

The Sizewell C Project

6.4 Volume 3 Northern Park and Ride Chapter 11 Geology and Land Quality Appendices 11A - 11C

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NORTHERN PARK AND RIDE - APPENDIX 11A DARSHAM PARK AND RIDE PHASE 1 DESK STUDY REPORT

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Volume 3 Appendix 11A Darsham Park and Ride Phase 1 Desk Study Report |



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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: Northern Park & Ride Site, Darsham

Phase 1 Desk Study Report

EDF Energy

January 2020





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Abbreviation / Term	Description
BGS	British Geological Survey
СОМАН	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
MAGIC	Multi Agency Geographic Information for the Countryside
m bgl	Metres below ground level
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

Glossary of Abbreviations and Technical Terms



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 northern park and ride scheme for Sizewell C construction workers, which will be located approximately 1.2km to the north west of the centre of Darsham (referred to herein 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 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 [2], the Environment Agency website, where available [3], Defra's MAGIC website [4], Zetica's website [5] and Suffolk Biological Records Centre [6].

The conclusions and recommendations of this report are based on the project description and redline boundary (Appendix A) provided to Atkins (Appendix A) 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 third party 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 Darsham comprises a Park and Ride Scheme. Figure 1 included in Appendix A shows the site location, redline boundary.

The Park and Ride will include car parking areas with approximately 1,000 spaces; a bus terminus, parking and shelters; perimeter security fencing and lighting; a welfare building including toilets, drivers' rest room and security and administration offices; on-site soil storage which will be used for the reinstatement of the site once construction of Sizewell C is completed; and external areas including roadways, landscaping and sustainable drainage.

2.2. Site Location

The site is located 1.2km north west of Darsham Village in Suffolk, approximately 8.5km north west of the Main Development Site. The National Grid Reference (NGR) for the approximate centre of the site is TM 40715 70289.

The site comprises a roughly triangular area of agricultural land adjacent to and west of Main Road (A12) with a small extension to the north-east of Willow Marsh Lane to accommodate a new junction onto the A12.

Access can be gained from the north-eastern corner of the site, adjacent to White House Farm. The majority of the site is bounded by roads to the north and south-east (Willow Marsh Lane and the A12 respectively), while the western boundary is formed by the railway line. A petrol station is located immediately south of the site.

2.3. Site Visit

A site visit 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 visit. The observations from the site visit are summarised below and photographs are provided in Appendix E.

2.3.1. Land Use

The site was noted to comprise large open fields and farmed agricultural land.

2.3.2. Site Boundaries

The site is bound to the north-west by Willow Marsh Lane and the north-eastern boundary of the site is formed by properties situated along Main Road (the A12).

The eastern boundary of the site comprises the A12 and residential properties including White House Farm and Moate Hall. The south-eastern boundary of the site comprises the A12 and Darsham Service Station (petrol station, cafe and shop). Darsham Railway Station is located adjacent to the south of the site.

The south-western and north-western boundaries of the site are formed by the East Suffolk line. Willow Marsh Cottage is located adjacent to the north-western corner of the site. An area of woodland (Little Nursery Wood) forms the central area of the western boundary of the site.

2.3.3. Surrounding Area

Agricultural fields are located to the west, north and east, with some residential properties to the south and east.



2.3.4. Ground Cover and Topography

The ground cover is agricultural land, which had been ploughed at the time of the visit. The site is generally flat with a gentle slope towards the western boundary.

2.3.5. Surface Water

A pond is present in the eastern section of the site adjacent to Moate Hall, surrounded by trees. Drainage ditches were present along the northern boundary of the site along Willow Marsh Lane.

2.3.6. Services

Overhead cables (telecoms) are present in the south of the site (in a south-east to north-west orientation), along the eastern site boundary and along part of the northern boundary towards the east (in a west to east orientation).

2.3.7. Visual / Olfactory Evidence of Contamination

No visual or olfactory evidence of contamination was noted during the visit completed in March 2019.

2.3.8. Potential Hazards and / or Constraints

The site visit identified several features which may have the potential to place a constraint on construction and / or operational phases of the proposed development:

- Fences and drainage ditches could be potentially hazardous and restrict access of plant required for ground investigation and / or construction.
- Overhead cables (telecoms) may restrict access of plant required for ground investigation and / or construction.
- The woods identified adjacent to the east of the site may provide ecological habitats and could restrict areas accessed and working times for ground investigation and / or construction.
- 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 B. Further information has also been obtained from publicly available sources of information including BGS geological mapping and historical borehole records [2], the Environment Agency website, where available [3], Defra's MAGIC online mapping [4], the Zetica online unexploded ordnance (UXO) risk maps [5], and Suffolk Biological Records Centre website [6].

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 1884 and 1995 at a 1:2,500 scale and between 1884 and 2012 at a 1:10,000 scale are presented within the Envirocheck report [1], included in Appendix B. Information obtained during the site visit in 2019 was used to determine whether there had been any significant changes between 2012 and present day. Key aspects of the site history are summarised in Table 3.1.

Date (Scale)	On-site	Surrounding area
1884 (1:2,500) 1884 / 1885 (1:10,560)	The majority of the site is shown as enclosed fields bound to the north-west and south- west by the East Suffolk Line and in the south-east, north-east and north by unnamed roads in the current positions of Main Road and Willow Marsh Lane respectively. The extension to the site is shown as part of an agricultural field bound by the roads identified above and fields.	The surrounding area comprises predominantly agricultural land and associated farm properties including White House Farm adjacent to the east of the site. Darsham Station (rail) is shown immediately south of the site. 'Little Nursery' Wood is shown adjacent to the central western site boundary. A small 'moat' and a pond are shown adjacent to the eastern site boundary.
1904 (1:2,500) / 1905 (1:10,560)	No significant changes.	No significant changes.
1950 / 1951 (1:10,560)		
1957 / 1958 (1:10,000)		
1976 (1:2,500)	No significant changes.	The area to the immediate south of the site has undergone some development and two granaries are now labelled. A garage (Darsham Service Station) is shown adjacent to the south-east of the site. 'Little Nursery' Wood is now shown to have expanded westwards towards the railway.
1982 (1:10,000)	No significant changes.	Main Road is now labelled as the A12 (T).
1995 (1:2,500)		
2012 (1:10,000)	No significant changes.	Two granaries are shown; one of the granaries immediately south of the site is now labelled as 'Station Works' whilst the other one is no longer labelled.

Table 3.1 Summary of site history



Date (Scale)	On-site	Surrounding area
Present day	No significant changes.	No significant changes.

The site has remained largely undeveloped for the period covered by the available historical maps.

The surrounding area has also remained predominantly agricultural since 1884 (the earliest available map), with the exception of Darsham Station immediately south of the site and the railway (East Suffolk Line) adjacent to the north-west and south-west of the site. Darsham Service Station including a garage(has also been located adjacent to the south-east of the site from at least 1976, and White House Farm has been present adjacent to the east of the site since the earliest recorded maps (1884). These activities may cause a potential contamination risk to the site.

3.3. Superficial and Bedrock Geology

The geological sequence in the area has been determined from BGS website [2].

3.3.1. Made Ground / Artificial Deposits

Made Ground is not shown to be present on the BGS online mapping [2], however the area adjacent to the East Suffolk Line the areas of the site associated with the existing roads (A12 (Main Road) and Willow Marsh Lane) have the potential to include Made Ground relating to their construction.

3.3.2. Superficial Deposits

Available BGS records indicate that the site is largely underlain by superficial diamicton (boulder clay) deposits of the Lowestoft Formation, which comprise an extensive sheet of chalky till as well as outwash sands and gravels, silts and clays.

A thin strip of land adjacent to the western site boundary is shown to comprise Head (windblown) deposits, comprising clay, silt, sand and gravel deposits.

3.3.3. Bedrock and Structural Features

According to the BGS website, bedrock geology beneath the site comprises sand of the Crag Group, described as 'shallow-water marine and estuarine sands, gravels, silts and clays'. Beneath the Crag Group is the London Clay Formation and the Chalk Group. There are no BGS borehole or trial pit logs available on or within 500m of the site.

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 [6] 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 unlikely to be affected by coal mining, and there is no hazard relating to the non-coal mining areas of Great Britain. Given the regional geology, it is unlikely that there will be any coal-bearing strata beneath the site or within the vicinity.

3.4.2. Historical Extractive Activities

The Envirocheck report [1] indicates no historical extractive activities on or within 500m of the site. Furthermore, the Suffolk County Council Minerals Local Plan [7] was reviewed which indicates there are no planned areas of mineral extraction within 500m of the site and the site is not within a Mineral Safeguarding Area.



3.4.3. Ground Stability

The ground stability conditions found at the site, according to the Envirocheck report [1], are listed in Table 3.2.

Table 3.2	Ground	stability	conditions
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Condition	Potential
Collapsible ground stability hazards	Very low
Compressible ground stability hazards	No hazard
Ground dissolution stability hazards	No hazard
Landslide ground stability hazards	Very low
Running sand ground stability hazards	Very low
Shrinking or swelling clay ground stability hazards	Low

3.5. Radon

The Envirocheck report [1] and BRE Radon Guidance [8] states that the site is 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

According to the MAGIC website [4]. the Head Deposits and Lowestoft Formation (diamicton) superficial deposits underlying the site are classified as a Secondary (Undifferentiated) Aquifer¹.

The Crag Group bedrock underlying the site is classed as a Principal Aquifer². The site does not lie within or adjacent to a groundwater Source Protection Zone (SPZ)³.

3.6.1. Groundwater Abstractions

The Envirocheck report [1] indicates there have previously been a number of licensed groundwater abstractions within 500m of the site in the sand and gravel, chalk and Crag Group for a variety of uses including agricultural (general) purposes. The closest abstraction point is a well located adjacent to the south-east of the site. The well was used by Yoxford and Darsham farmers for industrial processes. These have now all been revoked.

3.6.2. Groundwater Discharge Consents

The Envirocheck report indicates there are two licensed discharge consents to groundwater within 500m of the site, however it is not clear whether these are currently active. The two discharges have been summarised in Table 3.3.

¹ A Secondary (Undifferentiated) aquifer is designated in cases where it has not been possible to attribute either category Secondary A or Secondary B to a rock type.

² 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.

³ Source Protection Zones show the risk of contamination from activities that might cause pollution in the area. The closer the activity, the greater the risk.



Operator	Distance / direction from site	Property type	Discharge type	Dates
A. F. Wilson	13m north	Domestic property (single)	Sewage – final treated effluent	1984 - unknown
D. J. Trower	19m north-east	Domestic property (single)	Sewage – final treated effluent	1985 - unknown

Table 3.3 Summary of licensed groundwater discharge consents

3.7. Hydrology

The Envirocheck report [1] indicates that there is a pond within the eastern section of the site adjacent to Moate Hall. Several other pond features are shown on available online mapping in the grounds of Moate Hall (approximately 40m from the site), Darsham Cottage (approximately 60m from the site) and a larger pond adjacent to the unnamed road to Darsham Old Hall to the south of the A12 which is approximately 340m from the site.

An unnamed watercourse originates in the east of Martins Farm, approximately 275m to the northwest of the site. The watercourse crosses the East Suffolk line to the south of Willow Marsh Lane crossing and flows southwards along the western boundary of the site. The channel crosses back beneath the East Suffolk line to the south of Little Nursery Wood and flows to the west of Darsham railway station and joins the Minsmere River approximately 1.2km south east of the site.

3.7.1. Surface Water Abstractions

The Envirocheck report [1] indicates there are no water abstractions relating to surface water within 500m of the site. In 2016, the Environment Agency website [3] listed the closest surface water abstraction point as being approximately 2.7km south of the site, from the Minsmere River. However, this information is no longer publicly available.

3.7.2. Surface Water Discharge Consents

The Envirocheck report lists five discharge consents to surface waters within 500m of the site. These are summarised in Table 3.4.

Operator	Distance / direction from site	Property / discharge type	Receiving water	Dates
Anglian Water Services	470m north- east	Sewerage network discharges (pumping station)	Unknown tributary (of Minsmere River)	1989 – 2010
Anglian Water Services	476m north- east	Sewerage network (pumping station, storm overflow)	Tributary of Minsmere River	2010 – unknown
Dr W. Fishwick	478m south- east	Sewage disposal works (from single domestic property)	Tributary of Minsmere River	2007 – unknown

 Table 3.4
 Summary of licensed surface water discharge consents

3.8. Flood Risk

The Environment Agency flood risk map contained within the Envirocheck report [1], and the Environment Agency website [3] indicate that the site is located in Flood Zone 1 and has a low risk of flooding from rivers or the sea.

The majority of the site is also indicated to be at very low risk of flooding from surface water. However, a potential surface water flow route is indicated along the western site boundary. This flow route runs





from north to south and connects to the unnamed watercourse located immediately west of Darsham railway station, before discharging to the Minsmere River to the south.

An area of high surface water flood risk is located at the northern end of the site. It is suggested that the lower topography adjacent to the A12 to the west leads to pooling of surface water during peak flow events.

Smaller isolated areas of low to high surface water flood risk are also located within the site. Analysis of topographic data shows these are a mixture of topographically low points, ridges and furrows associated with existing agricultural land drainage and management.

3.9. Pollution Incidents to Controlled Waters

The Envirocheck report [1] states that there have been two Category Two (significant) pollution incidents to surface water within 500m of the site. However, these were both dated more than 20 years previously and therefore have not been considered further.

