
roads, plus exhaust particulates.		Future on-site services and structures.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	not present.			Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.
		Crops and livestock (onsite).	Migration of contaminated waters/ dust/ fibres and subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.	Unlikely	Medium	Low risk.	Receptor not present.			Receptor not present.		

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Table 1.3: Removal and reinstatement phase conceptual site model.

Source	Receptor		Contaminant Exposure / Migration Pathway.	Baseline				And Reinstate d Tertiary Mitigati		Secondary Mitigation Measures.		And Reinstaten ertiary And	nent With Secondary
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.		Probability	Consequence	Risk Category.
On-site:  Made Ground associated with the	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and	Low likelihood.	Mild	Low risk.	Receptor not present.			Intrusive ground investigation undertaken post	Receptor not present.		
infilled disused sand pit, mounds and disturbed ground in the south-west of site:		Construction/ maintenance workers.	water. Inhalation of contaminants in soil, soil-derived dust, fibres and gas and/ or vapours.	Receptor not present.			Low likelihood.	Mild	Low risk.	operation including soil and groundwater sampling and	Unlikely	Mild	Very low risk.
Beggars Barn in north-		Users of the new park and ride.	and gas and or vapours.	Receptor not present.			Receptor not present.			monitoring.  Remediation of	Receptor not present.		
west of the site, previously used for cattle and dairy farming.	Human health: Off-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil-derived dust and water	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	soil and groundwater contamination prior to	Unlikely	Minor	Very low risk.
Fly-tipped waste in the south-west of the site (including drums, Intermediate bulk		Pedestrians, cyclist, horse riders accessing public bridleway and local roads.	which may have migrated off-site.  Inhalation of contaminants in soil-derived dust, fibres and gas and/ or vapours which	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	construction (e.g. source removal, treatment or capping) if	Unlikely	Minor	Very low risk.
containers, canisters, etc.).  Made Ground associated with the		Occupants of residential and commercial properties in the surrounding area.	may have migrated off-site.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	deemed necessary.	Unlikely	Minor	Very low risk.
construction of the B1078 (Main Road), A12 and B1078 slip road within the south and south-west of the site as	Controlled Waters.	Principal bedrock aquifer and secondary A and secondary	Leaching/ migration of contaminants in soil to groundwater in underlying aquifers.	Low likelihood.	Medium	Moderate/ low risk.	Likely	Medium	Moderate risk.		Low likelihood.	Mild	Low risk.
well as activities associated with their operation.  Farmland within site boundary. Potential for unmapped farmers tips:		undifferentiated superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Likely	Medium	Moderate risk.		Unlikely	Mild	Very low risk.
Range of contaminants including asbestos, metals, hydrocarbons,		Surface water bodies off-site (River Ore, ponds, ditches, and drains).	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Low likelihood.	Mild	Low risk.	Likely	Mild	Moderate/ low risk.		Low likelihood.	Minor	Very low risk.
PCBs, PAHs, solvents, fuels, oils, exhaust particulates, herbicides, pesticides, silage, effluent. Ground gases			Discharge of contaminants entrained in groundwater and/ or surface water run-off followed by overland flow and discharge.		Mild	Low risk.	Likely	Mild	Moderate/ low risk.		Low likelihood.	Minor	Very low risk.

