GeoDyne

Geotechnical &
Environmental
Consultants

Millfield House
Spalding Common
Spalding

Environmental Assessment
For
Seagate Homes Limited

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Project No: D44007		**Date: 20th February 2024**	
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1.0 INTRODUCTION

1.1 Introduction

GeoDyne Limited has been appointed by the Client, Seagate Homes Ltd., to undertake an Environmental Assessment at a parcel of land to the east of Spalding Common, Spalding. A Site Location Plan (Figure No. D44007/01) is included in Appendix I.

1.2 Project Understanding

We understand that it is proposed to develop the site for a low-rise residential end-use incorporating private gardens. The proposed development plan has been provided by the Client and is included in Appendix II of this report.

The foregoing understanding has formed the basis of our assessment. Where the proposed site end-use is not consistent with our current understanding, it would be necessary to review our assessment to ensure it continues to apply.

1.3 Objectives

The scope of works detailed herein has been designed to ascertain the key environmental issues pertaining to the proposed development to assist with the discharge of Condition 4 of the Local Authority (South Holland District Council) planning conditions relating to the proposed development (Ref.: H16-0134-23).

A copy of the planning conditions is presented in Appendix III of this report.

1.4 Scope of Works

Based on the defined objectives of the works (detailed in Section 1.3), the scope of the environmental assessment included the following:

- A site walkover.
- Review of available historical and contemporary Ordnance Survey publications relating to the site.
- Review of the sites geology, hydrology and hydrogeology.
- Review of the sites coal mining status.
- Review of the sites radon status.
- Commission of a full detailed Landmark Envirocheck report relating to the site.
- Commission of Landmark geological mapping data.
- Production of a site-specific preliminary Conceptual Site Model (pCSM).
- A sub-contracted sub-surface utility scan.
- A series of trial pits within accessible areas of the site to provide an initial inspection of the near surface ground conditions for environmental purposes.
- Environmental soil testing.
- Revision of the pCSM.
- Provide a summary of recommendations from an environmental perspective.

1.5 Limitations

The conclusions and recommendations made in this report are limited to those that can be made based on the findings of the investigation. Where comments are made based on information obtained from third parties, GeoDyne Limited assumes that all third-party information is true and correct. No independent action has been undertaken to validate the findings of third parties.

This report has been prepared in accordance with our understanding of current good practice. However, changes to good practice, guidance or legislation may necessitate revision of this report after the date of issue.

GeoDyne Limited has prepared this report for the sole use and reliance of Seagate Homes Ltd., in accordance with our standard Conditions & Limitations (included in Appendix XIV). This report may not be used or relied upon by any unauthorised third party without the explicit written agreement of GeoDyne Limited. Reliance may not be placed on our report until all invoices associated with the project have been paid.

2.0 SITE DESCRIPTION & HISTORY

2.1 Site Description

The site comprises an 'L' shaped parcel of land located to the east of Spalding Common; approximately 3km to the southwest of Spalding town centre in Lincolnshire. The site may be located around approximate Ordnance Survey National Grid reference 523360E 320020N. The site covers an area of approximately 0.2 hectares.

At the time of our works (February 2024), the majority of the site comprised bare soils, locally with standing water. Evidence that vegetation / trees had recently been cleared was observed in the western area of the site. Building materials, associated with the adjacent ongoing residential construction site, were being stored in the northeastern and southeastern areas of the site.

The western site boundary was denoted by a hedgerow, with the B1172 (Spalding Common) beyond. The southern and eastern site boundaries were not physically defined at the time of our works. The northern boundary was formed by fencing associated with offsite residential dwellings.

A residential dwelling 'Millfield House' and the associated garden were present to the immediate northwest of the site. Further residential dwellings were present off Spalding Common to the sites north, northwest and southwest. Construction of a residential estate 'Fantail View' was ongoing to the sites south and east by Seagate Homes. Ashwood Nursing Home was present to the south, beyond the construction site.

An Annotated Site Plan showing the main features of the site and the immediate surrounding area, is included as Appendix IV of this report (Figure No. D44007/02) and a plan showing general views of the site is included as Appendix V (Figure No. D44007/03).

Current OS mapping is presented in Figure 1 on the next page (site area depicted by red boundary) and an aerial photograph of the site, obtained from the Landmark Analysis tool commissioned as part of our works, is presented in Figure 2. It is noted that the structures and glasshouses associated with the former commercial plant nursery to the east and south of the site, as shown in the aerial photography (Figure 2) have been demolished and this area is being redeveloped with residential dwellings, as depicted in Figure 1.

Figure 1: Current OS Mapping (1:10000 scale)



Figure 2: Aerial Photography of the site (2024 Image)



2.2 Site History

The historical and contemporary Ordnance Survey publications included within the Landmark Envirocheck Report have been reviewed by GeoDyne to establish the history of the site and its environmental setting. The historical Ordnance Survey maps are included as Appendix VI of this report.

We would note that the boundary marked on the historical sheets within the Envirocheck Report appears to 'shift' on several of the maps due to scaling inaccuracies between maps of differing dates. This is a function of Envirocheck transposition algorithms.

The key findings of the historical search are summarised in Table 1.

TABLE 1 – HISTORICAL PUBLICATION DATA

Date	Features on Site	Features off Site
1880s	• The site comprises the southern and eastern areas of an undeveloped field (presumably farmland).	• The site is bordered to the west by a drainage ditch and a road (later Spalding Common). • The field in which the site is located extends to the sites north. Further open farmland, locally with open ditches, is present to the sites east, south and west (beyond Spalding Common). • A '*Windmill*' is located 20m to the north of the site. Small buildings (locally with Pumps; and possibly associated with the windmill) are located to the north of the windmill. • The River Welland is located approximately 200m to the east of the site beyond a road '*Cradge Bank Road*' and a raised embankment. • Residential properties are present approximately 200m to the southwest of the site. '*Ash Holt Farm*' is present approximately 230m to the sites south. • A railway line runs approximately 230m to the northwest of the site.
1890s	• No maps available for viewing.	• No maps available for viewing.
1900s	• The site remains essentially unchanged.	• A small building has been constructed approximately 50m to the sites south. • An orchard is indicated approximately 140m to the sites north
1910s & 1920s	• No maps available for viewing.	• No maps available for viewing.
1930s	• The site remains essentially unchanged.	• Further small buildings and pumps are shown to the sites north in the vicinity of the windmill. • Residential development has occurred from approximately 220m to the north of the site off Spalding Common and Cradge Bank Road.
1940s	• No maps available for viewing.	• No maps available for viewing.
1950s	• The site remains essentially unchanged.	• The windmill to the north is now indicated to be disused. The pumps previously to the north are no longer labelled. • Two large buildings have been constructed to the south and southeast of the site. • Further residential development has occurred to the northwest of the site beyond Spalding Common.

TABLE 1 – HISTORICAL PUBLICATION DATA		
Date	**Features on Site**	**Features off Site**
1960s	• The site remains essentially unchanged.	• The buildings previously to the south of the site have been replaced with further buildings. Four large glasshouses have been constructed to the southeast of the site. Two further glasshouses are present to the sites northeast. Tracks are shown between these buildings / glasshouses, which are associated with '*Millfield Nurseries*'. • The embankment between the site and the River Welland appears to have been enlarged.
1970s	• The site remains essentially unchanged.	• The buildings to the southwest associated with Millfield Nurseries have been reconfigured and include a new building.
1980s	• The northeastern area of the site and the northern extremity of the sites western area comprise part of a rear garden to a residential dwelling located to the sites north. • The southern area of the site appears to remain as open field which is divided into two by the late 1980s, although mapping is incomplete. • A small structure (Glasshouse) is present in the northeastern corner by the late 1980s.	• A residential dwelling '*Millfield*' has been constructed to the sites immediate north. • Tanks are shown to the east of the site, associated with Millfield Nurseries. • Mapping is incomplete to the sites south.
1990s	• The site remains essentially unchanged. • The 1999 aerial image shows the sites northern area (i.e. part of the residential garden) to essentially comprise grass with shrubs. The southern areas of the site also comprise grass with occasional trees / shrubs. The discrete areas of the site are separated by hedgerow.	• The surrounding area remains essentially unchanged.
2000s	• The glasshouse previously in the northeastern corner of the site is no longer shown.	• The drain previously identified beyond the sites western boundary is no longer present.
2016	• The site remains essentially unchanged.	• The building to the south, beyond Millfield Nurseries has been extended.
2023	• The site remains essentially unchanged.	• The buildings to the south / southeast associated with Millfield Nurseries are no longer shown.
2024	• The site remains essentially unchanged.	• The building to the south of the site is labelled as '*Medical Care*'.

2.3 Aerial Photography & Historical Map Overlays

As part of the commissioned Landmark Report, the use of the Landmark Envirocheck Analysis tool was purchased to provide site specific aerial photographic imagery, and to provide the ability to undertake limited historical map overlay manipulation. The following images (Figures 3, 4 and 5) show overlays of the historical map publications from 1888, 1968-69 and 1995, as shown on current aerial imagery.