3.10. Substantiated Pollution Incident Register

The Envirocheck report [1] states that there are no substantiated pollution incident register entries within 500m of the site.

3.11. Waste Management Sites

The Envirocheck report [1] confirms that there are none of the following within 500m of the site:

- Historic 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. Registered Radioactive Substances

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

3.13. Fuel Stations

Darsham Service Station is located adjacent to the south-eastern boundary of the site. There are no other fuel stations within 500m of the site according to the Envirocheck report [1] and the Yell website [9].

3.14. Contemporary Trade Directories

The Envirocheck report [1] indicates there is one contemporary trade directory within 500m of the site that has the potential to use contaminants of concern. This is the garage and petrol station adjacent to the south-east of the site, as listed above.

3.15. Sensitive Land Uses

The Envirocheck report and Multi Agency Geographic Information for the Countryside (MAGIC) website [4] were reviewed for the following sensitive statutory and non-statutory 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.

Sillett's Wood Ancient Woodland County Wildlife Site (CWS) is indicated to be present approximately 300m north-west of the site. The Envirocheck report [1] indicates that the site lies within a surface and groundwater water Nitrate Vulnerable Zone (NVZ)⁴. There are two Grade II listed buildings (Oak Hall and Hill Farmhouse) located approximately 60m and 430m to the north-east of the site.

3.16. Other Relevant Information

3.16.1. Unexploded Ordnance (UXO)

A Zetica UXO map 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 as Appendix C.

3.16.2. Land Ownership / Access

The site area does not have any public rights of way, and the land parallel to the railway is assumed to be owned by Network Rail. Access is possible to the various areas of the site with the majority of the land owned by one private landowner.

⁴ Nitrate Vulnerable Zone (NVZ) is designated where land drains and contributes to the nitrate found in 'polluted' waters. Polluted waters include:

[•] Surface or ground waters that contain at least 50mg per litre (mg/l) nitrate

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

[•] 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 CLR11⁵ [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 development, 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.

⁵ 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).



Risk Level	Definition
Very High Risk	There is a high probability that severe harm could arise to a designated receptor or there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (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.

Table 4.1 Definitions of estimate risk

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

	consequence									
Probability (Likelihood)		Severe	Medium	Mild	Minor					
	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk					
	Likely		Moderate Risk	Moderate / Low Risk	Low Risk					
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk					
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk					

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

4.3. Preliminary Conceptual Site Model (PCSM)

Based upon the historical and present land uses identified in the Envirocheck report [1], historical mapping and other desk study sources, 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

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.

	Activity / Feature	Potential Contaminants		
On-site	Made Ground associated with the construction of the A12 and Willow Marsh Lane.	A range of inorganic and organic contaminants including polycyclic aromatic hydrocarbons (PAHs), coal tars, asbestos and ground gases 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/engine oils. Risk of inorganic and organic contamination including metals and hydrocarbons, polychlorinated biphenyls (PCBs), asbestos, etc.		
Off-site	Darsham Service Station adjacent to the south-eastern boundary.	Inorganic and organic contaminants including petroleum, petrol additives, diesel, oils / lubricants.		
	Darsham Station adjacent to southern boundary and the East Suffolk Line (railway) adjacent to the north-western and south- western boundary.	A range of inorganic and organic contaminants including hydrocarbons, PAHs, PCBs, metals; and ash and fill used in the construction of the railway including the potential for asbestos.		
	Granaries located adjacent to the south- eastern boundary of the site	Risk of inorganic and organic contamination including metals and hydrocarbons, asbestos, etc.		
	White House Farm adjacent to the eastern boundary.	Contamination risk from herbicides, pesticides, silage, effluent, and fuel/engine oils. Risk of inorganic and organic contamination including metals and hydrocarbons, polychlorinated biphenyls (PCBs), asbestos, etc.		

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

4.3.2. 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.

Receptor Groups	Current site use	Proposed Park & Ride Use			
Human health (on-site)	Farmers and workers on agricultural land	Construction / maintenance workers			
	Users of Willow Marsh Lane	Users of the new park and ride site			
Human health (off-site)	Residents in adjacent properties / users of and workers in adjacent commercial premises / commuters	Residents in adjacent properties / users of and workers in adjacent commercial premises / commuters			
	Pedestrians accessing surrounding roads	Pedestrians accessing surrounding roads			
	Farmers and workers on agricultural land	Farmers and workers on agricultural land			
Controlled water	Groundwater in Principal bedrock aquifer and Secondary Undifferentiated Superficial aquifer	Groundwater in Principal bedrock aquifer and Secondary Undifferentiated Superficial aquifer			

Table 4.4 Summary of potential receptors



Receptor Groups	Current site use	Proposed Park & Ride Use
	Pond within the east of the site adjacent to Moate Hall and unnamed watercourse along west of site (retained during construction and operation).	Pond within the east of the site adjacent to Moate Hall (retained during construction and operation).
	Drain and ponds within 500m of the site	Drain, surface watercourses and ponds within 500m of the site
Property	Existing on-site and off-site services and structures (including listed buildings)	Existing on-site and off-site services and structures (including listed buildings)
	-	Proposed on-site services and structures
	Crops and livestock (on- and off-site)	Crops and livestock (off-site)
Ecological	Sillet's Ancient Woodland CWS (off-site)	Sillet's Ancient Woodland CWS (off-site)

4.3.3. 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.

Potential Ecological Exposure Pathways:

• Migration of contaminated waters/dust/fibres and subsequent uptake by flora or ingestion/ inhalation/dermal contact by fauna.



4.3.4. 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				
			Probability	Consequenc e	Risk Category	Probability	Consequence	Risk Category	Probability	Consequence	Risk Category		
ON-SITE: Made Ground associated with the construction of the	Human health: On-site	Farmers and workers on agricultural land	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and water.	Unlikely	Mild	Very low risk	Receptor not present			Receptor not present			
roads including A12 Road and Willow Marsh Lane. A range of inorganic and		Construction / maintenance workers	Inhalation of contaminants in soil, soil- derived dust, fibres and gas/vapours.	Receptor not present			Unlikely ⁶	Mild	Very low risk	Unlikely	Mild	Very low risk	
including the potential for asbestos. Fuels and oils		Users of Willow Marsh Lane		Unlikely	Mild	Very low risk	Receptor not present			Unlikely	Mild	Very low risk	
attributed to spills from vehicles on the roads included within the site		Users of the new park and ride		Receptor not present			Receptor not present			Unlikely	Mild	Very low risk	
Farmland within site boundary. Potential for unmapped farmers tips: Contamination risk from herbicides, pesticides,	Human health: Off-site	Residents in adjacent properties / users of adjacent commercial premises / commuters	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and water which may have migrated off-site. Inhalation of contaminants in soil, soil-derived dust, fibres and gas/vapour which may have migrated off-site.	Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	
silage, effluent, and fuel oils. Risk of inorganic and organic contamination including metals and bydrocychone RCPs		Pedestrians accessing surrounding roads		Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	
asbestos, etc.		Farmers and workers on agricultural land		Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	
	Controlled Waters	aters Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low Risk	Unlikely	Medium	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	Unlikely	Medium	Low Risk	Unlikely	Medium	Low Risk	
		Pond and unnamed watercourse on-	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk	Low likelihood	Mild	Low Risk	Unlikely	Mild	Very low risk	
		Site	SILE	Discharge of contaminants entrained in groundwater and / or surface water run-off followed by overland flow and discharge.	Unlikely	Mild	Very low risk	Low likelihood	Mild	Low Risk	Unlikely	Mild	Very low risk
		Drain and ponds within 500m of the site	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Minor	Very low risk	Unlikely	Minor	Very low risk	Unlikely	Minor	Very low risk	
			Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge.	Unlikely	Minor	Very low risk	Unlikely	Mild	Very low risk	Unlikely	Minor	Very low risk	
	Property / services	ices Existing on-site and off-site	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	
		services and structures (including listed buildings)	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	
			Direct contact of contaminants in soil and/or groundwater with buried services.	Receptor not present			Receptor not present			Unlikely	Minor	Very low risk	

⁶ It has been assumed that all construction workers will adhere to site working practices, including use of appropriate PPE

Source	Receptor		Contaminant exposure / migration	Baseline		Construction			Operation			
			patienty	Probability	Consequenc e	Risk Category	Probability	Consequence	Risk Category	Probability	Consequence	Risk Category
		Proposed 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			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 contact by livestock.	Unlikely	Mild	Very low risk	Receptor not present			Receptor not present		
		Crops and livestock (off- site)		Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk
	Ecological Receptor	Sillett's Wood Ancient CWS Woodland (off site)	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.	Unlikely	Mild	Very low risk	Low likelihood	Mild	Low Risk	Unlikely	Mild	Very low risk
OFF-SITE: Darsham service station adjacent to the south east	Human health: On-site	Farmers and workers on agricultural land	Dermal contact with and/or ingestion of contaminants in windblown soil-derived	Unlikely	Mild	Very low risk	Receptor not present			Receptor not present		
Potential contaminants include petroleum, petrol		Construction / maintenance workers	onto site. Inhalation of contaminants in soil, soil-	Receptor not present			Unlikely	Mild	Very low risk	Unlikely	Mild	Very low risk
additives, diesel, oils / lubricants.	t d	Users of Willow Marsh Lane Users of the new park and ride	derived dust, fibres and vapours which may have migrated onto site.	Unlikely	Mild	Very low risk	Receptor not present		-	Unlikely	Mild	Very low risk
Darsham Station, adjacent to southern boundary and				Receptor not present			Receptor not present			Unlikely	Mild	Very low risk
the railway line adjacent to the north-western and south-western boundary.	Controlled waters	Controlled vaters Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer Pond and unnamed watercourse on-site	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low Risk	Unlikely	Medium	Low Risk	Unlikely	Medium	Low Risk
A range of organic contaminants including hydrocarbons, PCBs, PAHs, solvents and creosote; metals; and ash, fill and possibly asbestos	c g d l, s f f		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	Medium	Low Risk	Unlikely	Medium	Low Risk
used in the construction of the railway.			Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk	Low likelihood	Mild	Low Risk	Unlikely	Mild	Very low risk
to the south-eastern		5110										
Inorganic and organic contamination including metals and hydrocarbons, asbestos, etc.	с д ;		Discharge of contaminants entrained in groundwater and / or surface water run-off followed by overland flow and discharge.	Unlikely	Міїа	Very low risk	Low likelihood	Mild	Low Risk	Unlikely	Mild	Very low risk
White House Farm adjacent to the eastern boundary	Property / services	Existing on-site services and structures (including listed buildings)	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
Fuels, oils and pesticides associated with various farming practices.		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			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 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 of risk to human health and controlled waters.

5.2. Conclusions

The site area is currently open fields that appear to be used for agricultural purposes. There was no visual or olfactory evidence of contamination noted on the site during the site visit. On site sources are considered to be limited and comprise the Made Ground from the existing roads and the potential for unidentified farmers tips. Off-site sources of potential contamination were identified including Darsham Service Station, Darsham Railway Station, the East Suffolk Line railway, granaries and White House Farm.

Risks to human health without mitigation measures are considered to be very low, based on the findings of the desk study. Risks to controlled waters (groundwater and pond on site) and ecological receptors during construction were considered to be low. The Principal Aquifer beneath the site raised the overall risk rating for groundwater but was considered to have a medium consequence if affected by contamination due to the absence of a SPZ. Risks to property (buildings, crops, and livestock) and services were generally assessed as being very low, given the unlikely and mild 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:

Receptor		Highest risk classification	Recommended actions / further assessment					
Human health (on-site)	Farmers and workers on agricultural land	Very low risk	Specific intrusive investigation is not likely to be required for contamination purposes. However, the low potential for contamination should be confirmed through limited					
()	Construction / maintenance workers	Very low risk	sampling and chemical analysis as part of a geotechnic ground investigation.					
	Users of Willow Marsh Lane	Very low risk						
	Users of the new park and ride site	Very low risk						
Human health (off-site)	Residents in adjacent properties / users of adjacent commercial premises	Very low risk						
	Pedestrians accessing surrounding roads	Very low risk						
	Farmers and workers on agricultural land	Very low risk						

Table 5.1 Recommendations

Receptor		Highest risk classification	Recommended actions / further assessment				
Controlled Waters	Groundwater in Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer	Low risk	Given the sensitivity of the receptors, it would be appropriate to ensure that the proposed works will not adversely affect groundwater through mobilisation of contamination or creation of preferential migration pathways. Subject to details of proposed construction works, this could be through limited intrusive ground investigation and chemical analysis to establish whether there is a source of contamination present.				
	Pond and unnamed watercourse on-site	Low risk					
	Drain and ponds within 500m of the site	Very low risk					
Property	Existing on-site and off-site services (including listed buildings)	Very low risk	Specific intrusive investigation is not likely to be required for contamination purposes. However, the low potential for contamination should be confirmed through limited sampling and chemical analysis as part of a geotechnical				
	Future on-site services and structures	Very low risk	ground investigation.				
	Crops and livestock (on-site and off-site)	Very low risk					
Ecological	Sillett's Wood Ancient Woodland CWS (off site)	Low risk					

6. References

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- [15] EDF Energy, "Sizewell C Proposed Nuclear Development EIA Scoping Report," 2014.

Appendices



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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.