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Source	Receptor		Contaminant Exposure / Migration Pathway.	Baseline				And Reinstate d Tertiary Mitigati		Secondary Mitigation Measures.		And Reinstaten ertiary And	nent With Secondary
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.		Probability	Consequence	Risk Category.
including methane, carbon dioxide, carbon monoxide, hydrogen sulphide.	Property / services.	Existing on-site and off-site services and structures including listed buildings.	contaminants in soil and/ or	Unlikely	Minor	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
		Future on-site services and structures.		Receptor not present.			Receptor not present.				Receptor not present.		
			Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. such as service routes or differentially permeable strata.	Receptor not present.			Receptor not present.				Receptor not present.		
		Crops and livestock (on-site).	waters/ dust/ fibres and		Mild	Low risk.	Receptor not present.				Receptor not present.		
		Crops and livestock (off-site).	subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
Off-site:  Made Ground associated with the	Human health: On-site.	Farmers and workers on agricultural land.	windblown soil-derived dusts		Mild	Very low risk.	Receptor not present.				Receptor not present.		
to the south-west of the site and former railway located 420m north-east		Construction/ maintenance workers.	and water that may have migrated onto site. Inhalation of contaminants in soil, soil derived dust, fibres and	not present.			Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
as well as activities associated with their		Users of the new park and ride.	vapours which may have migrated onto site.				Receptor not present.				Receptor not present.		
operation, and with residential properties within 250m of the site.	Controlled Waters.	Principal bedrock aquifer and secondary A and secondary	contaminants in soil to	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate/ low risk.		Unlikely	Medium	Low risk.
Farmland surrounding the site.		undifferentiated superficial aquifer.	Migration of contaminated water through preferential pathways such as	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate/ low risk.		Unlikely	Medium	Low risk.

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Source	Receptor		Contaminant Exposure / Migration Pathway.	Baseline				And Reinstate d Tertiary Mitigati		Secondary Mitigation Measures.		And Reinstaten ertiary And	nent With Secondary
				Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.		Probability	Consequence	Risk Category.
Made Ground associated with the disused sand pits 70m and 130m to the north-			underground services, pipes and granular material to groundwater in underlying aquifers.										
east.  Electrical substation 250m south of the site.  Contaminants including hydrocarbons, PCBs,	Property / services	Existing on-s services.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways. Such as service routes or differentially permeable strata.		Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
PAHs, solvents and creosote; metals; and ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the roads,		Future on-s services al structures.	Migration of contaminated groundwater, ground gas and/ or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	not present.			Receptor not present.				Receptor not present.		
plus exhaust particulates.		Crops and livesto (on-site).	Migration of contaminated waters/ dust/ fibres and subsequent uptake by crops or ingestion/ inhalation/ dermal contact by livestock.		Medium	Low risk.	Receptor not present.				Receptor not present.		

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#### SIZEWELL C PROJECT - ENVIRONMENTAL STATEMENT

#### **NOT PROTECTIVELY MARKED**

VOLUME 4, CHAPTER 11, APPENDIX C : IMPACT ASSESSMENT TABLES



#### SIZEWELL C PROJECT - ENVIRONMENTAL STATEMENT

#### **NOT PROTECTIVELY MARKED**

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#### **Plates**

None provided.

#### **Figures**

None provided.