Figure 3: Current Aerial Imagery Overlain with 1888 Historical Map Data



The site comprises part of an undeveloped field. The area surrounding the site predominantly comprises open fields. Residential dwellings and a windmill are present to the north.

Figure 4: Current Aerial Imagery Overlain with 1968-69 Historical Map Data



The site remains as undeveloped land. Structures and glasshouses associated with Millfield Nurseries have been constructed to the sites northeast and south / southeast.

Figure 5: Current Aerial Imagery Overlain with 1995 Historical Map Data



The southern area of the site comprises part of undeveloped fields. The northeastern area of the site comprises part of residential garden associated with 'Millfield'; a small glasshouse is present in the northeastern corner of the site. Further structures / glasshouses are present to the sites east and southeast associated with the expansion of Millfield Nurseries. These structures remained until the recent commencement of the redevelopment of Millfield Nurseries by Seagate Homes with the residential dwellings.

3.0 GEOLOGY & ENVIRONMENTAL SETTING

3.1 Geological References

The following geological publications were referred to:

- BGS 1:50000 Series Sheet 144 *'Spalding'* (1992).
- Landmark geological map sheets (included in Appendix VII).
- The BGS online interactive map viewer and Lexicon of Named Rock Units.
- The Coal Authority online interactive map viewer.
- Environment Agency website: www.environment-agency.gov.uk.

3.2 Geology

Superficial (Drift) Deposits

The site and immediate surrounding area are indicated on the BGS website to be underlain by Tidal Flat Deposits which date from the Quaternary. The 1:50,000 scale map refers to the majority of these strata as the Barroway Drove Beds which are described as '*older marine alluvium; salt marsh deposits (silty clay)'*. The Barroway Drove Beds are indicated to be sequentially underlain by the Abbey Sand and Gravel, described on the 1:50,000 scale mapping as *'brackish and marine (sand and gravel)*'.

Drift deposits have the potential to alter rapidly in character and geotechnical properties both laterally and vertically over relatively short distances and may also be water bearing. These deposits may also contain peat as pockets, lenses or discrete layers.

Any peat deposits beneath, and in the general vicinity of, the site are considered to represent a potential source of hazardous ground gas (i.e. methane and carbon dioxide).

Bedrock Geology

The Drift Deposits at the site and in the immediate surrounding area are indicated to be underlain at depth by the Oxford Clay Formation, dating from the Jurassic.

The Oxford Clay Formation is described on the 1:50,000 scale mapping as *'grey, calcareous mudstone'*.

3.3 Faults

No surface faults are indicated to be present within the boundary of the site or within the immediate vicinity of the site, on the geological maps viewed.

3.4 Man-Made Deposits

The geological publications do not show the presence of any man-made deposits (i.e. Made Ground, Worked Ground or Landscaped Ground) beneath or within likely potential influencing distance of the site.

Localised Made Ground or disturbed ground may be anticipated in the vicinity of the former glasshouse in the sites northeastern area.

The historical mapping revealed the presence of a drainage ditch immediately beyond the sites western boundary until the early 2000s when it is possible that the ditch became infilled. Any infill materials to this feature are considered to represent a potential source of hazardous ground gas (i.e. methane and carbon dioxide) that may, under the right circumstances affect the proposed development site. However, due to the relatively small and shallow nature of this feature, the risk of significant generation of ground gases is considered to be very low and any gases generated are likely to migrate to the atmosphere rather than laterally through the near surface soils.

3.5 Coal Mining

The site does not lie within an area requiring the commission of a coal mining report in accordance with The Coal Authority online interactive map viewer. No specific investigation or mitigation in relation to historical coal mining issues is therefore considered to be necessary at the site.

3.6 Unexploded Ordnance Risk

An initial Unexploded Bomb Risk Map search has been commissioned through ZeticaUXO. The plan (Appendix VIII) indicates that the site is within a '*Low*' risk area with regard to unexploded ordnance.

With the following commentary provided by Zetica '*A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK*.' Areas designated as low risk are indicated as having 15 bombs per 1000 acres or less.

3.7 Landmark Envirocheck Report

A Landmark Envirocheck Report was commissioned to assist in ascertaining the environmental setting of the site. The full Envirocheck Report is presented in Appendix IX and has revealed the following key relevant information (details are only listed where they are within potential influencing distance of the site).

No comments have been made within our report with respect to potential flooding issues. Advice from a qualified drainage consultant should be sought by the Client with respect to this matter.

3.7.1 Agency and Hydrological

Aquifer Status

The aquifer designation maps are presented in Appendix IX and are based on geological mapping provided to Landmark by the British Geological Survey. Different aquifer classifications may be applied to superficial (drift) deposits (typically forming shallow perched groundwater units where present) and bedrock aquifers (which may contain regional groundwater units). Possible aquifer designations comprise Principal Aquifers, Secondary (A, B or Undifferentiated) Aquifers and Unproductive Strata.

The superficial deposits comprising the Tidal Flat Deposits and the underlying bedrock geology comprising the Oxford Clay Formation are both designated as Unproductive Strata.

The Environment Agency describes Unproductive Strata as *'…rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow'.*

Source Protection Zone Status

The site is not shown to lie within a Source Protection Zone (SPZ). SPZs relate to the protection of groundwater resources, principally for public drinking water supply.

Surface Water

The nearest surface water feature is located approximately 20m west of the site, at its closest point. This relates to an open ditch beyond Spalding Common. It is noted that open ditches proliferate in the local geographic area.

The River Welland is present approximately 200m to the east of the site, oriented northwest to southeast.

Discharge Consents

A single discharge consent is indicated to have been issued within 250m of the site. This relates to a consent located approximately 111m southeast for the discharge of '*Unknown*' matter onto land / soakaway from a domestic property. The permit was issued in 1990 and revoked in 1997.

Pollution Incidents to Controlled Waters

One pollution incident is listed within 250m of the site. The incident is recorded approximately 184m to the northeast of the site and relates to animal carcasses within an open watercourse (River Welland) in 1999. The incident is recorded as Category 3 Minor Incident.

Water Abstractions

There is one permit listed for Water Abstractions located approximately 119m northeast of the site relating to the abstraction of surface water for '*General Agriculture: Spray Irrigation – Direct'* which was granted in 2004 and is operated by '*R Chappell & Sons*' with no revocation date.

3.7.2 Waste

There are no waste sites (i.e. current or historic landfills, waste transfer stations etc.) identified on or within 250m of the site.

3.7.3 Hazardous Substances

There are no sites associated with hazardous substances (e.g. sites dealing with explosives etc) identified on the site, or within a 250m radius of the site, in the Landmark Envirocheck Report.

3.7.4 Geological Issues

BGS Soil Chemistry

The BGS has prepared estimated soil concentration maps for several metals (including Arsenic, Lead, Nickel, Chromium and Cadmium), which are extrapolated from records available for use within their assessments.

Whilst potentially useful for the inference of Natural Metal Enrichment (NME) of the natural soils in a general locale, the data should not be used to inform any detailed decisions with regards to the chemistry of a particular site as it does not allow for anthropogenic effects. Estimates of the soil chemistry at the site indicate anticipated concentrations of Arsenic of <15mg/kg, Cadmium of <1.8mg/kg, Chromium of 60-90mg/kg, Lead <100mg/kg and Nickel of 15-30mg/kg.

Based on the information supplied in the Landmark Envirocheck Report, the site is indicated to be located in an area where significant NME of the underlying natural soils is not anticipated to be present. However, this is only applicable to the specific determinands listed above.

Ground Stability Hazards

No significant ground stability hazards have been identified within the Envirocheck Report which may affect the site. However, we would note that the site is indicated to have a '*Moderate*' hazard potential for compressible and running sand ground stability hazards.

Radon

The Envirocheck report states that *'The property is in a lower probability radon area (less than 1% of homes are estimated to be at or above the action level',* the report further states that *'No radon protective measures are necessary in the construction of new dwellings or extensions'*. No specific mitigation in relation to radon issues are therefore required at the site.

BGS Borehole Records

There are no BGS borehole records within the immediate vicinity of the site.

Mining and Ground Stability Datasheet

The Landmark Report and the Mining & Ground Stability Datasheet (included within Appendix IX) do not identify the presence of any Extractive Industries and Man-Made or Natural Cavities beneath the site or within 250m of the site.

3.7.5 Industrial Land Use

Contemporary Trade Directory Entries

One Contemporary Trade Directory entry is recorded within 250m of the site. This relates to an inactive frozen food processing and distribution outlet located approximately 33m to the sites east. The location of this former outlet lies within the area of the ongoing residential construction site to the east.

Manufacturing and Production

There are six entries listed within 250m of the site, five of the entries relate to '*Tanks'* located in the grounds of the former Millfield Nurseries between approximately 23m to 52m east of the site; this area is currently undergoing residential development. The sixth entry relates to '*Arable Farming'* approximately 38m west of the site.