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Appendix B. Envirocheck Report
















Envirocheck® Report:

Datasheet

Order Details:

Order Number: 40176294_1_1

Customer Reference: 32623

National Grid Reference: 640660, 269970

Slice:

Site Area (Ha): 27.98

Search Buffer (m): 500

Site Details:

PRN1 Darsham Station Darsham Suffolk

Client Details:

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





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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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Report Version v47.0



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		2	5
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	pg 2		1	
Local Authority Pollution Prevention and Control Enforcements				
Nearest Surface Water Feature	pg 2	Yes		
Pollution Incidents to Controlled Waters	pg 2		2	
Prosecutions Relating to Authorised Processes				
Prosecutions Relating to Controlled Waters				
Registered Radioactive Substances				
River Quality				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions	pg 3		2	1 (*6)
Water Industry Act Referrals				
Groundwater Vulnerability	pg 5	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				
Extreme Flooding from Rivers or Sea without Defences				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 8	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 8	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 10	Yes		n/a
Potential for Compressible Ground Stability Hazards				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 12		3	(*1)
Fuel Station Entries	pg 12		1	



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 13			1
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 13	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
1	Discharge Consents	s Arthur Francis Wilson	A14NF	13	1	640500
·	Property Type: Location: Authority: Catchment Area: Reference: Permit Version:	Domestic Property (Single) Willow Marsh Cottage Willow Marsh Lane, Darsham, Suffolk, Ip17 3qg Environment Agency, Anglian Region Not Given Pr4nf1034x 1	(N)	10		270800
	Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge	12th June 1984 12th June 1984 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Into Land				
	Environment: Receiving Water: Status: Positional Accuracy:	Trib Minsmere River Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 100m				
	Discharge Consents	5				
2	Operator: Property Type: Location: Authority: Catchment Area: Reference:	David John Trower Domestic Property (Single) Moat Hall Main Road, Darsham, Suffolk, Ip17 3pp Environment Agency, Anglian Region Not Given Pr4nf264	A10NE (NE)	19	1	640755 270084
	Permit Version: Effective Date: Issued Date: Revocation Date:	1 3rd October 1985 3rd October 1985 Not Supplied				
	Discharge Type: Discharge Environment: Receiving Water:	Sewage Discharges - Final/Treated Effluent - Not Water Company Into Land				
	Status: Positional Accuracy:	Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 10m				
	Discharge Consents	5				
3	Operator: Property Type: Location:	Anglian Water Services Limited Sewerage Network - Pumping Station - Water Company Darsham Ps Green Gables Ps, High Street, Darsham, Saxmundham, Suffolk, Ip17 3qq	A15NE (NE)	470	1	641290 270900
	Authority: Catchment Area: Reference: Permit Version:	Environment Agency, Anglian Region Minsmere River (Leiston) Aw4nf1829 1				
	Effective Date: Issued Date: Revocation Date: Discharge Type:	21st February 1989 21st February 1989 2nd December 2010 Sewage Discharges - Pumping Station - Water Company				
	Discharge Environment: Receiving Water: Status:	Unknown Trib. Surrendered under EPR 2010				
	Positional Accuracy:	Located by supplier to within 100m				
3	Discharge Consents	s Anglian Water Services Limited	A15NE	476	1	641300
-	Property Type: Location: Authority: Catchment Area: Reference: Permit Version:	Sewerage Network - Pumping Station - Water Company High Street, Darsham Environment Agency, Anglian Region Minsmere River (Leiston) Asenf2379 2	(NE)			270900
	Effective Date: Issued Date: Revocation Date: Discharge Type:	3rd September 2010 3rd September 2010 Not Supplied Public Sewage: Storm Sewage Overflow				
	Discharge Environment: Receiving Water: Status:	Freshwater Stream/River Trib Minsmere River Post National Rivers Authority Legislation where issue date > 31/08/1989				
	Positional Accuracy:	Located by supplier to within 100m				



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Discharge Consents	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:	Anglian Water Services Limited Sewerage Network - Pumping Station - Water Company High Street, Darsham Environment Agency, Anglian Region Not Given Asenf2379 1 2nd January 1990 2nd January 1990 2nd September 2010 Public Sewage: Storm Sewage Overflow Freshwater Stream/River Trib Minsmere River Post National Rivers Authority Legislation where issue date > 31/08/1989	A15NE (NE)	476	1	641300 270900
	Positional Accuracy:	Located by supplier to within 100m				
4	Discharge Consents Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	s Dr William George Fishwick Sewage Disposal Works - Other Old Hall Barn Westleton Road, Darsham, Saxmundham, Suffolk, Ip17 3pb Environment Agency, Anglian Region River Ore / River Alde / River Fromus Prenf21013 1 10th December 2007 10th December 2007 10th December 2007 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River Tributary Of The River Yox New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A7NW (SE)	478	1	641013 269580
	Discharge Consents	S				
4	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:	M B Padfield Domestic Property (Single) Old Hall Farm Darsham, Saxmundham, Suffolk, Ip17 3pr Environment Agency, Anglian Region Minsmere River (Leiston) Pr4nf1073x 1 19th September 1984 19th September 1984 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River Trib Minsmere River Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 10m	A11SW (SE)	478	1	641027 269597
5	Local Authority Poll Name: Location: Authority: Permit Reference: Dated: Process Type: Description: Status: Positional Accuracy:	Iution Prevention and Controls Smith & Wesby (Sax) Ltd Main A12, Darsham, SAXMUNDHAM, Suffolk, IP17 3PW Suffolk Coastal District Council, Environmental Health Department EPA62 24th March 2003 Local Authority Air Pollution Control PG1/14 Petrol filling station Authorised Manually positioned to the address or location	A10SE (SW)	9	2	640594 269821
	Nearest Surface Wa	ter Feature				
			A10NE (N)	0	-	640700 270087
6	Pollution Incidents of Property Type: Location: Authority: Pollutant: Note: Incident Date: Incident Reference: Catchment Area: Receiving Water: Cause of Incident: Incident Severity: Positional Accuracy:	to Controlled Waters Not Given Ipswich District Environment Agency, Anglian Region Unknown River Wang 6th August 1993 1748 Not Given Freshwater Stream/River Unknown Category 2 - Significant Incident Located by supplier to within 100m	A14SE (N)	6	1	640500 270500



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Pollution Incidents	to Controlled Waters				
7	Property Type: Location: Authority: Pollutant: Note: Incident Date: Incident Reference: Catchment Area: Receiving Water: Cause of Incident: Incident Severity: Positional Accuracy:	Water Company Sewage: Pumping Station Ipswich District Environment Agency, Anglian Region Crude Sewage Tributary Of River Yox 25th August 1994 2115 Not Given Freshwater Stream/River Poor Operational Practice Category 2 - Significant Incident Located by supplier to within 100m	A11NW (E)	225	1	641001 270001
	Water Abstractions					
8	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:	Yoxford & Darsham Farmers 7/35/03/*g/042 Not Supplied Well Near Darsham Rail Station, DARSHAM Environment Agency, Anglian Region Industrial Processing (Miscellaneous) Not Supplied Well And Borehole 0 2000 E chalk; Status: Revoked Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	A10SE (S)	42	1	640590 269760
	Water Abstractions					
9	Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Adnams & Co Ltd 7/35/03/*g/041 Not Supplied Well At Stradbroke Arms, DARSHAM Environment Agency, Anglian Region Private Water Undertaking Not Supplied Well And Borehole 1 5000 Glacial Sand and Gravel; Status: Revoked Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	A10SW (SW)	152	1	640390 269600
	Water Abstractions					
10	Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Mr A W Hadingham 7/35/03/*g/013 Not Supplied Well At Hall Farn, DARSHAM Environment Agency, Anglian Region Agriculture (General) Not Supplied Well And Borehole 3 9100 Crag; Status: Revoked Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	A11SW (SE)	461	1	641050 269650



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions					
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Positional Accuracy:	L J Whiting 7/35/03/*g/016 Not Supplied Well At Martins Farm, YOXFORD Environment Agency, Anglian Region Agriculture (General) Not Supplied Well And Borehole 0 1300 E chalk; Status: Revoked Not Supplied Not Supplied Not Supplied Not Supplied Not Supplied Located by supplier to within 10m	A13NW (NW)	780	1	639730 270800
	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:	The Trustees Of Trusson'S Mere 7/35/03/*G/0076 101 Well At Darsham Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Not Supplied O1 January 31 December 5th March 2002 Not Supplied Located by supplier to within 100m	A7NE (SE)	805	1	641200 269300
	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:	D J Prutton 7/35/03/*G/0076 100 Well At Darsham Environment Agency, Anglian Region General Farming And Domestic Water may be abstracted from a single point Groundwater Not Supplied Not Supplied Crag; Status: Perpetuity 01 January 31 December 1st April 1996 Not Supplied Located by supplier to within 10m	A7NE (SE)	805	1	641200 269300
	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: Pesitional Accuracy:	R & W Thickitt 7/35/03/*S/0050 102 Minsmere R At Trustans Fm,Dars Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface Not Supplied Not Supplied Trustans Farm, Darsham, Suffolk 01 May 30 September 8th August 2003 Not Supplied Located by supplied to within 10m	A2NW (S)	966	1	640340 268760



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions					
	Operator: Licence Number: Permit Version: Location: Authority:	The Trustees Of Trusson'S Mere 7/35/03/*S/0050 101 Minsmere R At Trustans Fm,Dars Environment Agency, Anglian Region	A2NW (S)	966	1	640340 268760
	Abstraction: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details:	General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface Not Supplied Not Supplied Not Supplied				
	Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	01 May 30 September 5th March 2002 Not Supplied Located by supplier to within 10m				
	Water Abstractions					
	Operator: Licence Number: Permit Version: Location: Authority: Abstraction: Abstraction Type: Source:	D J Prutton 7/35/03/*S/0050 100 Minsmere R At Trustans Fm,Dars Environment Agency, Anglian Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface	A2NW (S)	966	1	640340 268760
	Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Not Supplied Not Supplied Status: Perpetuity 01 May 30 September 1st April 1996 Not Supplied Located by supplier to within 10m				
	Groundwater Vulner	rability				
	Soil Classification: Map Sheet: Scale:	Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Sheet 33 East Suffolk 1:100,000	A10NE (W)	0	1	640659 269970
	Groundwater Vulner	rability				
	Soil Classification: Map Sheet: Scale:	Soils of High Leaching Potential (H2) - Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential Sheet 33 East Suffolk 1:100,000	A10SE (S)	0	1	640698 269803
	Drift Deposits					
	Drift Deposit:	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 Surfolk	A10NE (W)	0	1	640659 269970
	Scale:	1:100,000				
	Bedrock Aquifer Des Aquifer Desination:	signations Principal Aquifer	A10NE (W)	0	3	640659 269970
	Bedrock Aquifer Des Aquifer Desination:	signations Principal Aquifer	A10NE (N)	0	3	640659 270001
	Superficial Aquifer	Designations				
	Aquifer Designation:	Unproductive Strata	A10NE (W)	0	3	640659 269970
	Aquifer Designation:	Unproductive Strata	A10NE (N)	0	3	640659 270001
	Superficial Aquifer I Aquifer Designation:	Designations Secondary Aquifer - Undifferentiated	A10NE (W)	0	3	640489 270001
	Extreme Flooding fr	om Rivers or Sea without Defences				
	Flooding from River	s or Sea without Defences				



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Areas Benefiting from Flood Defences				
	None				
	Flood Water Storage Areas				
	None				
	Flood Defences				
	None				



Waste

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage				
	Name: Suffolk County Council - Has supplied landfill data		0	7	640659 269970
	Local Authority Landfill Coverage				
	Name: Suffolk Coastal District Council - Had landfill data but passed it to the relevant environment agency		0	2	640659 269970



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Description:	I Geology Norwich Crag, Red Crag and Chillesford Clay	A10NE	0	3	640659
	BGS Estimated Soil Source: Soil Sample Type:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil	(W) A11NW (E)	0	4	269970 641000 270000
	Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel	<15 mg/kg <1.8 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg				
	Concentration:	Chamiotari				
	Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Pritish Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	A10NE (N)	0	4	640659 270000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	A10NE (W)	0	4	640659 269970
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg 40 - 60 mg/kg <150 mg/kg <15 mg/kg	A10NE (W)	0	4	640487 270000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 40 - 60 mg/kg <150 mg/kg <15 mg/kg	A10NE (W)	10	4	640486 269986
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg 20 - 40 mg/kg <150 mg/kg <15 mg/kg	A10SE (SW)	19	4	640469 269864