## 1. Impact Assessment Tables

**Table 1.1: Construction phase impact assessment.** 

Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Construction Phase Risk Assessment (with primary and tertiary mitigation measures).	Classification of Effect.	Secondary Mitigation Measures.	Construction Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effect.
On-site: Made Ground associated with	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Low risk.	Receptor not present.	Negligible	Intrusive ground investigation	Receptor not present.	Minor beneficial.
the infilled disused sand pit, mounds and disturbed ground in the south-west of site:		Construction/ maintenance workers.	soil, soil-derived dust and water. Inhalation of contaminants	Receptor not present.	Low risk.	Minor adverse.	undertaken post planning to inform the detailed design and	Very low risk.	Negligible <sup>1</sup>
Beggars Barn in north-west of he site, previously used for		Users of the new park and ride.	in soil, soil-derived dust, fibres and gas/vapours.	Receptor not present.	Receptor not present.	Negligible	confirm the ground conditions and contamination status of	Receptor not present.	Negligible
Attle and dairy farming.  by-tipped waste in south-west site (including drums, termediate bulk containers, anisters, etc.).	Human health: Off-site.  Occupants of residential and commercial properties in the surrounding area.  Pedestrians, cyclist, horse riders accessing public bridleway and local roads.  Farmers and workers on agricultural land.	il ingestion of contaminants in soil-derived dust and water which may have migrated	Very low risk.	Low risk.	Minor adverse.	the site including soi and groundwater sampling and monitoring.	Very low risk.	Negligible	
canisters, etc.).  Made Ground associated with the construction of the B1078 Main Road), A12 and B1078 lip road within the south and		off-site.  Inhalation of contaminants in soil-derived dust, fibres and gas/vapours which may have migrated off-site.	Very low risk.	Low risk.	Minor adverse.	Remediation of soil and groundwater contamination prior to construction (e.g.	Very low risk.	Negligible	
outh-west of the site as well as activities associated with their		Farmers and workers		nave migrated on-site.	Very low risk.	Low risk.	Minor adverse.	treatment or capping) if deemed necessary.	Very low risk.
peration. armland within site boundary. otential for unmapped armers tips:	Controlled Waters.	Principal bedrock aquifer and Secondary A and Secondary Undifferentiated	Leaching/migration of contaminants in soil to groundwater in underlying aquifers.	Moderate/low risk.	Moderate risk.	Minor adverse.		Low risk.	Minor beneficial.
lange of contaminants including asbestos, metals, ydrocarbons, Polychlorinated siphenyls (PCBs), Polycyclic aromatic Hydrocarbons PAHs), solvents, fuels, oils, xhaust particulates, erbicides, pesticides, silage,	Undifferentiated Superficial aquifer.			Low risk.	Moderate risk.	Moderate adverse.		Very low risk.	Minor beneficial.
erbicides, pesticides, sliage, ffluent. Ground gases including methane, carbon ioxide, carbon monoxide, ydrogen sulphide.	Surface water bodies (off-site) including River Ore, ponds, ditches and drains.		Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Low risk.	Moderate/low risk.	Minor adverse.		Very low risk.	Minor beneficial.
			Discharge of contaminants entrained in groundwater	Low risk.	Moderate/low risk.	Minor adverse.		Very low risk.	Minor beneficial.

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<sup>&</sup>lt;sup>1</sup> Introduction of this receptor at construction automatically triggers a minor adverse effect. However, professional judgement has been exercised and this effect has been reduced to negligible given the likelihood of adequate PPE being utilised.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Construction Phase Risk Assessment (with primary and tertiary mitigation measures).	Classification of Effect.	Secondary Mitigation Measures.	Construction Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effect.
			and/or surface water run-off followed by overland flow and discharge.						
	Property/ services	Existing on-site and off- site services and structures including listed buildings.	Direct contact of contaminants in soil and/or groundwater with buried services.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
			Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
		Future on-site services and structures.	Direct contact of contaminants in soil and/or groundwater with buried services.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
			Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
		Crops and livestock (onsite).	Migration of contaminated waters/dust/fibres and		Receptor not present.	Minor beneficial.		Receptor not present.	Minor beneficial.
		Crops and livestock (off-site).	subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Minor beneficial.
Off-site: Made Ground associated with	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Very low risk.	Receptor not present.	Negligible <sup>2</sup>		Receptor not present.	Negligible <sup>2</sup>
the construction of the A12 and slip road to the south-west of		Construction/maintenan ce workers soil-derived dust and water. Inhalation of contaminants	Receptor not present.	Low risk.	Minor adverse.		Very low risk.	Negligible <sup>1</sup>	
railway located 420m north- east as well as activities		Users of the new park and ride.	in soil-derived dust, fibres and gas/vapours.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible

<sup>&</sup>lt;sup>2</sup> Removal of this receptor at construction automatically triggers a minor beneficial effect. However, professional judgement has been exercised and this effect has been reduced to negligible.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Construction Phase Risk Assessment (with primary and tertiary mitigation measures).		Secondary Mitigation Measures.	Construction Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effect.			
associated with their operation, and with residential properties within 250m of the site.  Farmland surrounding the site.	Property/ services	Principal bedrock aquifer and Secondary A and Secondary Undifferentiated	Leaching/migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate/low risk.	Minor adverse.		Low risk.	Negligible			
Made Ground associated with the disused sand pits located 70m and 130m to the northeast.  Electrical substation located 250m south of the site.  A range of inorganic and		Superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Low risk.	Moderate/low risk.	Minor adverse.		Low risk.	Negligible			
organic contaminants including hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the roads, plus exhaust		Existing on-site services.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible			
particulates.					Future on-site and structures.	Future on-site services and structures.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.
		Crops and livestock (onsite).	Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Very low risk.	Receptor not present.	Minor beneficial.		Receptor not present.	Minor beneficial.			