3.7.6 Sensitive Land Use

The site and immediate surrounding area are identified as being within a Nitrate Vulnerable Zone. In our experience the majority of this area of the country is defined as a Nitrate Vulnerable Zone and this classification is considered not to present a potential risk to the site.

3.8 Land Use Assessment

As part of the land use assessment, reference has been made to the *'Desk Reference Guide to potentially Contaminative Land Uses'* produced by Mr P Syms and published jointly by the ISVA (The professional Society for Valuers and Auctioneers) in association with The Royal Institution of Chartered Surveyors (RICS) and the Chartered Institute of Environmental Health (CIEH).

We have also made reference to the Department for Environment, Food and Rural Affairs and the Environment Agency Contaminated Land Report CLR8 '*Potential Contaminants for the Assessment of Land'* (March 2002). Although now formally withdrawn, this document identifies key contaminants which may potentially be present at a site as a result of a given historical land use and is considered useful as a desk based ready reference guide.

3.8.1 On Site Assessment

At the time of our walkover (February 2024), the site predominantly comprised an area of bare soil, which was locally used for the storage of construction materials associated with the ongoing residential construction site to the sites east.

Based on the reviewed historical information, the site has essentially remained as undeveloped fields / residential gardens since the earliest reviewed mapping of the 1880s. However, a small glasshouse was present in the northeastern area of the site between the 1980s and 2000s.

The area to the immediate northeast, east, southeast and south of the site was associated with Millfield Nurseries. The nearest surface water feature is located approximately 20m west of the site, beyond Spalding Common.

The site is not identified in any of the land-use categories detailed within the publications referenced in Section 3.8. Based on the information obtained from our desk study enquiries, our walkover of the site and experience of similar sites, potential general soil contamination that may be present could include:

- Metals or metalloids associated within any Made Ground beneath the site.
- Polycyclic Aromatic Hydrocarbons (PAHs) from any ashy inclusions and / or carbonaceous inclusions in the near surface soils.
- Asbestos Containing Materials (ACMs) associated with the former structure at the site.
- Potentially hazardous ground gases (i.e. methane and carbon dioxide) associated with any natural peat / organic deposits beneath the site and any infill materials to the former drainage ditch within the sites western boundary.

3.8.2 Off Site Assessment

Based on the information obtained from the desk study, there are a limited number of industrial / commercial land uses in the vicinity of the site, the closest of which include Millfield Nurseries located to the immediate east / southeast of the site. It is noted that Millfield Nurseries are no longer operational and all associated structures and features, inclusive of the tanks, have been removed. The area of the former Millfield Nurseries is now undergoing residential development.

On the basis of the foregoing, it is considered that the potential risks to human health from off-site sources of contamination have been mitigated as part of redevelopment of the adjacent site.

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

4.1 General

The DEFRA publication '*Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance*' (dated April 2012) states the following with regards to the production of a Conceptual Site Model (CSM) for a site:

'*The process of risk assessment involves understanding the risks presented by land, and the associated uncertainties. In practice, this understanding is usually developed and communicated in the form of a "conceptual model"*'. The development of a CSM is typically undertaken in an iterative process, reflecting the changes in understanding as more detailed site information becomes available.

In developing a CSM, and specifically in the context of land contamination, consideration needs to be given to three essential elements; which form the basis of any risk present. The statutory guidance sections 3.8 and 3.9 (April 2012) states the following:

(a) '*A "contaminant" is a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of controlled waters.*
(b) A "receptor" is something that could be adversely affected by a contaminant, for example a person, an organism, and ecosystem, property, or controlled waters...
(c) A "pathway" is a route by which a receptor is or might be affected by a contaminant.

The term "contaminant linkage" means the relationship between a contaminant, a pathway and a receptor.' For a contaminant linkage to be plausible, all three elements need to be present.

In undertaking a risk assessment and deriving a CSM for the purposes of the redevelopment of a site (i.e. planning and development control) reference has been made to both the Model Procedures for the Management of Land Contamination, as well as the National Planning Policy Framework (NPPF, dated February 2019).

The preliminary CSM should identify the hazards (source of potential contamination) and should set out the potential pollutant linkages with a view to identifying the nature and magnitude of the potential risks to receptors.

In order to undertake the foregoing assessment, consideration is required with respect to the probability or likelihood of the linkage occurring and the severity and significance of the potential consequences; taking account the nature of the pollutant linkage and the potential severity of the hazard and the sensitivity of the receptor within the context of the proposed land use (in consideration of the planning regime).

Consideration of consequence / severity, probability / likelihood and risk has been based on the following guidance documentation:

- CIRIA C552 '*Contaminated Land Risk Assessment, A Guide to Good Practice*', 2001.
- EA R&D publication 66 '*Guidance for the Safe Development of Housing on Land Affected by Contamination*', 2008.

4.2 Classification of Consequences

In order to apply a consequence classification to a particular potential pollutant linkage, it is first necessary to define the terminology used within the classification system. The following terminology and definitions detailed in Table 2 have been adopted within our assessment, based on the guidance referenced in Section 4.1.

TABLE 2 – CLASSIFICATION OF CONSEQUENCES	
Classification	**Definition**
Severe	• Acute risks to human health. • Short-term risk of pollution of controlled waters or significant impact on controlled waters; e.g. large-scale pollution or very high levels of contamination. • Catastrophic damage to buildings or property (such as building explosion causing collapse). • Ecological system effects – immediate risks of major damage which is likely to result in irreversible substantial adverse changes in the functioning of the ecosystem or harm to a species of special interest that endangers the long-term maintenance of the population.
Medium	• Chronic risks to human health. • Pollution of sensitive water resources (such as leaching of contaminants into controlled waters) causing a significant effect on water quality. • Ecological system effects – Immediate risks of significant damage which may result in substantial adverse changes to the ecosystems functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. • Significant damage to buildings, structures and services (for example foundation damage or rendering the building unsuitable for habitation).
Mild	• Non-permanent health effects to human health (i.e. exposure is unlikely to lead to 'significant harm' in the context of Part 2A of the Environmental Protection Act 1990. • Pollution of controlled waters or non-sensitive water resources (for example non-classified groundwater) that results in a short-lived effect to water quality or a marginal effect on amenity value, agriculture or commerce. • Minor damage to buildings, structures and services. • Ecological system effects – Minor or short-term damage which is unlikely to result in substantial adverse changes to the ecosystems functioning or harm to a species of special interest. • Substantial damage to non-sensitive environments (such as arable farmland for example).
Minor	• No measurable effects on human health including non-permanent health effects to human health that are easily preventable by appropriate use of PPE / RPE. • Minor pollution of controlled waters including non-sensitive water resources with no discernible effects on water quality or ecosystems. • Minor damage to non-sensitive environments (including arable farmland for example). • Easily repairable effects of damage to buildings, structures, services or the environment (for example discolouration of concrete, loss of plants in a landscaping scheme etc.).

4.3 Classification of Probability

Once the possibility of a pollutant linkage has been established (noting that probability classification does not apply when there is no possibility of a linkage being present), the probability should be classified in accordance with Table 3.

TABLE 3 – CLASSIFICATION OF PROBABILITY		
Classification	**Definition**	**Likelihood**
High Likelihood	There is a pollutant linkage and an event is highly likely to occur in the short-term, and is almost inevitable over the long-term OR there is evidence at the receptor of harm or pollution occurring.	>95% likelihood of Consequence Occurring
Likely	There is a pollutant linkage and it is probable that an event will occur. It is not inevitable, but possible in the short-term and likely over the long-term.	50 – 95% likelihood of Consequence Occurring
Low Likelihood	There is a pollutant linkage and circumstances are possible under which an event could occur. It is by no means certain that even over a longer period such an event would take place, and less likely in the short-term.	5 – 49% likelihood of Consequence Occurring
Unlikely	There is a pollutant linkage and it is improbable that an event would occur even in the very long-term.	<5% likelihood of Consequence Occurring

4.4 Classification of Risk

In order to establish the relevant risk term applicable to the identified pollutant linkage, one of the risk phrases identified within Table 4 must be adopted, with the definitions of each risk term detailed within Table 5.

TABLE 4 – RISK CLASSIFICATION MATRIX (BASED ON C552 CIRIA, 2001)					
		Consequence of Risk			
		Severe	Medium	Mild	Minor
Probability (Likelihood)	High Likelihood	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/Low	Low	Negligible
	Unlikely	Moderate/Low	Low	Negligible	Negligible or No Potential Risk

TABLE 5 – RISK CLASSIFICATION DEFINITIONS (BASED ON C552 CIRIA, 2001)	
Very High	There is a high probability that severe harm will arise to a designated receptor from an identified hazard 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 undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, there is a low likelihood that such harm would be severe, or if any harm were to occur it is more likely that the harm would be 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 longer term.
Moderate/Low	It is possible that harm could arise to a receptor. However, a combination of likelihood and consequence results in a risk that is above low but is not of sufficient concern to be classified as moderate. It can be driven by cases where there is an acute risk which carries a severe consequence, but where the exposure is unlikely. Such harm would at worst normally be mild. The risk is unlikely to present a substantial liability. Some limited further investigation may be required to clarify the risk and any associated liability. If subsequent remediation works are necessary, they are likely to be limited in extent.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Negligible	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is unlikely to be any worse than mild. No liability would be associated with such risks.
No Potential Risk	There is no potential risk or liability where no pollutant linkage has been established.