Details		Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
BGS Estimated Soil Source:	Chemistry British Geological Survey, National Geoscience Information Service	A10NE	34	4	640463
Arsenic Concentration:	<15 mg/kg	(VV)			209990
Cadmium Concentration:	<1.8 mg/kg				
Concentration:	<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	A10SE (SW)	53	4	640445 269877
Concentration: Cadmium	<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	A10SE (S)	177	4	640678 269656
Concentration: Cadmium	<1.8 mg/kg				
Concentration: Chromium	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	A11NW (E)	225	4	641000 269970
Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	60 - 90 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg 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	A15NE (NE)	353	4	641304 270730
Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	40 - 60 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	A15NE (NE)	395	4	641360 270733
Concentration: Cadmium Concentration:	<1.8 mg/kg				
Chromium Concentration:	60 - 90 mg/kg				
Lead Concentration: Nickel Concentration:	<150 mg/kg 15 - 30 mg/kg				
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration: Nickel Concentration: Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Cadmium Concentration: Lead Concentration: Cadmium Concentration: Lead Concentration: Nickel Concentration: Cadmium Concentration: Cadmium Concentration: Lead Concentration: Nickel Concentration: Cadmium Concentration: Cadmium Concentration: Cadmium Concentration: Cadmium Concentration: Lead Concentra	Body Statistics Details Body Statistics Survey, National Geoscience Information Service Soll Sample Type: Rural Soll Survey, National Geoscience Information Service Concentration: Cadmium -1.8 mg/kg Concentration: -0.9 0 mg/kg Lead Concentration: -1.5 mg/kg Concentration: -1.5 mg/kg Concentration: -1.6 mg/kg Concentration: -1.6 mg/kg Concentration: -2.0 mg/kg Concentration: -3.0 mg/kg Concentration: -3.0 mg/kg Concentration: -4.0 mg/kg	Details Cluderant Reference (Compass) BOS Estimated Soil Chemistry Source: A10NE (W) A10NE (W) Source: Source: A10NE (W) Concentration: -1.5 mg/kg A10NE (W) Concentration: -1.5 mg/kg A10NE (W) Concentration: -1.5 mg/kg A10NE (W) EAG Sectimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: A10SE (SW) EAG Sectimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: A10SE (SW) EAG Sectimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: A10SE (S) EAG Sectimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service (S) A10SE (S) Source: British Geological Survey, National Geoscience Information Service (S) A10SE (S) Concentration: -1.8 mg/kg A10SE (S) Concentration: -1.8 mg/kg A10SE (S) Concentration: -1.8 mg/kg A10SE (S) Concentration: -1.8 mg/kg A10SE Concentratio	Details Quadram Reference Distance Distance Distance Surger: Quadram Reference Distance Distance Distance Distance (W) Stitutate Alone (W) 45 Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Concentration: A100E (W) 34 65 Estimated Soil Chemistry Concentration: -15 mg/kg A100E (W) 53 66 Estimated Soil Chemistry Source: Statish Geological Survey, National Geoscience Information Service Concentration: A100E (SW) 53 67 mg/kg Concentration: -13 mg/kg -13 mg/kg S3 53 68 Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Concentration: A100E (SW) 53 60 Semple Type: Run Sol Concentration: -40 mg/kg -410 mg/kg 53 60 Semple Type: Run Sol Concentration: -40 mg/kg -410 mg/kg 177 80 Semple Type: Run Sol Concentration: -40 mg/kg -410 mg/kg 177 80 Settimated Soil Chemistry Source: Run Sol Concentration: -41 mg/kg -410 mg/kg 225 60 Settimated Soil Chemistry Source: Run Sol Source: Run Sol Source: A110W 225 <td>DetailsQuardinal Reference (Compass Direction)Estimated Subscore DirectionEstimated Subscore DirectionEstimated Subscore DirectionContactBSS Estimated Soil Chemistry Source: Concentration: ChemistryStational Gassience Information Service Attal Soil </td>	DetailsQuardinal Reference (Compass Direction)Estimated Subscore DirectionEstimated Subscore DirectionEstimated Subscore DirectionContactBSS Estimated Soil Chemistry Source: Concentration: ChemistryStational Gassience Information Service Attal Soil



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil	Chemistry				
	Source: Soil Sample Type: Arsenic	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A11SE (SE)	484	4	641126 269705
	Cadmium Concentration:	<1.8 mg/kg				
	Chromium Concentration:	20 - 40 mg/kg				
	Nickel Concentration:	<150 mg/kg <15 mg/kg				
	PCS Estimated Sail	Chamistry				
	Source: Soil Sample Type: Arsenic Concentration:	British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg	A6NW (SW)	490	4	640249 269288
	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	A9NE (W)	492	4	640000 269970
	Cadmium Concentration:	<1.8 mg/kg				
	Concentration:	40 - 60 mg/kg				
	Nickel Concentration:	<150 mg/kg 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	A9NE (W)	497	4	640000 270000
	Concentration: Cadmium	<1.8 mg/kg				
	Concentration: Chromium	60 - 90 mg/kg				
	Lead Concentration: Nickel Concentration:	<150 mg/kg 15 - 30 mg/kg				
	BGS Measured Urb	an Soil Chemistry				
	No data available	-				
	BGS Urban Soil Che No data available	emistry Averages				
	Coal Mining Affecte In an area that might	d Areas not be affected by coal mining				
	Non Coal Mining Ar	eas of Great Britain				
	Retential for Collen	cible Cround Stability Hazarda				
	Hazard Potential:	Very Low	A10NE	0	3	640659
			(N)			270001
	Potential for Collap Hazard Potential: Source:	sible Ground Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	A10NE (W)	0	3	640659 269970
	Potential for Compr	essible Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A10NE (N)	0	3	640659 270001
	Potential for Compr Hazard Potential: Source:	essible Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A10NE	0	3	640659 269970
	Potential for Groun	d Dissolution Stability Hazards	(**)			200310
	No Hazard					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Lands	ide Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10NE (W)	0	3	640659 269970
	Potential for Lands	ide Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10NE (N)	0	3	640659 270001
	Potential for Runnin	ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10NE (N)	0	3	640659 270001
	Potential for Runnin	ng Sand Ground Stability Hazards				
	Hazard Potential:	Very Low	A10NE	0	3	640659
	Source:	British Geological Survey, National Geoscience Information Service	(W)			269970
	Potential for Runnin	ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10SE (SW)	16	3	640471 269865
	Potential for Runnin	ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10SE (SW)	50	3	640447 269878
	Potential for Runnin	ng Sand Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10SE (S)	177	3	640680 269657
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10NE (N)	0	3	640659 270001
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10NE (W)	0	3	640659 269970
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10NE (W)	0	3	640489 270001
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Very Low British Geological Survey, National Geoscience Information Service	A10NE (W)	8	3	640488 269985
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A10SE (SW)	16	3	640471 269865
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	Low British Geological Survey, National Geoscience Information Service	A10NE (W)	31	3	640465 269998
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A10SE (SW)	50	3	640447 269878
	Potential for Shrink	ing or Swelling Clay Ground Stability Hazards				
	Hazard Potential: Source:	No Hazard British Geological Survey, National Geoscience Information Service	A10SE (S)	177	3	640680 269657
	Radon Potential - R	adon Protection Measures				
	Protection Measure:	No radon protective measures are necessary in the construction of new dwellings or extensions	A10NE (N)	0	3	640659 270001
	Source:	British Geological Survey, National Geoscience Information Service				
	Radon Potential - R	adon Protection Measures				
	Protection Measure:	No radon protective measures are necessary in the construction of new dwellings or extensions British Geological Survey. National Geoscience Information Service	A10NE (W)	0	3	640659 269970
	Padon Potential P	adon Affacted Araze				
	Affected Area	The property is in a lower probability radon area as less than 1% of homes		Ο	3	640659
	Source:	are above the action level British Geological Survey, National Geoscience Information Service	(N)	5	3	270001
	Radon Potential - R	adon Affected Areas				
	Affected Area:	The property is in a lower probability radon area, as less than 1% of homes are above the action level	A10NE (W)	0	3	640659 269970
	Source:	British Geological Survey, National Geoscience Information Service				



Industrial Land Use

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Contemporary Trad	e Directory Entries				
11	Name: Location: Classification: Status: Positional Accuracy:	A E Kerridge & Sons Ltd Station Garage, Main Road, Darsham, Saxmundham, Suffolk, IP17 3PW Car Dealers Inactive Automatically positioned to the address	A10SE (S)	33	-	640611 269803
	Contemporary Trad	e Directory Entries				
11	Name: Location: Classification: Status: Positional Accuracy:	Darsham Tyre Exhaust Centre Station Garage, Main Road, Darsham, Saxmundham, Suffolk, IP17 3PW Tyre Dealers Active Automatically positioned to the address	A10SE (S)	33	-	640611 269803
	Contemporary Trad	e Directory Entries				
11	Name: Location: Classification: Status: Positional Accuracy:	Darsham Darsham Service Station,Main Rd, Darsham, Saxmundham, Suffolk, IP17 3PW Petrol Filling Stations Active Manually positioned to the address or location	A10SE (S)	33	-	640610 269802
	Contemporary Trad	e Directory Entries				
	Name: Location: Classification: Status: Positional Accuracy:	Arthur J Davey Coal Yard, Thurtells Corner, Yoxford, Saxmundham, Suffolk, IP17 3LB Coal & Smokeless Fuel Merchants & Distributors Inactive Automatically positioned to the address	A6SW (SW)	679	-	640106 269155
	Fuel Station Entries					
12	Name: Location: Brand: Premises Type: Status: Positional Accuracy:	Darsham Service Station Darsham Service Station, Main Road, Darsham, Saxmundham, Suffolk, IP17 3PW Jet Petrol Station Open Manually positioned to the address or location	A10SE (S)	31	-	640609 269805



Sensitive Land Use

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Environmentally S	ensitive Areas				
13	Name: Multiple Areas: Total Area (m2): Source:	Suffolk River Valleys Y 18431673.02 Natural England	A7NW (S)	489	5	640894 269342
	Nitrate Vulnerable	Zones				
14	Name: Description: Source:	Not Supplied NVZ Area Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A10NE (W)	0	6	640659 269970



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Suffolk Coastal District Council - Environmental Health Department	September 2011	Annual Rolling Update
Discharge Consents	April 2012	Quarterly
Enforcement and Prohibition Notices	7.012	Quartony
Environment Agency - Anglian Region	June 2012	Quarterly
Integrated Pollution Controls 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 Update
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
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Eastern Area	April 2012	Quarterly
Water Abstractions	April 2012	Quarterly
		Quarterry
water Industry Act Referrals	April 2012	Quarterly
Croundwater Vulnershility		Quarterry
Environment Agency - Head Office	January 2011	Not Applicable
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



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	May 2000	Not Applicable
Suffolk County Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Suffolk Coastal District Council - Environmental Health Department	May 2000	Not Applicable
	May 2000	
Registered Landfill Sites	March 0000	Net Annlinette
Environment Agency - Anglian Region - Eastern Area	March 2003	
Registered Waste Transfer Sites	March 0000	Net Annlinette
Environment Agency - Anglian Region - Eastern Area	March 2003	
Registered Waste Treatment or Disposal Sites	March 2002	Net Applicable
Environment Agency - Anglian Region - Eastern Area	March 2003	
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	December 2011	Annual Rolling Update
	February 2006	Annual Kolling Update
Planning Hazardous Substance Consents	December 2011	Annual Palling Ladate
Suffolk County Council - Environment and Transport	February 2006	Annual Rolling Undate
		in the second second



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		
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		
Catalist Ltd - Experian	February 2012	Quarterly



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



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Licensed Partner
Environment Agency	Environment Agency
Scottish Environment Protection Agency	Sectish Environment Protection Agency
The Coal Authority	THE COAL AUTHORITY
British Geological Survey	British Geological Survey
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

amec

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	Suffolk Coastal District Council - Environmental Health Department	Telephone: 01394 383789 extn 2238 Fax: 01394 385100 Website: www.suffolkcoastal.gov.uk
	Council Offices, Melton Hill, Woodbridge, Suffolk, IP12 1AU	
3	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
4	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
5	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
6	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
7	Suffolk County Council St Edmund House, County Hall, Ipswich, Suffolk, IP4 1LZ	Telephone: 01473 583000 Fax: 01473 230240 Website: www.suffolkcc.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.



🖒 Specified Site 🛛 🖒 Specified Buffer(s)	X Bearing Reference Point 🛛 🛽 Map ID
Several of Type at Location	
Agency and Hydrological	Waste
Contaminated Land Register Entry or Notice (Location)	BGS Recorded Landfill Site (Location)
Note: Contaminated Land Register Entry or Notice	🔀 BGS Recorded Landfill Site
🔶 Discharge Consent	🔴 EA Historic Landfill (Buffered Point)
L Enforcement or Prohibition Notice	EA Historic Landfill (Polygon)
A Integrated Pollution Control	Integrated Pollution Control Registered Waste Site
Integrated Pollution Prevention Control	Licensed Waste Management Facility
Local Authority Integrated Pollution Prevention and Control	Licensed Waste Management Facility (Location)
A Local Authority Pollution Prevention and Control	Local Authority Recorded Landfill Site (Location)
Control Enforcement	IIII Local Authority Recorded Landfill Site
Pollution Incident to Controlled Waters	🚫 Registered Landfill Site
Prosecution Relating to Authorised Processes	Registered Landfill Site (Location)
Prosecution Relating to Controlled Waters	Registered Landfill Site (Point Buffered to 100m)
A Registered Radioactive Substance	Registered Landfill Site (Point Buffered to 250m)
🥆 River Network or Water Feature	👚 Registered Waste Transfer Site (Location)
🖶 River Quality Sampling Point	IIII Registered Waste Transfer Site
🔷 Substantiated Pollution Incident Register	Registered Waste Treatment or Disposal Site (Location)
🔷 Water Abstraction	Registered Waste Treatment or Disposal Site
🔶 Water Industry Act Referral	Hazardous Substances
Geological	🌠 COMAH Site
BGS Recorded Mineral Site	🌠 Explosive Site
Industrial Land Use	🛃 NIHHS Site

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6
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2
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< 150
150 - 300
300 - 600
600 - <mark>900</mark>
















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Web

www.envirocheck.co.uk



Envirocheck® Report:

Datasheet

Order Details:

Order Number: 40176294_1_1

Customer Reference: 32623

National Grid Reference: 640630, 271290

Slice: B

•

Site Area (Ha): 27.98

Search Buffer (m): 500

Site Details:

PRN1 Darsham Station Darsham Suffolk

Client Details:

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





Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	2
Hazardous Substances	-
Geological	3
Industrial Land Use	-
Sensitive Land Use	5
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Data Suppliers	10
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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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Report Version v47.0



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				
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				
River Quality Biology Sampling Points				
River Quality Chemistry Sampling Points				
Substantiated Pollution Incident Register				
Water Abstractions				
Water Industry Act Referrals				
Groundwater Vulnerability	pg 1	Yes	n/a	n/a
Bedrock Aquifer Designations	pg 1	Yes	n/a	n/a
Superficial Aquifer Designations	pg 1	Yes	n/a	n/a
Source Protection Zones				
Extreme Flooding from Rivers or Sea without Defences				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 3	Yes	n/a	n/a
BGS Estimated Soil Chemistry	pg 3	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 4	Yes		n/a
Potential for Compressible Ground Stability Hazards				n/a
Potential for Ground Dissolution Stability Hazards				n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes		n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes		n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	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				
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 5			1
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	pg 5	1		
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				



Agency & Hydrological

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Nearest Surface Wa	ter Feature				
			B2SE (SW)	310	-	640481 271147
	Groundwater Vulne	rability				
	Soil Classification: Map Sheet: Scale:	Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Sheet 33 East Suffolk 1:100,000	B2NE (S)	0	1	640630 271294
	Drift Deposits					
	Drift Deposit: Map Sheet: Scale:	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 1:100,000	B2NE (S)	0	1	640630 271294
	Bedrock Aquifer De	signations				
	Aquifer Desination:	Principal Aquifer	B2NE (S)	0	2	640630 271294
	Superficial Aquifer	Designations				
	Aquifer Designation:	Unproductive Strata	B2NE (S)	0	2	640630 271294
	Superficial Aquifer	Designations				
	Aquifer Designation:	Secondary Aquifer - Undifferentiated	(S)	0	2	640528 270609
	Extreme Flooding for None	rom Rivers or Sea without Defences				
	Flooding from River	rs or Sea without Defences				
	Areas Benefiting fro	om Flood Defences				
	None					
	Flood Water Storag	e Areas				
	None					
	Flood Defences					
	None					



Waste

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage				
	Name: Suffolk County Council - Has supplied landfill data		0	6	640630 271294
	Local Authority Landfill Coverage				
	Name: Suffolk Coastal District Council - Had landfill data but passed it to the relevant environment agency		0	7	640630 271294



Geological

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid	d Geology	Dalle			
	Description:	Norwich Crag, Red Crag and Chillestord Clay	B2NE (S)	0	2	640630 271294
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 60 - 90 mg/kg	B3SW (SE)	0	3	641000 271000
	Nickel Concentration:	15 - 30 mg/kg				
	BGS Estimated Soil	Chemistry				
	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 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	B2SE (S)	0	3	640630 271000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	B2NE (S)	183	3	640630 271294
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg 40 - 60 mg/kg <150 mg/kg <15 mg/kg	B3SE (SE)	353	3	641270 271000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	B3SE (SE)	395	3	641305 271000
	BGS Estimated Soil Source: Soil Sample Type: Arsenic Concentration: Cadmium Concentration: Chromium Concentration: Lead Concentration: Nickel Concentration:	Chemistry British Geological Survey, National Geoscience Information Service Rural Soil <15 mg/kg <1.8 mg/kg 60 - 90 mg/kg <150 mg/kg 15 - 30 mg/kg	B3NW (E)	414	3	641000 271294



Geological

BGS Estimated Soil Chemistry B1SE 497 3 Source: British Geological Survey, National Geoscience Information Service B1SE 497 3 Soil Sample Type: Rural Soil Arsenic <15 mg/kg (SW) 497 3 Concentration: Cadmium <1.8 mg/kg (SW) Concentration: 10 10 Concentration: Concentration: Concentration: 10	NGR
Source: British Geological Survey, National Geoscience Information Service B1SE (SW) 497 3 Soil Sample Type: Rural Soil Arsenic <15 mg/kg	
Cadmium <1.8 mg/kg	640000 271000
Concentration: Lead Concentration: Nickel 15 - 30 mg/kg Concentration:	
BGS Measured Urban Soil Chemistry	
No data available	
No data available	
Coal Mining Affected Areas	
In an area that might not be affected by coal mining	
Non Coal Mining Areas of Great Britain No Hazard	
Potential for Collapsible Ground Stability Hazards	
Hazard Potential: Very Low B2NE 0 2 Source: British Geological Survey, National Geoscience Information Service (S) 0 2	640630 271294
Potential for Compressible Ground Stability Hazards	
Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service (S)	640630 271294
Potential for Ground Dissolution Stability Hazards No Hazard	
Potential for Landslide Ground Stability Hazards	+
Hazard Potential: Very Low B2NE 0 2 Source: British Geological Survey, National Geoscience Information Service (S) 2	640630 271294
Potential for Running Sand Ground Stability Hazards	1
Hazard Potential: Very Low B2NE 0 2 Source: British Geological Survey, National Geoscience Information Service (S) 2	640630 271294
Potential for Shrinking or Swelling Clay Ground Stability Hazards	
Hazard Potential: Low B2NE 0 2 Source: British Geological Survey, National Geoscience Information Service (S) (S)	640630 271294
Radon Potential - Radon Protection Measures	
Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions (S)	640630 271294
Source: British Geological Survey, National Geoscience Information Service	ļ
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 B2NE 0 2 Source: British Geological Survey, National Geoscience Information Service (S) 0 2	640630 271294



Sensitive Land Use

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Environmentally S	ensitive Areas				
1	Name: Multiple Areas: Total Area (m2): Source:	Suffolk River Valleys Y 18431673.02 Natural England	(SW)	489	4	639692 269824
	Nitrate Vulnerable	Zones				
2	Name: Description: Source:	Not Supplied NVZ Area Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B2NE (S)	0	5	640630 271294



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Suffolk Coastal District Council - Environmental Health Department	September 2011	Annual Rolling Update
Discharge Consents	April 2012	Quarterly
Enforcement and Prohibition Notices	7.012	Quartony
Environment Agency - Anglian Region	June 2012	Quarterly
Integrated Pollution Controls 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 Update
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
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	January 2011	Annually
Substantiated Pollution Incident Register		
Environment Agency - Anglian Region - Eastern Area	April 2012	Quarterly
Water Abstractions	April 2012	Quarterly
		Quarterry
water Industry Act Referrals	April 2012	Quarterly
Croundwater Vulnershility		Quarterity
Environment Agency - Head Office	January 2011	Not Applicable
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



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	May 2000	Not Applicable
Suffolk County Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Suffolk Coastal District Council - Environmental Health Department	May 2000	Not Applicable
	May 2000	
Registered Landfill Sites	March 0000	Net Annlinette
Environment Agency - Anglian Region - Eastern Area	March 2003	
Registered Waste Transfer Sites	March 0000	Net Annlinette
Environment Agency - Anglian Region - Eastern Area	March 2003	
Registered Waste Treatment or Disposal Sites	March 2002	Net Applicable
Environment Agency - Anglian Region - Eastern Area	March 2003	
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	December 2011	Annual Rolling Update
	February 2006	Annual Kolling Update
Planning Hazardous Substance Consents	December 2011	Annual Palling Ladate
Suffolk County Council - Environment and Transport	February 2006	Annual Rolling Undate
		in the second second



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		
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		
Catalist Ltd - Experian	February 2012	Quarterly



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



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Licensed Partner
Environment Agency	Environment Agency
Scottish Environment Protection Agency	SECTISH Environment Protection Agency
The Coal Authority	THE COAL AUTHORITY
British Geological Survey	British Geological Survey
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	Telephone: 0115 936 3143
	British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	Landmark Information Group Limited	Telephone: 01392 441761 Fax: 01392 441709
	5 - 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Email: cssupport@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk
4	Natural England	Telephone: 0845 600 3078 Fax: 01733 455103
	Northminster House, Northminster Road, Peterborough, Cambridgeshire, PE1 1UA	Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
5	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	Telephone: 0113 2613333 Fax: 0113 230 0879
	Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	
6	Suffolk County Council	Telephone: 01473 583000
	St Edmund House, County Hall, Ipswich, Suffolk, IP4 1LZ	Website: www.suffolkcc.gov.uk
7	Suffolk Coastal District Council - Environmental Health Department	Telephone: 01394 383789 extn 2238 Fax: 01394 385100
	Council Offices, Melton Hill, Woodbridge, Suffolk, IP12 1AU	vedsite: www.suffoikcoastal.gov.uk
-	Health Protection Agency - Radon Survey, Centre for	Telephone: 01235 822622 Fax: 01235 833891
	Kadiation, Chemical and Environmental Hazards	Email: radon@hpa.org.uk Website: www.hpa.org.uk
	Landmark Information Group Limited	Telephone: 0844 844 9952
	The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	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.



🚫 Specified Site 🛛 💍 Specified Buffer(s)	X Bearing Reference Point
Several of Type at Location	
Agency and Hydrological	Waste
Contaminated Land Register Entry or Notice (Location)	BGS Recorded Landfill Si
🚫 Contaminated Land Register Entry or Notice	BGS Recorded Landfill Si
🔶 Discharge Consent	🔴 EA Historic Landfill (Buffer
Lenforcement or Prohibition Notice	EA Historic Landfill (Polygo
A Integrated Pollution Control	Integrated Pollution Control Waste Site
Integrated Pollution Prevention Control	Licensed Waste Manage
Local Authority Integrated Pollution Prevention and Control	Eicensed Waste Manager
A Local Authority Pollution Prevention and Control	Local Authority Recorded
Control Enforcement	Local Authority Recorded
Pollution Incident to Controlled Waters	🚫 Registered Landfill Site
Prosecution Relating to Authorised Processes	Registered Landfill Site (L
Prosecution Relating to Controlled Waters	Registered Landfill Site (P
A Registered Radioactive Substance	Registered Landfill Site (P
🥆 River Network or Water Feature	👚 Registered Waste Transf
🛖 River Quality Sampling Point	Registered Waste Transf
🖕 Substantiated Pollution Incident Register	Registered Waste Treatm (Location)
🔶 Water Abstraction	Registered Waste Treatm
🔶 Water Industry Act Referral	Hazardous Sub
Geological	🛃 COMAH Site
BGS Recorded Mineral Site	🛃 Explosive Site
Industrial Land Use	🙀 NIHHS Site

Order Number:
Customer Ref:
National Grid Reference
Slice:
Site Area (Ha):
Search Buffer (m):







X Bearing Reference Point

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Order Details:	40176294_1_1
Customer Ref:	32623
National Grid Reference:	640630, 271290
Slice:	В
Site Area (Ha):	27.98
Search Buffer (m):	500

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Order Details:	40176294_1_1
Customer Ref:	32623
National Grid Reference:	640630, 271290
Slice:	В
Site Area (Ha):	27.98
Search Buffer (m):	500





Index Map

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.

Segment

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:





British Geological Survey Natural environment research council





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

Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 270330

 Site Area (Ha):
 27.98

 Search Buffer (m):
 500

Site Details

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1884	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1976	4
Large-Scale National Grid Data	1:2,500	1995	5

Historical Map - Segment A10



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
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Site Details

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Page 1 of 5

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Published 1884 Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

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

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Map Name(s) and Date(s)



Historical Map - Segment A10



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
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 Search Buffer (m):
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1884	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1976	4
Large-Scale National Grid Data	1:2,500	1995	5

Historical Map - Segment A11



Order Details

Order Number: Customer Ref: National Grid Reference: 640660, 269970 Slice: Α Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 27.98 100

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Site Details

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Ordnance Survey Plan

Published 1976

Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 100

Site Details

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1884	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1976	4
Large-Scale National Grid Data	1:2,500	1995	5

Historical Map - Segment A14



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 100

Site Details

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Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 100

Site Details

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Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 100

Site Details

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covered the whole of what were considered to be the cultivated parts of Great Projection, with independent surveys of a single county or group of counties,

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:2,500	1884	2
Suffolk	1:2,500	1904	3
Ordnance Survey Plan	1:2,500	1976	4
Large-Scale National Grid Data	1:2,500	1995	5

Historical Map - Segment A15



Order Details

Order Number: Customer Ref: National Grid Reference: 640660, 269970 Slice: Α Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 27.98 100

Tel: Fax: Web

Site Details

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Published 1884 Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A15



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 100

Site Details

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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 A15



Order Details

Order Number:40176294_1_1Customer Ref:32623National Grid Reference:640660, 269970Slice:ASite Area (Ha):27.98Search Buffer (m):100

Site Details

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Ordnance Survey Plan

Published 1976

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)



Order Details

Order Number: 40176294_1_1 Customer Ref: 32623 National Grid Reference: 640660, 269970 Slice: А Site Area (Ha): Search Buffer (m): 27.98 100

Site Details

PRN1 Darsham Station, Darsham, Suffolk



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Large-Scale National Grid Data

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)