**Table 1.2: Operational phase impact assessment.** 

Source			Contaminant Exposure / Migration Pathway.  Baseline (Currer Risk Assessment.		Operation Phase Risk Assessment with primary and tertiary mitigation measures (assumed all mitigation proposed during construction is undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with primary, secondary and tertiary mitigation).	Residual Effects.
On-site:  Made Ground associated with the infilled disused sand pit,	Human health: On-site.	Farmers and workers on agricultural land.  Construction/maintenance	Dermal contact with and ingestion of contaminants in soil, soilderived dust and water.	Low risk.  Receptor not present.	Receptor not present.  Very low risk.	Negligible <sup>3</sup> Negligible <sup>4</sup>	Receptor not present.  Very low risk.	Negligible <sup>3</sup> Negligible <sup>4</sup>
mounds and disturbed ground in the south-west of site:  Beggars Barn in north-west of the site, previously used for		workers.  Users of the new park and ride.	Inhalation of contaminants in soil, soil-derived dust, fibres and	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
cattle and dairy farming.  Fly-tipped waste in the southwest of the site (including drums, intermediate bulk containers, canisters, etc.).  Made Ground associated with the construction of the B1078	Human health: Off-site.	commercial properties in the surrounding area.  Pedestrians, cyclist, horse  of contaminants in soil-derived dust and water which may have migrated off-site.  Very III	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible	
	Controlled Eaters.	Pedestrians, cyclist, horse riders accessing public bridleway and local roads.	Inhalation of contaminants in soilderived dust, fibres and gas/vapours which may have	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
(Main Road), A12 and B1078 slip road within the south and		Farmers and workers on agricultural land.		Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
south west of the site as well as activities associated with their operation.  Farmland within site boundary.		Principal bedrock aquifer and Secondary A and Secondary Contaminants Undifferentiated Superficial aquifer.	contaminants in soil to groundwater in underlying	Moderate/low risk.	Low risk.	Minor beneficial.	Low risk.	Minor beneficial.
Potential for unmapped farmers tips:  Range of contaminants including asbestos, metals, hydrocarbons, PCBs, PAHs, solvents, fuels, oils, exhaust particulates, herbicides, pesticides, silage, effluent. Ground gases including methane, carbon dioxide, carbon monoxide, hydrogen sulphide.				Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.
			Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.
			Discharge of contaminants entrained in groundwater and/or surface water run-off followed by overland flow and discharge.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.

<sup>&</sup>lt;sup>3</sup> Removal of this receptor at operation automatically triggers a minor beneficial effect. However, professional judgement has been exercised and this effect has been reduced to negligible.

<sup>&</sup>lt;sup>4</sup> Introduction of this receptor at operation automatically triggers a minor adverse effect. However, professional judgement has been exercised and this effect has been reduced to negligible.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Operation Phase Risk Assessment with primary and tertiary mitigation measures (assumed all mitigation proposed during construction is undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with primary, secondary and tertiary mitigation).	Residual Effects.
	Property/ services	Existing on-site and off-site services and structures including listed buildings.	Direct contact of contaminants in soil and/or groundwater with buried services.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
	St	Future on-site services and structures.  Directly soil bur Miggro vap pre services and services and structures.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
			Direct contact of contaminants in soil and/or groundwater with buried services.	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
			Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
		Crops and livestock (on-site).	Migration of contaminated L waters/dust/fibres and subsequent	Low risk.	Receptor not present.	Minor beneficial.	Receptor not present.	Minor beneficial.
		Crops and livestock (off-site).	uptake by crops or ingestion/inhalation/dermal contact by livestock.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
Off-site: Made Ground associated with	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil-derived	Very low risk.	Receptor not present.	Negligible	Receptor not present.	Negligible
the construction of the A12 and slip road to the south-west of the site and Made Ground		Construction / maintenance workers.	dust and water. Inhalation of contaminants in soil-derived dust, fibres and vapours.	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
associated with the former railway located 420m north-		Users of the new park and ride.	1	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
east, as well as activities associated with their operation, and with residential properties within 250m of the site.	Controlled Waters.	Secondary A and Secondary	condary A and Secondary contaminants in soil to differentiated Superficial groundwater in underlying	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.
Farmland surrounding the site.  Made Ground associated with the disused sand pits located 70m and 130m to the north- east.			Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.