4.5 Contaminant [C] - Pathway [P] - Receptor [R] Considerations

The following CPR assessment has been undertaken based on the assumption that it is proposed to develop the site for a low-rise residential end-use incorporating private gardens.

4.6 Consideration of Potential Sources of Contamination [C]

Based on the findings of our desk study works, the potential key sources of contamination that would require consideration for the derivation of a preliminary CSM would be the following:

TABLE 6 – SUMMARY OF POTENTIAL CONTAMINANT SOURCES	
Areas of Potential Concern (APCs)	**Associated Contaminants**
Near Surface Soils (including potential Made Ground)	• Metals & Metalloids. • PAHs. • Asbestos.
Potential Made Ground (including infill to the former off-site drainage ditch) and buried peat/organic materials	• Ground gases (including methane and carbon dioxide).

4.7 Consideration of Potential Pathways [P]

The potential pathways at the site are primarily:

- Direct ingestion of soil (either directly or as soil particles attached to produce).
- Inhalation of fugitive dust and vapours.
- Direct skin contact with the ground.
- Direct ingestion of home-grown produce.
- Direct ground contact with construction materials (including supply pipes).
- Vertical and lateral migration of contamination.
- Vertical and lateral migration of potentially hazardous ground gases / vapours.

4.8 Consideration of Potential Receptors [R]

The potential receptors at the site are:

- The final end users (residents - typically long term (chronic) exposure and site visitors – typically short term (acute) exposure).
- The construction personnel (i.e. site workers) involved with the development of the site (typically short term (acute) exposure).
- Neighbouring properties (off-site receptors).
- Controlled Waters (i.e. underlying groundwater and nearby surface waters).
- Buildings and construction materials (including buried utilities).

In preparing the CSM, it has been assumed that construction personnel involved with the development of the site (typically short term (acute) exposure) will adopt all necessary personal protective equipment (PPE and RPE etc) and conform to health and safety requirements of their site-specific Risk Assessment and Method Statements (RAMS). Site workers have therefore not been included within the foregoing, as the adoption of these appropriate mitigation measures will result in an overall low risk of exposure to the C-P-R linkages identified.

4.9 Preliminary Risk Assessment / Conceptual Site Model

Our preliminary conceptual model of possible pollutant linkages, applicable to the proposed site usage and based on our current understanding, is summarised in Table 7.

TABLE 7 – PRELIMINARY RISK ASSESSMENT SUMMARY TABLE (DESK STUDY)

Potential Contaminant Source [C]	Potential Pathway(s) [P]	Potential Receptor [R]	Probability of CPR Linkage	Consequence of CPR Linkage	Risk Level	Comments / Justification
Near Surface Soils (including potential Made Ground)	Direct contact, ingestion or inhalation of fugitive dust and vapours	End users	Likely	Medium	Moderate	No Made Ground is indicated from geological mapping to be present on the site. However, man-made deposits / disturbed ground may be present in the area of the former glasshouse in the northeastern area of the site. No potentially significant historical contaminative land uses have been identified at the site. End users are likely to come into contact with the in-situ soils within areas of soft landscape (i.e. proposed gardens). Further consideration of this potential linkage should be provided during the course of the Exploratory Investigation works.
	Plant uptake / Soil Attached to Home Grown Produce	End users	Likely	Medium	Moderate	No Made Ground is indicated from geological mapping to be present on the site. However, man-made deposits / disturbed ground may be present in the area of the former glasshouse in the northeastern area of the site. No potentially significant historical contaminative land uses have been identified at the site. Home grown produce may be grown within the in-situ soils in private gardens. Further consideration of this potential linkage should be provided during the course of the Exploratory Investigation works.
	Vertical and lateral migration	Neighbouring properties	Low Likelihood	Medium	Moderate / Low	No Made Ground is indicated from geological mapping to be present on the site. However, man-made deposits / disturbed ground may be present in the area of the former glasshouse in the northeastern area of the site. No potentially significant historical contaminative land uses have been identified at the site. No sources of potentially mobile contamination (i.e. hydrocarbons) have been identified. Further consideration of this potential linkage should be provided during the course of the Exploratory Investigation works.

TABLE 7 – PRELIMINARY RISK ASSESSMENT SUMMARY TABLE (DESK STUDY)						
Potential Contaminant Source [C]	**Potential Pathway(s) [P]**	**Potential Receptor [R]**	**Probability of CPR Linkage**	**Consequence of CPR Linkage**	**Risk Level**	**Comments / Justification**
Near Surface Soils (including potential Made Ground)	Leaching of contaminants through unsaturated zone and / or vertical and lateral migration	Controlled Waters	Low Likelihood	Mild	Low	No Made Ground is indicated from geological mapping to be present on the site. However, man-made deposits / disturbed ground may be locally present in the area of the former glasshouse in the northeastern area of the site. No potentially significant historical contaminative land uses have been identified at the site. No sources of potentially mobile contamination (i.e. hydrocarbons) have been identified. The drift deposits and bedrock geology underlying the site are all classified as Unproductive aquifers. The site does not lie within a designated SPZ. Surface watercourses are situated within the vicinity of the site. Further consideration of this potential linkage should be provided during the course of the Exploratory Investigation works.
	Direct contact or contact with vapours	Plastic buildings products (e.g. water supply pipes)	Low Likelihood	Medium	Moderate / Low	No Made Ground is indicated from geological mapping to be present on the site. However, man-made deposits /disturbed ground may be locally present in the area of the former glasshouse in the northeastern area of the site. No potentially significant historical contaminative land uses have been identified at the site. No sources of potentially mobile contamination (i.e. hydrocarbons) have been identified. Further consideration of this potential linkage should be provided during the course of the Exploratory Investigation works.
Potential Made Ground (including infill to the former drainage ditch) and buried peat / organic materials	Vertical and lateral migration of ground gases to indoor air	End users of new buildings (asphyxiation) or new buildings (damage via explosion)	Low Likelihood	Severe	Moderate	The superficial deposits beneath the site have the potential to contain peat / organic materials. The Desk Study enquiries have revealed the presence of potentially infilled ground immediately beyond the western site boundary associated with a former drainage ditch. It is understood that the Client is proposing to incorporate ground gas protective measures within the proposed dwellings which will be consistent with those installed at the adjoining ongoing residential development of the former Millfield Nurseries (i.e. to meet the requirements of a CS2 scenario based on BS8485:2015 +A1:2019). The provision of ground gas protection measures is based on the knowledge of the gas regime in the immediate vicinity of the site and is in lieu of a programme of ground gas monitoring during the Exploratory Investigation Works. No radon precautions are required at the site.

The foregoing preliminary conceptual model highlights the potential plausible pollutant linkages that may relate to the site and would therefore require addressing by appropriate Exploratory Investigation Works. The information contained within the conceptual model should be confirmed and revised upon completion of an appropriate intrusive investigation, as detailed in the following section.

5.0 EXPLORATORY WORKS

5.1 Introduction

Sub-Surface Utility Avoidance Scan

Prior to the commencement of our intrusive works, a sub-contracted sub-surface utility scan was undertaken to attempt to avoid buried services during the intrusive works. Based on the results of the service scan and taking account of the requirement to avoid buried services, the exploratory holes were positioned to maximise the amount of information obtained at the site.

Trial Pits

A total of four trial pits (TP1 to TP4) were excavated at the site on 2nd February 2024. The pits were excavated to depths of between 1.20m and 2.80m below existing ground level (begl).

Trial Pit Locations / Logs

The approximate locations of the exploratory holes are indicated on the plan presented in Appendix X of this report (Figure No. D44007/04). The exploratory hole logs are presented in Appendix XI of this report.

5.2 Ground Conditions

The following represents a summary of the ground conditions encountered in the exploratory holes undertaken at the site.

5.2.1 Surface Materials

Surface Made Ground comprising gravel and coarse sand (considered to be construction material) was encountered at the surface of TP2 to a depth of 0.05m begl.

Natural silty clayey, locally sandy, topsoil was encountered at the surface of trial pits TP3 and TP4 and underlying the surface Made Ground in TP2 to a maximum depth of 0.20m begl.

Sandy silty Made Ground topsoil was encountered at the surface of trial pit TP1 to a depth of 0.15m begl.

5.2.2 Disturbed Ground / Reworked Natural Strata

Disturbed Ground was locally encountered beneath the Made Ground topsoil in TP1 to a depth of 0.75m begl. The presence of the Disturbed Ground appeared to be associated with the presence of a buried metal pipe and possible land drain at 0.70 begl within the northern end of the pit. The Disturbed Ground comprised slightly sandy slightly gravelly clayey silt consistent with reworked Natural Strata. Natural Strata was encountered beneath the Disturbed Ground in the southern end of the pit.