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Historical Mapping Legends

Ordnance	Survey County Series 1:10,560	Ordnance Survey Plan 1:10,000	1:10,000 Raster Mapping
Grav Pit	vel Sand Other Pit Pits	Chalk Pit, Clay Pit	Gravel Pit Refuse tip or slag heat
پېنې پېنې پېښ پېښ پېښ پېښ	rs	Refuse or Lake, Loch	ື້ໍ້ໍ້ຈັກ Boulders ໂດຍ Autor (southered) ອີ່ເຊັ່ງ Boulders ເscattered)
د د		Dunes	Shingle Mud Mud
من م	d Deciduous Brushwood	ネネ Coniferous ふみの Non-Coniferous 木 木 Trees のの Trees	Sand Sand Sand Pit
		ሩን ሩን Orchard በስ_ Scrub \ነነ _በ Coppice	Slopes Top of cliff Undergroun
Fir	Furze Rough Pasture	יזר זו Bracken איזענעע Heath איז אין א Rough יד	General detail detail detail Narrow gau railway
Ar flc	row denotes Trigonometrical w of water Station	<u>→⊥</u> Marsh 、、、Y///, Reeds <u>→</u> - <u>-</u> s Saltings	County boundary
++ Si Pt Si	te of Antiquities	Building Building Glasshouse	(England only) boundary District, Unitary, Metropolitan, Constituend London Borough boundary boundary
Sketched Contour	Instrumental Contour	Pylon ————————————————————————————————————	Area of wooded vegetation ∧ Non-coniferous ∧ Coniferous
Main Roads	Fenced Minor Roads	Cutting Embankment Standard Gauge	 Coniferous Coniferous Crees (scattered) Coniferous Coniferou
	Sunken Road Raised Road	Road [™] [™] Road Level Foot Single Track Under Over Crossing Bridge	ې پې د د د د د د د د د د د د د د د د د د
	Road over Railway over Railway River	Siding, Tramway or Mineral Line -+ -+ -+ -+ +-+ + Narrow Gauge	متله Rough متلاه المعلم الم متله Grassland من المعلم الم
Constant Constant Constant	Railway over Road Level Crossing	— — Geographical County	مور میں
	River or Canal Stream	Administrative County, County Borougn or County of City Municipal Borough, Urban or Rural District, Burgh or District Council	Water feature Flow arrows
	Stream County Boundary (Geographical)	Borough, Burgh or County Constituency Shown only when not coincident with other boundaries	MHW(s) Mean ngh water (springs) Mean of water (springs) Telephone line Electricity
<u></u>	County & Civil Parish Boundary	BP, BS Boundary Post or Stone Pol Sta Police Station	(where shown) (with poles) Bench mark (where shown) (with poles)
Co. Boro. Bdy.	County Borough Boundary (England)	Ch Church PO Post Office CH Club House PC Public Convenience F E Sta Fire Engine Station PH Public House FB Foot Bridge SB Signal Box	Point feature Pylon, flare
Co. Burgh Bdy	County Burgh Boundary (Scotland) Rural District Boundary	Fn Fountain Spr Spring GP Guide Post TCB Telephone Call Box MP Mile Post TCP Telephone Call Post	• Site of (antiquity) Glasshouse
·····	Civil Parish Boundary	MS Mile Stone W Well	General Building Important Building

ping

Refuse tip or slag heap

Underground detail Narrow gauge railway Single track railway Civil, parish or community boundary Constituency boundary

Non-coniferous

Marsh, Salt Marsh or Reeds

Flow arrows

(with poles) Triangulation

Glasshouse

water (springs)

transmission line

Pylon, flare stack or lighting tower

ame Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:10,560	1884 - 1885	2
Suffolk	1:10,560	1905	3
Suffolk	1:10,560	1928	4
Suffolk	1:10,560	1950 - 1951	5
Ordnance Survey Plan	1:10,000	1957 - 1958	6
Ordnance Survey Plan	1:10,000	1957	7
Ordnance Survey Plan	1:10,000	1979	8
Ordnance Survey Plan	1:10,000	1982 - 1984	9
Ordnance Survey Plan	1:10,000	1991	10
10K Raster Mapping	1:10,000	2012	11

Historical Map - Slice A



Order Details

Order Number: Customer Ref: National Grid Reference: 640660, 269970 Slice: Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 А 27.98 500

Tel: Fax: Web:

Site Details

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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.













Ordnance Survey Plan Published 1957 - 1958 Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TM37SE TM47SW 1957 I 1958 I 1:10,560 1:10,560 TM36NE TM46NW 1957 I 1957 1:10,560 1:10,560 Т Т

Historical Map - Slice A



Order Details

Order Number: Customer Ref: National Grid Reference: 640660, 269970 Slice: А Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 27.98 500

Tel: Fax: Web:

Site Details

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Ordnance Survey Plan Published 1982 - 1984 Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TM37SE TM47SW 1982 I 1982 I 1:10,000 1:10,000 -1 1 TM36NE 1984 1982 1:10,000 1:10,000 - г ⁻ Т

Historical Map - Slice A



Order Details

Order Number: Customer Ref: National Grid Reference: 640660, 269970 Slice: А Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 27.98 500

Tel: Fax: Web:

Site Details

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10k Raster Mapping

Published 2012

Source map scale - 1:10,000

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

Map Name(s) and Date(s)

TM37SE 2012 1:10,000	TM47SW 2012 1:10,000
·	 '
I TM36NE	I TM46NW
2012 1:10,000	2012 I 1:10,000
, i	- I - İ - I

Historical Map - Slice A



Order Details

 Order Number:
 40176294_1_1

 Customer Ref:
 32623

 National Grid Reference:
 640660, 269970

 Slice:
 A

 Site Area (Ha):
 27.98

 Search Buffer (m):
 500

Site Details

PRN1 Darsham Station, Darsham, Suffolk



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Historical Mapping Legends

Ordnance	Survey County Series 1:10,560	Ordnance Survey Plan 1:10,000	1:10,000 Raster Mapping
Grav Pit	vel Sand Other Pit Pits	مرین کر Chalk Pit, Clay Pit کر Gravel Pit در Chalk Pit, Clay Pit در Chalk Pit	Gravel Pit Gravel Pit Gravel Pit
C Qua	rry Shingle Orchard	Sand Pit Oisused Pit	Rock (scattered)
په ^م ه ^م ه ^م ه ² [*] م ² [*] ⁴ ⁴ ⁴ [*] ⁴ ⁴ ⁴ ⁴ ⁴ [*] ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ [*] ⁴ ⁴ ⁴ ⁴ ⁴ ⁴	ers	Refuse or Lake, Loch	ີ້ໍ້ໍີ Boulders Boulders (scattered)
4 2 5 4 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	and the second s	Dunes 200 Boulders	Shingle Mud Mud
Mixed Woo	d Deciduous Brushwood	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sand Sand Sand Pit
			Slopes reaction Top of cliff
Fir	Furze Rough Pasture	ஒ் ் Orchard ெ தொல் \Y்ஸ் Coppice ரிரி Bracken ஸ்ப்ப்ச் Heath பட்டா, Rough ரி Grassland	General detail — — — — Underground detail — — — Overhead detail — — — — Narrow gauge railway
++++→ Ai flo	rrow denotes <u>a</u> Trigonometrical ow of water Station	<u> معا</u> يد Marsh ،،،∨//، Reeds <u>معا</u> دد Saltings	railway railway
r ∔ • Si	ite of Antiquities 🔹 🔹 Bench Mark	Direction of Flow of Water Building	Civil, parish or County boundary (England only) Civil, parish or community boundary
• 285 S	ump, Guide Post, Well, Spring, ignal Post Boundary Post urface Level	Glasshouse Sand	District, Unitary, Metropolitan, Constituency London Borough boundary boundary
Sketched	Instrumental Contour	Pylon ————————————————————————————————————	Area of wooded vegetation Area of vegetation Area of vegetatio
Main Roads	Fenced Minor Roads	Cutting Embankment Standard Gauge	Coniferous Coni
	Sunken Road Raised Road	Road ''''''' Road Level Foot Single Track	★ trees (scattered) ★ tree Coppice or Osiers
And the second s	Road over Railway over Railway River	Under Over Crossing Bridge Siding, Tramway or Mineral Line	متله Rough متله Grassland میلاه ۱۹۹۲ Heath
	Railway over Level Crossing	—— —— Geographical County	∩o_ Crub →⊻∠ Marsh, Salt →⊻∠ Marsh or Reeds
	Road over Road over River or Canal Stream	Administrative County, County Borough or County of City Municipal Borough Urban or Bural District	Water feature Flow arrows
	Road over Stream	Burgh or District Council Borough, Burgh or County Constituency Shown only when not coincident with other boundaries	MHW(S) Mean high water (springs) Mean low water (springs)
	County Boundary (Geographical)	Civil Parish — — — — Civil Parish Shown alternately when coincidence of boundaries occurs	Telephone line (where shown)
	County & Civil Parish Boundary	BP, BS Boundary Post or Stone Pol Sta Police Station	← Bench mark Triangulation
	County Borough Boundary (England)	Ch Church PO Post Office CH Club House PC Public Convenience	Point feature Pylon, flare stack
Co. Boro. Bdy.	County Burgh Boundary (Scotland)	FE Sta Fire Engine Stadon PH Public House FB Foot Bridge SB Signal Box Fn Fountain Spr Spring	or Mile Stone)
y	Rural District Boundary	GP Guide Post TCB Telephone Call Box MP Mile Post TCP Telephone Call Post	•••• Site of (antiquity) Glasshouse
	Civil Parish Boundary	MS Mile Stone W Well	General Building Important Building

ame Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Suffolk	1:10,560	1885 - 1886	2
Suffolk	1:10,560	1905	3
Suffolk	1:10,560	1951	4
Ordnance Survey Plan	1:10,000	1957 - 1958	5
Ordnance Survey Plan	1:10,000	1979	6
Ordnance Survey Plan	1:10,000	1982	7
10K Raster Mapping	1:10,000	2012	8

Historical Map - Slice B



Order Details

Order Number: Customer Ref: National Grid Reference: 640630, 271290 Slice: В Site Area (Ha): Search Buffer (m):

40176294_1_1 32623 27.98 500

Tel: Fax:

Web:

Site Details

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Appendix C. Zetica UXO Map

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UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 640505,269830



LEGEND

High: Areas indicated as having a bombing density of 50 bombs per 1000acre miltary UXO find industrv x or higher. Moderate: Areas indicated as having a bombing density of 15 to 49 bombs Luftwaffe targets transport dock per 1000acre. IJ utilities Low: Areas indicated as having 15 bombs per 1000acre or less. other

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 D. Definitions of Probability and Consequence

Table D.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 D.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.	



Classification	Definition of consequence
Minor	Minor exposure to hazardous substance resulting in no appreciable ill health effects.
Controlled Wat	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.



Appendix E. Site Visit Photographs


Date: 19/03/19	Project: Sizewell C Site Walkover, Northern Park and Ride
Comments	
View of the	
south west of	
the site, looking	
west towards	
the East Suffolk	
Line railway.	Million and March and American
	A CARLES AND A CAR
	Manager Andrew And
	- Lever X M / / A / - A - A
	HX RVAR DR H H H H H H H H H H H H H H H H H H









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NORTHERN PARK AND RIDE – APPENDIX 11B: CONCEPTUAL SITE MODELS

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Volume 3 Appendix 11B Conceptual Site Models |

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Tables

Table 1.1: Construction phase conceptual site model	1
Table 1.2: Operation phase conceptual site model	5
Table 1.3: Removal and reinstatement phase conceptual site model	9

Plates

None provided.

Figures

None provided.

i



1. Conceptual Site Models

Table 1.1: Construction phase conceptual site model.

Source	Receptor		Contaminant Exposure/	Baseline			Construction with Primary and Tertiary Mitigation.			Secondary Mitigation	Construction with Primary, Tertiary and Secondary Mitigation.			
Source			Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category.	
On-site: Made ground associated with	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil, soil-derived dust	Unlikely	Mild	Very low risk.	Receptor not present.			Intrusive ground investigation undertaken post	Receptor not present.			
the construction of the roads including A12 Road and Willow Marsh Lane. Fuels and oils attributed to spills from vehicles on the roads included within the site boundary, plus exhaust particulates. A range of		Construction / maintenance workers.	Inhalation of contaminants in soil, soil-derived dust, fibres and gas / vapours.	Receptor not present.			Low likelihood.	Mild	Low risk.	the detailed design and confirm the ground conditions	Unlikely ¹	Mild	Very low risk.	
		Users of Willow Marsh Lane.		Unlikely	Mild	Very low risk.	Receptor not present.			and contamination status of the site	Receptor not present.			
		Users of the new Park and ride.		Receptor not present.			Receptor not present.			groundwater sampling and	Receptor not present.			
	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated off-site. Inhalation of contaminants in soil-derived dust, fibres and gas / vapour which may have migrated off- site.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	monitoring. Remediation of soil and groundwater contamination prior to construction (e.g. source	Unlikely	Minor	Very low risk.	
inorganic and organic contaminants including the potential for		Pedestrians accessing surrounding roads and footpaths.		Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	or capping) if deemed necessary.	Unlikely	Minor	Very low risk.	
asbestos. Farmland within site boundary.		Farmers / workers on agricultural land.		Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.	
site boundary. Potential for un- mapped farmers tips: Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils. Risk of inorganic and organic	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate / low risk.		Unlikely	Mild	Very low risk.	
			Superficial aquiter.	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	Mild	Very low risk.

¹ It has been assumed that all construction workers will adhere to site working practices, including use of appropriate PPE.