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Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Operation Phase Risk Assessment with primary and tertiary mitigation measures (assumed all mitigation proposed during construction is undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with primary, secondary and tertiary mitigation).	Residual Effects.
Electrical substation located 250m south of the site.  A range of inorganic and organic contaminants including hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the roads, plus exhaust particulates.	Property/ services	Existing on-site services.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
	struc	Future on-site services and structures.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Very low risk.	Negligible <sup>4</sup>	Very low risk.	Negligible <sup>4</sup>
		Crops and livestock (on-site).	Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Low risk.	Receptor not present.	Negligible <sup>4</sup>	Receptor not present.	Negligible <sup>4</sup>



Table 1.3: Removal and reinstatement phase impact assessment.

Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Removal and Reinstatement Phase Risk Assessment (with primary and tertiary mitigation measures).	Classification of Effect.	Secondary Mitigation.	Removal and Reinstatement Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effects.
On-site:  Made Ground associated with	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Low risk.	Receptor not present.	Negligible <sup>2</sup>	Intrusive ground investigation	Receptor not present.	Minor beneficial.
the infilled disused sand pit, mounds and disturbed ground in the south-west of site:		Construction/ maintenance workers.	walet.	Receptor not present.	Low risk.	Minor adverse.	undertaken post operation including soil and groundwater	Very low risk.	Negligible <sup>5</sup>
in the south-west of site:  Beggars Barn in north-west of the site, previously used for cattle and dairy farming.  Fly-tipped waste in the south-west of the site (including drums, intermediate bulk containers, canisters, etc.)  Made Ground associated with the construction of the B1078 (Main Road), A12 and B1078 slip road within the south and south west of the site as well as activities associated with their		Users of the new park and ride.	soil, soil-derived dust, fibres and gas/vapours.	Receptor not present.	Receptor not present.	Negligible	sampling and monitoring.  Remediation of soil and groundwater contamination prior to construction (e.g. source removal, treatment or	Receptor not present.	Negligible
	properties surrounding  Pedestrians horse accessing	residential and commercial	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated offsite.	Very low risk.	Low risk.	Minor adverse.	capping) if deemed necessary.	1	Very low risk.
operation.  Farmland within site boundary. Potential for unmapped farmers tips:  Range of contaminants		accessing public bridleway and local	Inhalation of contaminants in soil-derived dust, fibres and gas/vapours which may have migrated off-site.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
including asbestos, metals, hydrocarbons, PCBs, PAHs, solvents, fuels, oils, exhaust		Farmers and workers on agricultural land.		Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
particulates, herbicides, pesticides, silage, effluent. Ground gases including methane, carbon dioxide, carbon monoxide, hydrogen sulphide.	Controlled Waters.  Principal bedrock aquifer and Secondary A and Secondary Undifferentiated Superficial aquifer.	aquifer and Secondary A and Secondary	Leaching/migration of contaminants in soil to groundwater in underlying aquifers.	Moderate/low risk.	Moderate risk.	Minor adverse.		Low risk.	Minor beneficial.
		Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Low risk.	Moderate risk.	Moderate adverse.		Very low risk.	Minor beneficial.	
		Surface water bodies (off-site) including	Lateral migration of contaminated groundwater	Low risk.	Moderate / low risk.	Minor adverse.		Very low risk.	Minor beneficial.