5.2.3 Natural Strata

The undisturbed Natural Strata typically comprised firm, becoming soft to firm then soft sandy SILT. Within trial pit TP2, the Silt progressed into soft silty CLAY. The Silt and Clay encountered at the site are considered to be representative of Tidal Flat Deposits which are indicated from geological mapping to underlie the site.

Tree roots were locally encountered within the Tidal Flat Deposits to a depth of 0.70m, a maximum tree root diameter of 60mm was recorded.

Within trial pit TP4, a pocket of topsoil type material was encountered at a depth of 1.10m begl. This topsoil is anticipated to be associated with recent tree / vegetation removal works at the site.

Underlying bedrock strata of the Oxford Clay Formation was not encountered within the trial pits.

5.3 Visual & Olfactory Evidence of Soil Contamination

No obvious visual or olfactory evidence of significant soil contamination was identified during the course of the site works (such as hydrocarbons or asbestos for example).

5.4 Water

Water was encountered in all of the trial pits at depths of between 0.70m and 0.90m begl. A deeper seepage was also encountered at 1.20m begl in trial pit TP1.

5.5 Plates

A photographic record of the exploratory holes was obtained during the intrusive works. Photographs of the trial pit excavations are presented on the Plates presented in Appendix XII of this report (Plate Nos. 1 to 4).

6.0 LABORATORY TESTING & CONTAMINATION ASSESSMENT

6.1 Introduction

Environmental soil testing was carried out on visually representative samples recovered from the exploratory holes at the site. The testing strategy was based on the land use assessment and preliminary CSM, and was considered sufficient to enable an assessment of the chemical status of the soils. The following testing has been undertaken as part of our works:

- 4No. Contamination suites (including metals, speciated Polycyclic Aromatic Hydrocarbons and Total Organic Carbon).
- 2No. Asbestos screens.

All laboratory soil test results are included in Appendix XIII.

6.2 Contamination Assessment Rationale

We understand that it is proposed to develop the site for a low-rise residential end-use incorporating private gardens.

6.2.1 Assessment Methodology

In order to undertake a Generic Quantitative Risk Assessment (GQRA) we have adopted the Suitable for Use Levels (S4ULs) published by LQM/CIEH in their publication referenced: Nathanail, C.P., McCaffrey, C. Gillett, A.G., Ogden, R.C. and Nathanail, J.F, 2015. '*The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham. All rights reserved.*' In the absence of an S4UL screening value, we have made reference to the Category 4 Screening Levels (C4SLs) published by DEFRA.

In consideration of the available generic land uses utilised in the derivation of the adopted screening criteria, we have adopted a residential with plant uptake end-use scenario for the purposes of the contamination assessment.

For assessment purposes, we have adopted a policy whereby determinands within the dataset are individually compared to the relevant screening value (i.e. individual S4ULs). Where determinands within the dataset are less than the appropriate screening value, the determinand is considered to be present at an acceptable concentration and no further assessment is required. Additional comment, statistical assessment or further Detailed Quantitative Risk Assessment (DQRA) may be provided where elevated values are revealed.

6.2.2 Selection of Soil Organic Matter (SOM) Content

The SOM content and soil type are used to provide an assessment of the applicability of the screening values adopted (the S4UL values are typically based upon SOM of 1%, 2.5% and 6%, as applicable, with all metals derived utilising 6% SOM as standard).

Where available at Tier 1 level, determinands have in the first instance been compared to screening values adopting a conservative SOM of 1%.

Where the determinand exceeds the relevant screening value at 1% SOM, a site-specific SOM may be adopted as appropriate to derive more site-specific screening values and the dataset reassessed.

6.3 Sampling Strategy

No specific areas of concern were identified at the site with respect to ground contamination, other than the location of the former structure (greenhouse) within the northeastern area of the site. A second building associated with the former Millfield Nurseries was identified from historical mapping to be present immediately beyond the southeastern corner of the site. The sampling strategy for the site was primarily to retrieve visually representative soil samples from a selection of locations, where access allowed.

The sampling strategy was based on a review of the historical, geological and environmental information obtained from the Desk Study enquiries and the current and proposed site setting, together with the ground conditions encountered during our exploratory works.

Table 8 summarises the reasoning behind the exploratory hole positions.

TABLE 8 – REASONING FOR EXPLORATORY HOLE LOCATION

Exploratory Hole Reference	Reasoning Behind Location
TP1	Targeted in close proximity to a former building located immediately to the southeast of the site.
TP2	Targeted in the location of the former on site structure (greenhouse)
TP1, TP2 & TP4	Targeted to proposed rear gardens
TP3 & TP4	General site coverage for environmental assessment purposes.

Key

TP – Trial Pit

The ground conditions encountered during our exploratory works revealed the presence of two distinct types of material, i) surface topsoil (including Made Ground topsoil) and ii) the underlying Natural Strata (including Disturbed / reworked Natural Strata).

Representative samples of the soil types were obtained during our environmental assessment works and subjected to chemical analysis for a suite of contaminants deemed appropriate based on the findings of the desk based enquiries. It is noted that the suite of contaminants detailed in Section 3.8.1 and Table 6 were considered to remain applicable as an initial chemical screen of the encountered soils following completion of the investigation works.

6.4 Contamination Analysis

A total of 4No. standard chemical contamination tests (including metals, speciated PAHs and TOC) were carried out on selected samples of the topsoil (including Made Ground topsoil) (3No.) and the disturbed / reworked Natural Strata (1No.) obtained during the environmental assessment works.

In addition, asbestos screening was undertaken on 2No. samples of the topsoil (including Made Ground topsoil).

For initial assessment purposes, the laboratory test results have been individually compared against appropriate GACs.

6.5 Contamination Soil Test Results

6.5.1 Standard Contamination Assessment

The contamination assessment for the soil samples analysed at the site is summarised in Table 9.

Please note that screening values have only been used for determinands where they are present at concentrations in excess of the LOD on at least one occasion.

TABLE 9 – SUMMARY OF TIER 1 GAC ASSESSMENT (RESIDENTIAL WITH PLANT UPTAKE END-USE)				
Contaminants – Potentially Harmful to Human Health	**No. of Samples Tested**	**Concentration Range (mg/kg)**	**Tier 1 GAC (mg/kg)**	**Tier 1 GAC Exceeded (Yes/No) & No. of Exceedances (n/total)**
Metals				
Arsenic	4	4 – 8	37 S4UL	No
Chromium III	4	15 – 22	910 S4UL	No
Copper	4	15 – 23	2400 S4UL	No
Lead	4	28 – 49	200 C4SL	No
Nickel	4	13 – 14	40 S4UL	No
Zinc	4	51 – 65	130 S4UL	No
PAH				
Fluoranthene	4	<0.10 – 0.15	280 S4UL	No
Pyrene	4	<0.10 – 0.12	620 S4UL	No

Key
S4UL – CIEH/LQM Suitable 4 Use Levels (2015). Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3026. All rights reserved.
C4SL – value for Lead taken from DEFRA publication SP1010 and based on a residential (with home-grown produce) end-use.

All remaining determinands assessed within the samples tested were present at individual concentrations below the Limit of Detection of the method of analysis adopted by the laboratory and / or below the appropriate Tier 1 GAC based on a residential with plant uptake end-use.

6.5.2 Asbestos

In addition to the foregoing contamination assessment, 1No. sample of the topsoil and 1No. sample of the Made Ground topsoil were subject to asbestos screening. No asbestos (loose fibres or bulk fragments) was detected by the laboratory in either of the samples analysed.

6.6 Contamination Assessment Summary

Human Health

Contamination testing was carried out on selected samples of the topsoil (including Made Ground) and the Natural Strata (locally disturbed / reworked).

Based on the chemical contamination assessment undertaken, the soils may generally be considered to be uncontaminated for the proposed residential with plant uptake end-use.

Controlled Waters

It is the opinion of GeoDyne that the concentrations recorded are unlikely to pose a significant risk to Controlled Waters.

7.0 REVISED CONCEPTUAL SITE MODEL

7.1 Introduction

In accordance with the approach detailed within Section 4.0, the Conceptual Site Model (CSM) for the site should be refined following acquisition and collection of additional data following completion of the site investigation works.

As a result of the site investigation, no potential sources, pathways or receptors have been excluded from the pCSM. However, the potential contaminant linkages have been re-assessed to reflect the findings of the investigations and risk assessments completed.

Our revised assessment following the acquisition and collection of information from the site investigation works is provided in Table 10.