Source Re contamination ncluding metals and hydrocarbons,	Percenter		Contaminant Exposure/	Baseline			Construction with Primary and Tertiary Mitigation.			Secondary Mitigation
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	maryandRisk Category.Low risk.Low risk.Very low risk.Very low risk.Very low risk.Low risk.	Measures.
contamination including metals and hydrocarbons, Polychlorinated Biphenyls (PCBs)		Pond and unnamed watercourse on- site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	
asbestos, etc.			Discharge of contaminants entrained in groundwater and / or surface water run-off followed by overland flow and discharge.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	
		Drain and ponds within study area.	Vithin study area. Vithin study		Minor	Very low risk.	Low likelihood.	Minor	Very low risk.	
			Discharge of contaminants entrained in groundwater and / or surface water run-off followed by overland flow and discharge.	Unlikely	Minor	Very low risk.	Low likelihood.	Minor	Very low risk.	
	Property/ services.	Existing on-site and off-site services and structures	Direct contact of contaminants in soil and / or groundwater with buried services.	Unlikely	Minor	Very low risk.	Low likelihood.	Minor	Very low risk.	
		including listed buildings.	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.	
		Future on-site services and structures.	Direct contact of contaminants in soil and / or groundwater with buried services.	Receptor not present.			Receptor not present.			

Construction and Secondary I	with Primary, Mitigation.	Tertiary
Probability	Consequence	Risk Category.
Unlikely	Minor	Very low risk.
Receptor not present.		



Source	Decenter	Contaminant Expo Migration Pathway. Migration of contamin groundwater, ground and / or vapours strata and prefer pathways such as se routes or differer permeable strata. Crops and livestock (on-site). Crops and livestock (off-site). Sillett's Wood Ancient Woodland (off-site). Juman alth: n-site. Farmers / workers on agricultural land. Migration of contamin waters / dust / fibres subsequent uptake flora or ingestio inhalation / dermal cc by fauna. Juman alth: n-site. Farmers / workers on agricultural land. Dermal contact with in soil-derived dust, and gas / vapours. Users of Willow Marsh Lane. Dermal contact with in soil-derived dust, and gas / vapours. ontrolled aters. Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer. Leaching / migratic contaminants in sc groundwater in unde aquifers.	Contaminant Exposure/	Baseline			Construction Tertiary Mitig	Secondary		
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.
			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.			
		Crops and livestock (on-site).	Migration of contaminated waters / dust / fibres and	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	
		Crops and livestock (off-site).	subsequent uptake by crops or ingestion / inhalation / dermal contact by livestock.	Unlikely	Mild	Very low risk.	Low likelihood.	w Mild Low risk. elihood.		
	Ecological Receptor.	Sillett's Wood Ancient Woodland (off-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	
Off-site: Darsham service	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil-derived dust and	Unlikely	Mild	Very low risk.	Receptor not present.			
south-east. Darsham railway		Users of Willow Marsh Lane.	water. Inhalation of contaminants	Unlikely	Mild	Very low risk.	Receptor not present.			
station, station works and the East Suffolk line.		Construction / maintenance workers.	and gas / vapours.	Receptor not present.			Low likelihood.	Mild	Low risk.	
Farm adjacent to the north-eastern		Users of the new Park and ride.		Receptor not present.			Receptor not present.			
boundary. Granaries located adjacent to the south- eastern	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low Risk.	Low likelihood.	Medium	Moderate / low risk.	
to the south- eastern boundary of the site. Inorganic and organic contaminants including metals,		Superficial aquiter.	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.	

Construction and Secondary	with Primary, Mitigation.	Tertiary
Probability	Consequence	Risk Category.
Receptor not present.		
Receptor not present.		
Unlikely	Minor	Very low risk.
Unlikely	Mild	Very low risk.
Receptor not present.		
Receptor not present.		
Unlikely	Minor	Very low risk.
Receptor not present.		
Unlikely	Medium	Low risk.
Unlikely	Medium	Low risk.



Source	Pacaptor		Contaminant Exposure/	Baseline			Construction Tertiary Mitig	Secondary									
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	mary and Semination Risk Category. Minimum Low risk. Image: seminational seminatiseminational seminatiseminational seminational seminationa	Measures.							
petroleum, petrol additives, diesel, oils, lubricants, hydrocarbons, PCBs, Polycyclic Aromatic Hydrocarbons		Pond and unnamed watercourse on- site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.								
(PAHs), solvents. pesticides and creosote; ash and fill.			Discharge of contaminants entrained in groundwater and / or surface water run-off followed by overland flow and discharge.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Risk Category. Mi Low risk. Iow risk. Low risk. Iow risk. Iow risk. Iow risk.								
	Property / services.	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.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.								
									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.			
		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.										

Construction and Secondary I	with Primary, Mitigation.	Tertiary
Probability	Consequence	Risk Category.
Unlikely	Minor	Very low risk.
Unlikely	Minor	Very low risk.
Unlikely	Minor	Very low risk.
Receptor not present.		
Receptor not present.		



Table 1.2: Operation phase conceptual site model.

Source	Receptor		Contaminant Exposure /	Baseline				Operation with P (Assumed All Construction is Ur	rimary and Tertia Mitigation Propendertaken).	ary Mitigation osed During	Operation with Primary, Tertiary and Secondary Mitigation.		
			migration Fathway.	Probability	Consequence	Risk Category		Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.
On-site: Made ground	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants	Unlikely	Mild	Very I risk.	ow	Receptor not present.			Receptor not present.		
associated with the construction of the roads		Construction / maintenance workers.	and water. Inhalation of contaminants in soil, soil-derived dust, fibres and gas / vapours.	Receptor not present.				Unlikely ²	Mild	Very low risk.	Unlikely	Mild	Very low risk.
including A12 Road and Willow Marsh Lane. Fuels and oils attributed to spills from vehicles on the roads included within the site boundary, plus exhaust		Users of Willow Marsh Lane.		Unlikely	Mild	Very I risk.	ow	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.
		Users of the new Park and ride.		Receptor not present.	Mild			Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.
	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated off-site. Inhalation of contaminants in soil-derived dust, fibres and gas / vapour which may have migrated off-site.	Unlikely	Mild	Very I risk.	ow	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.
		Pedestrians accessing surrounding roads and footpaths.		Unlikely	Mild	Very I risk.	ow	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.
range of inorganic and		Farmers / workers on agricultural land.		Unlikely	Mild	Very I risk.	ow	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.
organic contaminants including the potential for asbestos.	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer.	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.		Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.
asbestos. Farmland within site boundary. Potential for un- mapped farmers tips: Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils.			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 low risk.
		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very I risk.	ow	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.

² It has been assumed that all construction workers will adhere to site working practices, including use of appropriate PPE.



Source	Receptor		Contaminant Exposure /	Baseline	Baseline				rimary and Terti Mitigation Prop ndertaken).	ary Mitigation osed During	Operation with Primary, Tertiary and Secondary Mitigation.			
Diak of			migration Pathway.	Probability	Consequence	Risk Categor	у.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	
Risk of inorganic and organic contamination including metals and hydrocarbons, PCBs, asbestos, etc.			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Mild	Very risk.	low	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
		Drain and ponds within study area.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.	
			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Minor	Very risk.	low	Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low 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 risk.	low	Unlikely	Minor	Very 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 risk.	low	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
		Future on-site services and structures.	Direct contact of contaminants in soil and / or groundwater with buried services.	Receptor not present.				Unlikely	Minor	Very 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.	Receptor not present.				Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.	
		Crops and livestock (on-site).	Migration of contaminated waters / dust / fibres and	Unlikely	Mild	Very risk.	low	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 risk.	low	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	



Source	Receptor		Contaminant Exposure /	/ Baseline			Operation with F (Assumed All Construction is U	Primary and Tertia Mitigation Prop ndertaken).	ary Mitigation osed During	Operation with Primary, Tertiary and Secondary Mitigation.			
			Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	
	Ecological Receptor.	Sillett's Wood Ancient Woodland (off-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.	Unlikely	Mild	Very lov risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
Off-site: Darsham	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants	Unlikely	Mild	Very lov risk.	Receptor not present.			Receptor not present.			
service station to the south-		Users of Willow Marsh Lane.	in soil-derived dust and water.	Unlikely	Mild	Very lov risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
Darsham railway station,		Construction / maintenance workers.	in soil-derived dust, fibres and gas / vapours.	Receptor not present.			Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
station works and the East Suffolk line.		Users of the new Park and ride.		Receptor not present.			Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.	
Suffolk line. White House Farm adjacent to the north- eastern	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer.	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
boundary. Granaries located adjacent to the south-eastern boundary of the site.			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 low risk.	
Inorganic and organic contaminants including		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very lov risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
metals, petroleum, petrol additives, diesel, oils, lubricants, hydrocarbons,			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Mild	Very lov risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	
PCBs, PAHs, solvents. pesticides and creosote; ash and fill.	Property / services.	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.	Unlikely	Mild	Very lov risk.	Unlikely	Mild	Very low risk.	Unlikely	Mild	Very low risk.	



Source	Receptor		Contaminant Exposure / Migration Pathway.	Baseline			Operation with P (Assumed All Construction is Ur	rimary and Tertia Mitigation Prop ndertaken).	ary Mitigation osed During	Operation with Primary, Tertiary and Secondary Mitigation.		
			migration Fattway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.
	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.			Unlikely	Minor	Very low risk.	Unlikely	Minor	Very low risk.
		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.		



Table 1.3: Removal and reinstatement phase conceptual site model.

Sourco	Receptor		Contaminant Exposure /	Baseline			Removal and Reinstatement with Primary and Tertiary Mitigation.		with Primary	Secondary	Removal and Reinstatement with Primary, Tertiary and Secondary Mitigation.			ary,
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category	y.
On-site: Made ground	Human health:	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants	Unlikely	Mild	Very low risk.	Receptor not present.			Intrusive ground investigation	Receptor not present.			
associated with the construction of the roads including A12	On-site.	Construction / maintenance workers.	In soil, soil-derived dust and water. Inhalation of contaminants in soil soil-derived dust	Receptor not present.			Low likelihood.	Mild	Low risk.	operation including soil and groundwater	Unlikely ³	Mild	Very I risk.	low
Road and Willow Marsh		Users of Willow Marsh Lane.	fibres and gas / vapours.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.	sampling and monitoring.	Unlikely	Mild	Very I risk.	low
Lane. Fuels and oils		Users of the new Park and ride.		Receptor not present.	Mild		Receptor not present.			Remediation of soil and groundwater	Receptor not present.			
spills from vehicles on the roads included within the site boundary, plus exhaust	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated off-site. Inhalation of contaminants	Unlikely	Mild	Very low risk.	Low likelihood.	Minor	Very low risk.	contamination prior to construction (e.g. source removal, treatment or capping) if	Unlikely	Minor	Very I risk.	low
particulates. A range of inorganic and organic contaminants		Pedestrians accessing surrounding roads and footpaths.	in soil, soil-derived dust, fibres and gas / vapour which may have migrated off-site.	Unlikely	Mild	Very low risk.	Low likelihood.	Minor	Very low risk.	deemed necessary.	Unlikely	Minor	Very I risk.	low
including the potential for		Farmers / workers on agricultural land.		Unlikely	Mild	Very low risk.	Low likelihood.	Minor	Very low risk.		Unlikely	Minor	Very I risk.	low
asbestos. Farmland within site boundary. Potential for un- manned	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Unlikely	Medium	Low risk.	Low likelihood.	Medium	Moderate / low risk.		Unlikely	Mild	Very I risk.	low
farmers tips: Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils.		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.	Low likelihood.	Medium	Moderate / low risk.		Unlikely	Mild	Very I risk.	low
Risk of inorganic and organic contamination including		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very I risk.	low

³ It has been assumed that all construction workers will adhere to site working practices, including use of appropriate PPE



Source Receptor			Contaminant Exposure /	Baseline			Removal and I and Tertiary Mitiga	Reinstatement	with Primary	Secondary	Removal and Tertiary and S	Reinstatement vecondary Mitigat	vith Prim ion.	nary,
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Mitigation Measures.	Probability	Consequence	Risk Catego	ory.
metals and hydrocarbons, PCBs, asbestos, etc.			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very risk.	low
		Drain and ponds within study area.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Minor	Very low risk.	Low likelihood.	Minor	Very low risk.		Unlikely	Minor	Very risk.	low
			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Minor	Very low risk.	Low likelihood.	Minor	Very low risk.		Unlikely	Minor	Very risk.	low
	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.	Minor	Very low risk.		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.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		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.			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	Unlikely	Mild	Very 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 risk.	low
	Ecological	Sillett's Wood	Migration of contaminated	Unlikely	Mild	Very low	Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very	low



							Removal and F	einstatement v	vith Primary		Removal and	Reinstatement v	vith Primary
Source	Percenter		Contaminant Exposure /	Baseline			and Tertiary Mitiga	tion.		Secondary Mitigation	Tertiary and S	econdary Mitigat	ion.
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category.
	Receptor.	Ancient Woodland (off-site).	waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.			risk.							risk.
Off-site: Darsham	Human health:	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants	Unlikely	Mild	Very low risk.	Receptor not present.				Receptor not present.		
service station to the south-	On-site.	Users of Willow Marsh Lane.	in soil-derived dust and water.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
Darsham rail station, station works and the		Construction / maintenance workers.	in soil-derived dust, fibres and gas / vapours.	Receptor not present.			Low likelihood.	Mild	Low risk.		Unlikely	Mild	Very low risk.
East Suffolk Line.		Users of the new Park and ride.		Receptor not present.			Receptor not present.				Receptor not present.		
White House Farm adjacent to the north- eastern boundary.	Controlled waters.	Principal Bedrock aquifer and Secondary Undifferentiated	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.
Granaries located adjacent to the south-eastern boundary 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.	Low likelihood.	Medium	Moderate / low risk.		Unlikely	Medium	Low risk.
organic contaminants including metals, petroleum, patroleuditiuan		Pond on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
diesel, oils, lubricants, hydrocarbons, PCBs, PAHs, solvents.			Discharge of contaminants entrained in groundwater and / or surface water run- off followed by overland flow and discharge.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.
pesticides and creosote; ash and fill.	Property / services.	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.	Unlikely	Mild	Very low risk.	Low likelihood.	Mild	Low risk.		Unlikely	Minor	Very low risk.