<sup>&</sup>lt;sup>5</sup> Introduction of this receptor at construction automatically triggers a minor adverse effect. However, professional judgement has been exercised and this effect has been reduced to negligible given the likelihood of adequate PPE being utilised.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Removal and Reinstatement Phase Risk Assessment (with primary and tertiary mitigation measures).	Classification of Effect.	Secondary Mitigation.	Removal and Reinstatement Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effects.
		River Ore, ponds, ditches and drains.	with discharge to surface watercourses as base flow.						
			Discharge of contaminants entrained in groundwater and/or surface water run-off followed by overland flow and discharge.	Low risk.	Moderate/low risk.	Minor adverse.		Very low risk.	Minor beneficial.
	Property/ services	Existing on-site and off-site services and structures including listed buildings.	Direct contact of contaminants in soil and/or groundwater with buried services.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
			Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
		Future on-site services and structures.	Direct contact of contaminants in soil and/or groundwater with buried services.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
			Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
		Crops and livestock (on-site).	Migration of contaminated waters/dust/fibres and	Low risk.	Receptor not present.	Minor beneficial.		Receptor not present.	Minor beneficial.
		Crops and livestock (off-site).	subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Neutral
Off-site:  Made Ground associated with	Human health: On-site.	Farmers and workers on agricultural land.	Dermal contact with and ingestion of contaminants in	Very low risk.	Receptor not present.	Negligible <sup>6</sup>		Receptor not present.	Negligible <sup>2</sup>
the construction of the A12 and slip road to the south west of		Construction/ maintenance workers.	soil-derived dust and water.	Receptor not present.	Low risk.	Minor adverse.		Very low risk.	Negligible <sup>1</sup>

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<sup>&</sup>lt;sup>6</sup> Removal of this receptor at construction automatically triggers a minor beneficial effect. However, professional judgement has been exercised and this effect has been reduced to negligible.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Removal and Reinstatement Phase Risk Assessment (with primary and tertiary mitigation measures).	Classification of Effect.	Secondary Mitigation.	Removal and Reinstatement Phase Risk Assessment (with primary, tertiary and secondary mitigation measures).	Residual Effects.	
the site and Made Ground associated with the former railway located 420m northeast, as well as activities		Users of the new park and ride.	Inhalation of contaminants in soil-derived dust, fibres and gas/vapours.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible	
associated with their operation, and with residential properties within 250m of the site.  Farmland surrounding the site.  Made Ground associated with	dential properties of the site. Irounding the site. Id associated with sand pits located om to the north- Ibstation located of the site. If inorganic and iminants including s, PCBs, PAHs, creosote; metals; a fill, ground gas intial for asbestos. Dils attributed to vehicles on the plus exhaust  Controlled waters.  Fall Signature of the site.  Property/ services  Froperty/ services  Froperty/ services  Froperty/ services  Froperty/ services  Froperty/ services	Principal bedrock aquifer and Secondary A and Secondary	Leaching/migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate/low risk.	Minor adverse.		Low risk.	Negligible	
the disused sand pits located 70m and 130m to the northeast.  Electrical substation located 250m south of the site.  A range of inorganic and		ated Superficial aquif	Superficial aquifer.	Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Low risk.	Moderate/low risk.	Minor adverse.		Low risk.	Negligible
hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash and fill, ground gas and the potential for asbestos. Fuels and oils attributed to spills from vehicles on the roads, plus exhaust		te; metals; services services structures structures so on the	Existing on-site services and structures.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
particulates.		Future on-site services and structures.	Migration of contaminated groundwater, ground gas and/or vapours along strata and preferential pathways such as service routes or differentially permeable strata.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible	
		Crops and livestock (on-site).	Migration of contaminated waters/dust/fibres and subsequent uptake by crops or ingestion/inhalation/dermal contact by livestock.	Low risk.	Receptor not present.	Minor beneficial.		Receptor not present.	Minor beneficial.	