TABLE 10 – REVISED RISK ASSESSMENT SUMMARY TABLE EXPLORATORY INVESTIGATION							
Potential Contaminant Source [C]	**Potential Pathway(s) [P]**	**Potential Receptor [R]**	**Probability of CPR Linkage**	**Consequence of CPR Linkage**	**Risk Level**	**Comments / Justification**	**Residual Risk After Remedial / Mitigation Measures**
Near Surface Soils (including Made Ground topsoil and disturbed ground / reworked Natural Strata)	Direct contact, ingestion or inhalation of fugitive dust and vapours	End users	Unlikely	Medium	Low	The Exploratory Investigation works have revealed that the soils may be regarded as uncontaminated for the proposed end-use.	Low – as per 'Risk Level'. No remedial / mitigation measures required.
	Plant uptake / Soil Attached to Home Grown Produce	End users	Unlikely	Medium	Low	The Exploratory Investigation works have revealed that the soils may be regarded as uncontaminated for the proposed end-use.	Low – as per 'Risk Level'. No remedial / mitigation measures required.
	Vertical and lateral migration	Neighbouring properties	Unlikely	Medium	Low	No potentially mobile hydrocarbon contamination has been identified during the intrusive works and there was no obvious visual or olfactory evidence of any significant contamination (i.e. hydrocarbon impacted soils, for example).	Negligible. No remedial / mitigation measures required.
	Leaching of contaminants through unsaturated zone and / or vertical and lateral migration	Controlled Waters	Unlikely	Mild	Negligible	The results of the chemical soil analysis are considered not to represent a significant risk to Controlled Waters. No potentially mobile hydrocarbon contamination has been identified during the intrusive works and there was no obvious visual or olfactory evidence of any significant contamination (i.e. hydrocarbon impacted soils, for example).	Negligible – as per 'Risk Level'. No remedial / mitigation measures required.
	Direct contact or contact with vapours	Plastic buildings products (e.g. water supply pipes)	Unlikely	Medium	Low	No potentially mobile hydrocarbon contamination has been identified during the intrusive works and there was no obvious visual or olfactory evidence of any significant contamination (i.e. hydrocarbon impacted soils, for example). Mitigation measures may be required subject to consultation with water supply company	Low. Mitigation measures may be required subject to consultation with water supply company

TABLE 10 – REVISED RISK ASSESSMENT SUMMARY TABLE EXPLORATORY INVESTIGATION							
Potential Contaminant Source [C]	**Potential Pathway(s) [P]**	**Potential Receptor [R]**	**Probability of CPR Linkage**	**Consequence of CPR Linkage**	**Risk Level**	**Comments / Justification**	**Residual Risk After Remedial / Mitigation Measures**
Potential Made Ground (including infill to the former drainage ditch) and buried peat / organic materials	Vertical and lateral migration of ground gases to indoor air	End users of new buildings (asphyxiation) or new buildings (damage via explosion)	Low Likelihood	Severe	Moderate	The superficial deposits beneath the site have the potential to contain peat / organic materials. Furthermore, the Desk Study enquiries have revealed the presence of potentially infilled ground immediately beyond the western site boundary associated with a former drainage ditch. **It is understood that the Client is proposing to incorporate ground gas protective measures within the proposed dwellings which will be consistent with those installed at the ongoing adjoining residential development of the former Millfield Nurseries (i.e. to meet the requirements of a CS2 scenario based on BS8485:2015 +A1:2019). The provision of ground gas protection measures is based on the knowledge of the gas regime in the immediate vicinity of the site and is in lieu of a programme of ground gas monitoring during the Exploratory Investigation Works.** No radon precautions are required at the site.	Low

8.0 CONCLUSIONS & RECOMMENDATIONS

8.1 Site Summary

At the time of our works (February 2024), the site predominantly comprised an area of bare soil. Construction materials associated with the adjacent ongoing residential development of the former Millfield Nurseries were locally stored at the site.

Based on the reviewed historical information, the site has essentially remained as undeveloped fields / residential gardens since the earliest reviewed mapping of the 1880s. However, a small building (glasshouse) was present in the northeastern area of the site between the 1980s and early 2000s.

The area to the immediate northeast, east, southeast and south of the site was associated with Millfield Nurseries.

The site and surrounding area are indicated to be underlain by the Tidal Flat Deposits (Barroway Drove Beds). The Tidal Flat Deposits are indicated to be sequentially underlain by strata comprising the Abbey Sand and Gravel, and at depth by the Oxford Clay Formation.

8.2 Soil Contamination Assessment

Human Health

Contamination testing was carried out on selected samples of the topsoil (including Made Ground topsoil) and the Natural Strata (locally disturbed / reworked).

Based on the chemical contamination assessment undertaken, the soils may generally be considered to be uncontaminated for the proposed residential with plant uptake end-use.

Controlled Waters

The soil test results have revealed the general absence of any significant potentially mobile contamination beneath the subject site. On this basis, there are considered to be no significant risks posed to Controlled Waters by the findings of the laboratory analysis undertaken.

8.3 Remediation Proposals

Human Health

No specific remediation works will be required.

Should there be a requirement to import topsoil to the site, it will be necessary to test the topsoil at source to ensure it is suitably clean (prior to importation) in accordance with CLEA / generic guidance. The topsoil should also conform to BS3882: 2015 *'Specification for topsoil'*, with respect to the presence of foreign objects, and ideally nutrient levels etc.

Controlled Waters

No specific remediation in relation to Controlled Waters is considered to be necessary at the site on the basis of the available information.

Off-Site Disposal

Excess uncontaminated soils (for example underlying Natural Strata) should be regarded as a potential asset and we would recommend that the re-use of excess uncontaminated soils on site or off-site is investigated in the first instance (subject to appropriate permits, plans and registrations etc.).

The Natural Strata may be regarded as suitable for re-use landscaping / capping on alternative developments (subject to regulatory approval and the production of any necessary plans or permits) where surplus arisings are generated from the site.

Should off-site disposal be required, the chemical testing regime can be different to the chemical testing required to assess the suitability of the soils for retention on site and the risks to human health and Controlled Waters. Therefore, Waste Acceptance Criteria [WAC] testing may be required to confirm disposal costs, although in the first instance, the test results from this investigation should be supplied to landfill operators to determine likely disposal costs before any further testing is carried out.

8.4 Ground Gases

It is understood that the Client is proposing to incorporate ground gas protective measures within the proposed dwellings which will be consistent with those installed at the ongoing adjoining residential development of the former Millfield Nurseries. The provision of ground gas protective measures is based on the Clients knowledge of the ground gas regime in the immediate vicinity of the site and is in lieu of a programme of ground gas monitoring at the current site.

Therefore, it is understood that these protective measures will meet the requirements of Characteristic Situation CS2 in accordance with BS8485:2015 +A1:2019 *'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'* and will include the provision of a clear ventilated sub-floor void (beneath a beam and block type floor) and well installed suitable ground gas resistant membrane (i.e. Juta GP-1, or similar). To comply with BS8485, the membrane should be validated by a third party in accordance with the requirements of CIRIA C735 *'Good practice on the testing and verification of protection systems for buildings against hazardous ground gas'* (2014). Should an alternative design of ground gas protection measures be proposed, this should be approved in writing by the Local Planning Authority / Warranty Provider in advance of implementation on site.

8.5 Construction Workers

It is recommended that construction personnel involved with direct contact with the soils at the site use appropriate PPE / RPE equipment, together with hygiene facilities in accordance with general health and safety guidelines. The chosen Contractor should undertake the necessary Risk Assessments and Method Statements (RAMS) to determine the most appropriate protection required for safe working practices at the site.

A copy of this report should be included in the site health and safety file, and site workers should be made fully aware of the sites setting.

8.6 Utilities

Prior to development of the site, we would recommend that a copy of this report is supplied to utility companies, and that their recommendations relating to appropriate supply pipes are adhered to.

8.7 Unforeseen Circumstances

Should any areas of potentially contaminated soil be encountered during site construction works we would recommend consultation with GeoDyne to ensure that our recommendations continue to apply. Any potentially contaminated soils should be left in-situ and subjected to further assessment, to potentially include further chemical testing and risk assessment.

The following procedure should be adhered to if any areas of previously unidentified suspected contamination are encountered during the development of the site:

i. Suspected contaminated material will remain in-situ.
ii. GeoDyne to be notified. We will then undertake a visual assessment of the possible contamination, followed by appropriate sampling / testing (as necessary).
iii. If necessary, contamination will then be treated or removed from site. All necessary remediation works should be validated by testing in accordance with an approved strategy, with the relevant Regulators informed accordingly.

8.8 Licenses, Permits, Registrations, Plans and Approvals

The Contractor / Developer is responsible for, and must ensure that, all necessary licenses, permits, plans, registrations and approvals are in place prior to commencing with the construction works at the site.

These may include any Materials Management Plans (MMPs), Site Waste Management Plans (SWMPs) and / or Environmental Permits / Exemptions as necessary to enable the completion of the proposed works. Any MMP should be accompanied by a Qualified Person Declaration (QPD) and will require verification in due course.