Source	Receptor		Contaminant Exposure /	Baseline		Removal and Reinstatement with Primary and Tertiary Mitigation.			Secondary	Removal and Reinstatement with Primary, Tertiary and Secondary Mitigation.			
Source	Receptor		Migration Pathway.	Probability	Consequence	Risk Category.	Probability	Consequence	Risk Category.	Measures.	Probability	Consequence	Risk Category.
		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.				Receptor not present.		
		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.		



NORTHERN PARK AND RIDE – APPENDIX 11C: IMPACT ASSESSMENT TABLES

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Volume 3 Appendix 11C Impact Assessment Tables |



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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	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil, soil-	Very low risk.	Receptor not present.	Negligible ¹	Intrusive ground investigation	Receptor not present.	Negligible ¹
associated with the construction of the		Construction / maintenance workers.	derived dust and water. Inhalation of contaminants in soil soil-derived dust fibres and	Receptor not present.	Low risk.	Minor adverse.	undertaken post planning to inform the detailed design	Very low risk.	Negligible ²
Road and Willow Marsh Lane.		Users of Willow Marsh Lane.	gas / vapours.	Very low risk.	Receptor not present.	Negligible ¹	and confirm the ground conditions	Receptor not present.	Negligible ¹
Fuels and oils attributed to spills from vehicles on the roads included within the site boundary, plus		Users of the new Park and Ride.		Receptor not present.	Receptor not present.	Negligible	status of the site including soil and	Receptor not present.	Negligible
roads included within the site boundary, plus exhaust particulates. A range of inorganic and organic contaminants	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated off-site.	Very low risk.	Low risk.	Minor adverse.	groundwater sampling and monitoring. Remediation of soil	Very low risk.	Negligible
including the potential for asbestos. Farmland within site		Pedestrians accessing surrounding roads and footpaths.	Inhalation of contaminants in soil-derived dust, fibres and gas / vapour which may have migrated off-site.	Very low risk.	Low risk.	Minor adverse.	and groundwater contamination prior to construction (e.g. source	Very low risk.	Negligible
un-mapped farmers tips: Contamination risk from		Farmers / workers on agricultural land.		Very low risk.	Low risk.	Minor adverse.	removal, treatment or capping) if	Very low risk.	Negligible
herbicides, pesticides, silage, effluent, and fuel oils. Risk of inorganic	Controlled Waters.	olled Principal Bedrock aquifer rs. and Secondary Undifferentiated Superficial	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate / low risk.	Minor adverse.	necessary.	Very low risk.	Minor beneficial.
and organic contamination including metals and hydrocarbons, Polychlorinated Biphenyls (PCBs),		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.		Very low risk.	Minor beneficial.
asbestos, etc.		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible

² 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.

¹ 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).	Classification of Effect.	Secondary Mitigation Measures.	Construction Phase Risk Assessment (with Primary, Tertiary and Secondary Mitigation Measures).	Residual Effect.
			Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
		Drain and ponds within study area.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Very low risk.	Negligible		Very low risk.	Negligible
			Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Very low risk.	Negligible		Very low risk.	Negligible
	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
			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	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹
		Crops and livestock (off-site).	ingestion / inhalation / dermal contact by livestock.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
	Ecological receptor.	Sillett's Wood Ancient Woodland (off-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
Off-site:	Human health:	Farmers / workers on agricultural land.		Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹



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.
Darsham service station to the south-east.	On-site.	Users of Willow Marsh Lane.	Dermal contact with and ingestion of contaminants in soil-	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹
Darsham railway station, station works and the East Suffolk Line.		Construction / maintenance workers.	derived dust and water. Inhalation of contaminants in soil-derived dust fibres and	Receptor not present.	Low risk.	Minor adverse.		Very low risk.	Negligible ²
White House Farm adjacent to the north-		Users of the new Park and Ride.	gas / vapours.	Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
eastern boundary. Granaries located adjacent to the	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate / low risk.	Minor adverse.		Low risk.	Negligible
boundary of the site. Inorganic and organic contaminants including metals, petroleum, petrol additives, diesel.		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
oils, lubricants, hydrocarbons, PCBs, Polycyclic Aromatic		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
solvents. pesticides and creosote; ash and fill.			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 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
		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.	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹



Table 1.2: Operational phase impact assessment.

Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Operation Phase Risk Assessment (with Primary and Tertiary Mitigation Measures, Assuming All Mitigation Proposed During Construction is Undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with Primary, Tertiary and Secondary Mitigation Measures).	Residual Effects.
On-site: Made Ground associated with	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil, soil-	Very low risk.	Receptor not present.	Negligible ³	Receptor not present.	Negligible ³
the construction of the roads including A12 Road and Willow Marsh Lane		Construction / maintenance workers.	Inhalation of contaminants in soil soil-derived dust fibres	Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible ⁴
Fuels and oils attributed to spills		Users of Willow Marsh Lane.	and gas / vapours.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
from vehicles on the roads		Users of the new Park and Ride.		Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible ⁴
boundary, plus exhaust particulates. A range of inorganic and organic	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
contaminants including the potential for asbestos.		Pedestrians accessing surrounding roads and footpaths.	off-site. Inhalation of contaminants in soil derived dust fibres and gas / vapour	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
potential for asbestos. Farmland within site boundary. Potential for un-mapped farmers tips:		Farmers / workers on agricultural land.	which may have migrated off-site.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
Contamination risk from herbicides, pesticides, silage, effluent, and fuel oils. Risk of	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer.	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.
inorganic and organic contamination including metals and hydrocarbon <i>s</i> , PCBs, asbestos, etc.			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.
		Pond and unnamed watercourse L on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
			Discharge of contaminants entrained in groundwater and/or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
		Drain and ponds within study area.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible

³ 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.

⁴ 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, Assuming All Mitigation Proposed During Construction is Undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with Primary, Tertiary and Secondary Mitigation Measures).	Residual Effects.
			Discharge of contaminants entrained in groundwater and/or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
	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
			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
		Future on-site services and structures.	Direct contact of contaminants in soil and / or groundwater with existing buried service.	Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible ⁴
			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 ⁴	Very low risk.	Negligible ⁴
		Crops and livestock (on-site).	Migration of contaminated waters / V dust / fibres and subsequent uptake by crops or ingestion / inhalation / V dermal contact by livestock.	Very low risk.	Receptor not present.	Negligible ³	Receptor not present.	Negligible ³
		Crops and livestock (off-site). by cr derm		Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
	Ecological receptor.	Sillett's Wood Ancient Woodland (off-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion / inhalation / dermal contact by fauna.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
OFF-SITE: Darsham service station to the	Human health:	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil-	Very low risk.	Receptor not present.	Negligible ³	Receptor not present.	Negligible ³
South-east. Darsham rail station, station works and the East Suffolk line. White House Farm adjacent to the north-eastern boundary. Granaries located adjacent to the south-eastern boundary of the site.	01-316.	Construction / maintenance workers.	derived dust and water. Inhalation of contaminants in	Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible
		Users of Willow Marsh Lane.	gas / vapours.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
		Users of the new Park and Ride.		Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible ⁴
	Controlled waters.	Controlled Waters.	Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer.	Low risk.	Very low risk.	Minor beneficial.	Very low risk.	Minor beneficial.



Source	Pathway		Contaminant Exposure / Migration Pathway.	Baseline (Current) Risk Assessment.	Operation Phase Risk Assessment (with Primary and Tertiary Mitigation Measures, Assuming All Mitigation Proposed During Construction is Undertaken).	Classification of Effect.	Operational Phase Risk Assessment (with Primary, Tertiary and Secondary Mitigation Measures).	Residual Effects.
Inorganic and organic contaminants including metals, petroleum, petrol additives, diesel, oils, lubricants, hydrocarbons, PCBs, PAHs, solvents. pesticides and creosote; ash and fill.			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.
		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
			Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Very low risk.	Negligible	Very low risk.	Negligible
	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
		Future on-site services and structures.	Migration of contaminated groundwater, ground gas and / o vapours along strata and preferentia pathways such as service routes o differentially permeable strata.	Receptor not present.	Very low risk.	Negligible ⁴	Very low risk.	Negligible ⁴
		Crops and livestock (on-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by crops or ingestion / inhalation / dermal contact by livestock.	Very low risk.	Receptor not present.	Negligible ³	Receptor not present.	Negligible ³



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	Human health: On-site.	th: Farmers / workers on agricultural land. Dermal contact with and inges of contaminants in soil,	Dermal contact with and ingestion of contaminants in soil, soil-	Very low risk.	Receptor not present.	Negligible ¹	Intrusive ground investigation undertaken post operation including soil and groundwater	Receptor not present.	Negligible ¹		
with the construction of the roads including A12 Road and Willow Marsh Lane.		Construction / maintenance workers.	derived dust and water. Inhalation of contaminants in soil, soil-derived dust, fibres and gas / vapours.	Receptor not present.	Low risk.	Minor adverse.		undertaken post operation including soil and	undertaken post operation including soil and	Very low risk.	Negligible
		Users of Willow Marsh Lane.		Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible		
Fuels and oils attributed to		Users of the new Park and Ride.		Receptor not present.	Receptor not present.	Negligible	monitoring.	Receptor not present.	Negligible		
roads included within the site boundary, plus exhaust particulates. A	Human health: Off-site.	Occupants of residential and commercial properties in the surrounding area / commuters.	Dermal contact with and ingestion of contaminants in soil-derived dust and water which may have migrated off-site. Inhalation of contaminants in soil derived dust, fibres and gas / vapour which may have migrated off-site	Very low risk.	Very low risk.	Negligible	Remediation of soil and groundwater contamination prior to construction (e.g. source removal, troatmont or	Very low risk.	Negligible		
range of inorganic and organic contaminants including the potential for		Pedestrians accessing surrounding roads and footpaths.		Very low risk.	Very low risk.	Negligible		Very low risk.	Negligible		
asbestos. Farmland within site		Farmers / workers on agricultural land.		Very low risk.	Very low risk.	Negligible		Very low risk.	Negligible		
boundary. Potential for un-mapped farmers tips: Contamination risk from	Controlled Waters. Se Su Po on-	ontrolled Principal Bedrock aquifer and aters. Secondary Undifferentiated Superficial aquifer.	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate / low risk.	Minor adverse. capping) if deemed necessary.	Very low risk.	Minor beneficial			
herbicides, pesticides, silage, effluent, and fuel oils. Risk of inorganic and organic contamination including metals and hydrocarbons, PCBs, asbestos, etc.			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.		Very low risk.	Minor beneficial.		
				Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
				Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible	
		Drain and ponds within study area.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Very low risk.	Negligible		Very low risk.	Negligible		
			Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Very low risk.	Negligible			Very low risk.	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.
	Property / services	rty / Existing on-site and off-site es 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
			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 subsequent uptake by crops or ingestion / inhalation / dermal contact by livestock.	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹
		Crops and livestock off-site).		Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
	Ecological receptor.	Sillett's Wood Ancient Woodland (off-site).	Migration of contaminated waters / dust / fibres and subsequent uptake by flora or ingestion/ inhalation/dermal contact by fauna.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
Off-site: Darsham service station	Human health: On-site.	Farmers / workers on agricultural land.	Dermal contact with and ingestion of contaminants in soil-derived dust and water. Inhalation of contaminants in soil-derived dust, fibres and gas / vapours.	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹
to the south-east. Darsham rail station,		Construction / maintenance workers.		Receptor not present.	Low risk.	Minor adverse.		Very low risk.	Negligible ¹
Suffolk line.		Users of Willow Marsh Lane.		Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
White House Farm adjacent to the north- eastern boundary. Granaries located adjacent to the south-eastern boundary of the site.		Users of the new Park and Ride.		Receptor not present.	Receptor not present.	Negligible		Receptor not present.	Negligible
	Controlled Waters.	ed Principal Bedrock aquifer and Secondary Undifferentiated Superficial aquifer.	Leaching / migration of contaminants in soil to groundwater in underlying aquifers.	Low risk.	Moderate / low risk.	Minor adverse.		Low risk.	Negligible
			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



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.
Inorganic and organic contaminants including metals, petroleum, petrol additives, diesel, oils, lubricants, hydrocarbons, PCBs, PAHs, solvents. pesticides and creosote; ash and fill.		Pond and unnamed watercourse on-site.	Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Very low risk.	Low risk.	Minor adverse.	-	Very low risk.	Negligible
			Discharge of contaminants entrained in groundwater and / or Surface Water run-off followed by overland flow and discharge.	Very low risk.	Low risk.	Minor adverse.		Very low risk.	Negligible
	Property / services	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
		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.	Very low risk.	Receptor not present.	Negligible ¹		Receptor not present.	Negligible ¹