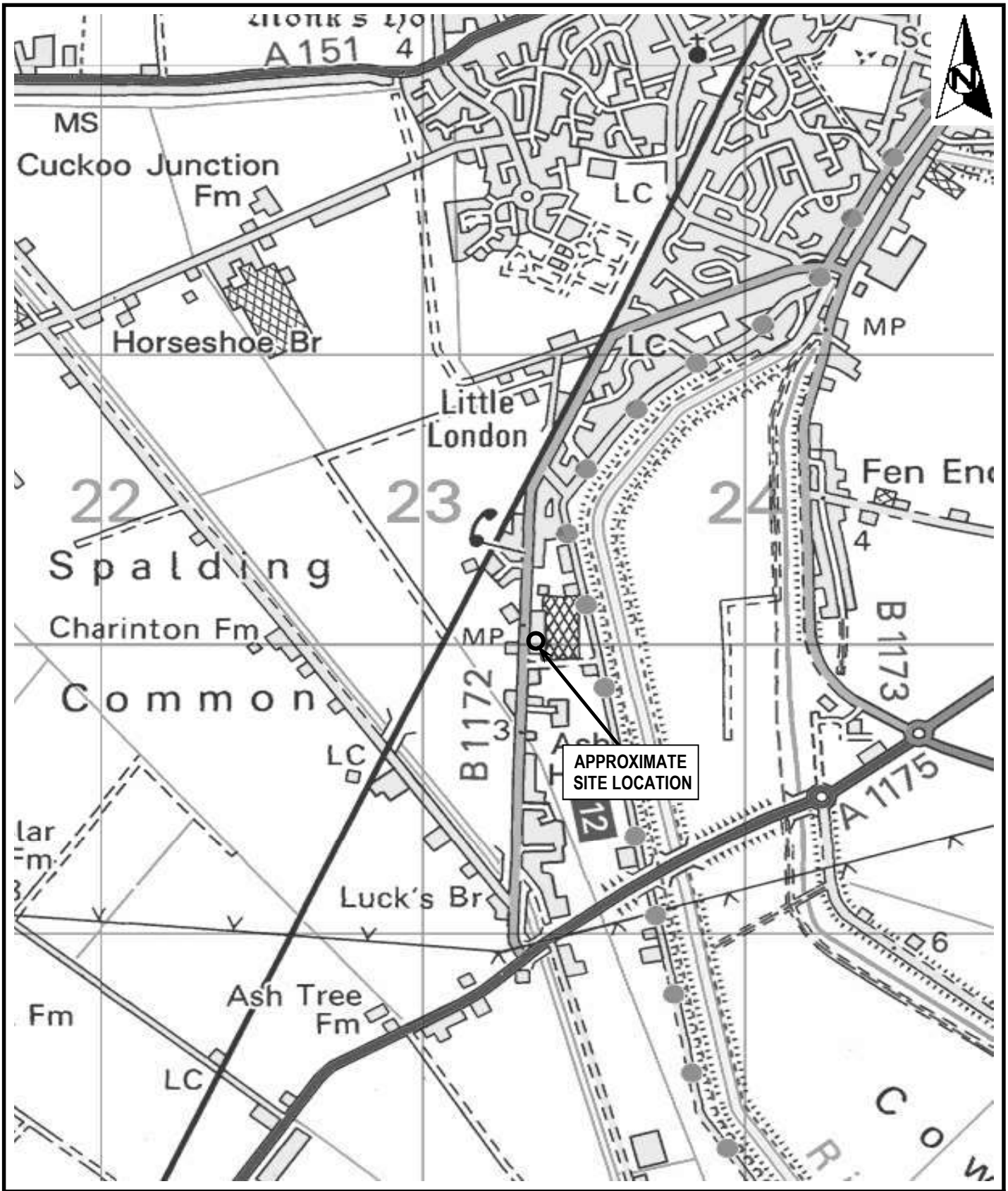
8.9 Statutory Consultation

We would recommend that a copy of our report is issued by the Client to the Local Authority (and NHBC or other Warranty Provider, if necessary) for review / comment and approval prior to commencing with the development of the site.

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APPENDIX I

Site Location Plan
(Figure No. D44007/01)



REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HIS MAJESTY'S STATIONERY OFFICE. CROWN COPYRIGHT RESERVED. LICENCE NO. LAN 1001274

Project No.	D44007	Drawn	DL
Client	Seagate Homes	Checked	DB
Project	Millfield House Spalding Common Spalding	Approved	PK
		Scale	NTS
		Date Drawn	06/02/2024
Title	Site Location Plan	Rev.	
		Figure No.	**D44007/01**

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APPENDIX II

Proposed Development Layout

MILLFIELD HOUSE, SPALDING COMMON

NOTES:
The details depicted on this drawing are the copyright and may not be reproduced without permission. This drawing must not be re-issued, loaned or copied without the consent. Errors omissions and discrepancies should be reported to the originator immediately.

All dimensions to be checked on site prior to construction or off-site fabrication by the Contractor, his Sub-contractor or Supplier.

Do not scale plans - use figure or grid dimensions where given.
Any deviation from the drawing is to be reported to the originator immediately.

IF IN DOUBT ASK !





LEGEND

- Proposed Trees
- Proposed Shrubs
- Proposed Hedges
- 1.8m high Timber close board fence
- 1.2m high Timber close board fence
- 1.2m high Timber post & rail fence
- 1.80m high brick wall
- Buff paving slabs to all paths/patios
- Tarmac private roadway
- Block Paving Areas
  buff paving (herringbone) with granite delineation (stretcher)
- Bin collection point (Grey slats)
  with brick wall on 3 sides

External Materials

Facing Bricks
Marshall's Peyton Heath

Roof Tiles
Double Pantile Rustic

Wires UPVC windows & roof doors
Black GRP front doors
Black UPVC Rainwater Goods & Soppetrons.
Black PVC gutters & down pipes
White GRP bay canopy with felted effect roof

TREES		
REF	SPECIES	GIRTH
BAP	Malus Profusion (Ow) Apple	10/+ 40cm
PHS	Prunus Hillieri Spire (Cherry)	10/+ 40cm

SHRUBS & HEDGES				
REF	SPECIES	Height	POT SIZE	QUANTITY
cb	Cenarrhus Burkwoodii	100-300mm	2L	9no
cs	Ceanothus Skylark	100-300mm	2L	6no
dog	Berberis Thunbergii Rose Glow	100-300mm	2L	6no
ef	Euonymus fortunei 'Emerald 'n Gold'	100-300mm	2L	6no
lav	Lavendula angustifolia 'Munstead'	100-300mm	2L	6no
cp	Carpinus Betulus (Hornbeam-Hedging)	450-600mm	2L	24no/run

SPECIFICATION NOTES

SHRUBS
Shrubs to BS 3936 to be planted in debris and weed free holes 100 ons deep. Topsoil to BS 3882. Any heavily compacted and pierced ground to be deep ripped to relieve the compaction. All holes to be accurately cut with even curves and straight lines as appropriate. Allow for 75 mm of Contract Ornamental bark mulch to all planting beds. Industrial grade large stirling bark will be deemed unacceptable. Plants to be good quality sturdy stock commensurate with the stipulated pot size.

HEDGING
Hedging plants are to be from a single source to ensure uniformity of stock. Hedge planting should be set out accurately in respect of alignment and spacing.

TREES
Trees to be staked and tied using 75 mm peeled pine stakes 2.1 m long 600 mm into ground and durable rubber ties.
Single or double staking in these circumstances is deemed to be unacceptable.
Tree pits are to be 1000 mm/ 1000mm x the depth of the rootball plus 150 mmm mm deep with thyroid topsoil containing the recommended quantity of mycorrhizal fungal spores.
Trees to be planted at the same level relative to the soil level as the original planting level.
Trees are to be well watered at planting time and during times of low rainfall.
It is important to confirm the location of drainage runs assessments and for tree planting to avoid these circumstances.

Rev	Notes	Date	By
C	House type plan to plot 3 swapped, Front path updated.	30.6.23	MD
B	Bin store location updated	06.06.23	LR
A	Same brick just name updated to Payton Heath	31.10.22	AC

SEAGATE HOMES

Project:
PROPOSED RESIDENTIAL DEVELOPMENT,
MILLFIELD HOUSE, SPALDING COMMON,
LINCS. PE11 3AU

Drawing:
SITE PLAN

Drawn: MD Date: 21.07.2022

Status: PLANNING Scale: 1:200 @ A1

Drawing Number:
MHS-SH-PD-SP-02-C

GeoDyne

APPENDIX III

Local Authority Planning Conditions

Seagate Homes
Holbeach Manor
Fleet Road
Holbeach
Spalding
PE12 7AX

Council Offices
Priory Road
Spalding
Lincolnshire
PE11 2XE
Admin 01775 764725
DC Officers 01775 764703

planningadvice@sholland.gov.uk
www.sholland.gov.uk

TOWN AND COUNTRY PLANNING ACT 1990

FULL

Reference: H16-0134-23 **Date of Decision:** 19th October 2023

Applicant: Seagate Homes
Holbeach Manor
Fleet Road
Holbeach
Spalding
PE12 7AX

Location: Millfield House Spalding Common Spalding

Description: Residential Development (9 Dwellings)

South Holland District Council hereby give notice that permission has been GRANTED (or equivalent) subject to the following condition(s):

1 The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason: As required by Section 91 of the Town and Country Planning Act 1990 as amended by the Planning and Compulsory Purchase Act 2004.

2 The development hereby permitted shall be carried out in accordance with the following approved plans and/or documents:

Application Form
MHS-SH-PD-LP-01 - Location Plan
MHS-SH-PD-SP-02-C - Site Plan
MH-S213-02-Plans & Elevations - House Type S213 Semi
MH-S213-01-Plans & Elevations Rev: A - House Type S213 Terrace
Flood Risk Assessment, prepared by S M Hemmings
Design and Access Statement, prepared by Mike Sibthorp Planning

Reason: For the avoidance of doubt and in the interests of proper planning.

3 The materials of the development hereby permitted shall be carried out in accordance with those detailed within the application form and approved plans.

Reason: In the interests of the architectural and visual integrity of the overall development and the visual amenity of the area in which it is set.
This Condition is imposed in accordance with Policies 2 and 3 of the South East Lincolnshire Local Plan, 2019.

4 The development hereby permitted shall not be commenced until a scheme to deal with any contamination of land or pollution of controlled waters has been submitted to and approved in writing by the Local Planning Authority (LPA).

The scheme shall include all of the following measures unless the LPA dispenses with any such requirement in writing:
i) A preliminary risk assessment (desk study) shall be carried out to identify and evaluate all potential sources of contamination and the impacts on land and/or controlled waters, relevant to the site. The desk-top study shall establish a 'conceptual site model' and identify all plausible pollutant linkages. Furthermore, the assessment shall set objectives for intrusive site investigation works/Quantitative Risk Assessment (or state if none required). A full copy of the desk-top study and a non-technical summary shall be submitted to the LPA without delay upon completion.
ii) If identified as being required following the completion of the desk-top study, an exploratory site investigation shall be carried out to fully and effectively characterise the nature and extent of any land contamination and/or pollution of controlled waters. It shall specifically include a risk assessment that adopts the Source-Pathway-Receptor principle, in order that any potential risks are adequately assessed taking into account the sites existing status and proposed end use. A full copy of the site investigation and findings shall be forwarded to the LPA without delay upon completion.
iii) Thereafter, a written method statement detailing the remediation strategy for land contamination and/or pollution of controlled waters affecting the site and a timetable for their completion shall be submitted to and approved in writing by the LPA. This shall include details of the proposed verification plan including compliance criteria and monitoring details.

No deviation shall be made from this scheme without the express written agreement of the LPA. If during redevelopment contamination not previously considered is identified, then the LPA shall be notified immediately and no further work shall be carried out until a method statement detailing a scheme for dealing with the suspected contamination has been submitted to and agreed in writing by the LPA.

Reason: To assess whether the site is polluted and to address any pollution to ensure a satisfactory development. This issue is integral to the development and therefore full details need to be finalised prior to the commencement of works.
This Condition is imposed in accordance with Policy 30 of the South East Lincolnshire Local Plan, 2019.

5 If contamination of land and/or pollution of controlled waters has been identified as a

DC_FINAL_DECISION - ODB:14

result of investigation undertaken in accordance with Condition 4 above and remediation is required, a full copy of a verification report shall be submitted to, and approved in writing by, the Local Planning Authority prior to the first occupation of the development. The report shall provide verification that the required works regarding contamination have been carried out in accordance with the approved Method Statement(s). Post-remediation sampling and monitoring results shall be included in the closure report to demonstrate that the required remediation objectives and criteria has been fully met.

Note: The applicant is advised that the phased risk assessment required by the Contaminated Land Scheme Condition should be carried out in accordance with the procedural guidance of the Environmental Protection Act 1990 Part 11A.

Reason: To ensure the satisfactory remediation of contaminated land and/or waters.
This Condition is imposed in accordance with Policy 30 of the South East Lincolnshire Local Plan, 2019.

6 No dwelling hereby permitted shall be occupied until details of the bin collection point (proposed for means of storage and disposal of refuse and recycling and to be located as shown within drawing no. MHS-SH-PD-SP-02-C), have been submitted to and approved in writing by the Local Planning Authority.

The details shall include the height, materials and specific scale of the bin collection point, as well as details of appropriate management and maintenance.

The approved scheme shall be fully implemented before the first occupation of relevant dwellings and shall thereafter be retained.

Reason: To ensure that adequate facilities are made available for refuse storage and disposal to avoid pollution, to protect residential amenity, and in the interests of the appearance of the site and the area within which it is set. This issue is integral to the development and therefore full details need to be finalised prior to the commencement of works.
This Condition is imposed in accordance with Policies 2, 3 and 30 of the South East Lincolnshire Local Plan, 2019.

7 The scheme of landscaping and tree planting shown on dwg. no. MHS-SH-PD-SP-02-C, shall be carried out and completed in its entirety during the first planting season following practical completion of the development. All trees, shrubs and bushes shall be maintained by the owner or owners of the land on which they are situated for the period of five years beginning with the date of completion of the scheme and during that period all losses shall be made good as and when necessary.

Reason: To ensure that the development is adequately landscaped, in the interests of its visual amenity and that of the area in which it is set.
This Condition is imposed in accordance with Policies 2 and 3 of the South East Lincolnshire Local Plan, 2019.

8 Prior to the first occupation of any dwelling hereby permitted, except where details are required by way of another condition hereby attached, the proposed boundary treatments shall be carried out and installed in accordance with dwg no. MHS-SH-PD-SP-02-C and

DC_FINAL_DECISION - ODB:14

shall be retained to this specification thereafter for the lifetime of the development, unless otherwise agreed by the Local Planning Authority.

Reason: In the interests of the character and appearance of the development and the amenity of the area in which it is set including the amenity of nearby occupiers.
This Condition is imposed in accordance with Policies 2 and 3 of the South East Lincolnshire Local Plan, 2019.

9 The development hereby permitted shall be carried out in accordance with the measures set out in the Flood Risk Assessment (prepared by S M Hemmings dated 22 August 2022) forming part of this planning application, unless otherwise agreed in writing by the Local Planning Authority, in particular the following measures shall be fully implemented before the property is first occupied:

- Finished floor levels shall be set no lower than 3.4 metres above Ordnance Datum (AOD)
- Each dwelling shall include flood resilient construction to a height of 300mm above the predicted flood level

Note: The above approved plan does not constitute final approval of detailed site levels or finished floor levels.

Reason: To ensure that the development does not increase the risk of flooding or be at risk of flooding.
This Condition is imposed in accordance with Policies 3 and 4 of the South East Lincolnshire Local Plan, 2019 and national guidance contained in Section 14 of the National Planning Policy Framework, 2023.

10 Before the commencement of the development hereby permitted, full details of the existing and proposed site levels and proposed floor levels of the buildings, hard surfaced areas and garden/amenity areas, including any mitigation measures arising as a consequence (for example increased height of boundary treatment), shall be submitted to and approved in writing by the Local Planning Authority. The development shall be constructed and retained in accordance with the details so approved.

Note: Site levels and finished floor levels have not been approved. Where levels are raised above existing ground levels, the submission shall be supported by cross-sectional drawings showing the relationship with adjoining uses and buildings to enable the Local Planning Authority to be satisfied that sufficient mitigation measures will be in place.

Reason: To ensure that the Local Planning Authority retains control over the finished site and floor levels of the development, in the interests of the amenity of adjacent residents and its visual and architectural relationship with adjacent development. This issue is integral to the development and therefore full details need to be finalised prior to the commencement of works.
This Condition is imposed in accordance with Policies 2, 3 and 4 of the South East Lincolnshire Local Plan, 2019.

11 Before any dwelling is occupied, all of that part of the vehicular access and vehicular access road, in addition to any associated footways within or adjoining the site, shall be

DC_FINAL_DECISION - ODB:14

laid out and constructed using materials as to be agreed and to finished surface levels in accordance with, details to be submitted and approved by the Local Planning Authority.

Reason: In the interests of safety, to avoid the creation of pedestrian trip hazards within the public highway from surfacing materials, manholes and gullies that may otherwise remain for an extended period at dissimilar, interim construction levels.
This Condition is imposed in accordance with Policy 2 of the South East Lincolnshire Local Plan, 2019.

12 Before the commencement of the development hereby granted beyond oversite, full details of the means of surface water disposal shall be submitted to and approved in writing by the Local Planning Authority. The details so approved shall be implemented in full before the development hereby permitted is first brought into use.

Reason: To ensure that the site is adequately drained, to avoid pollution, and to prevent increased risk of flooding.
This Condition is imposed in accordance with Policies 2, 3 and 30 of the South East Lincolnshire Local Plan, 2019 and national guidance contained in Section 14 of the National Planning Policy Framework, 2023.

13 Before the commencement of the development hereby granted, details of the means of foul water disposal shall be submitted to and approved in writing by the Local Planning Authority. The details so approved shall be implemented in full before the development hereby permitted is first brought into use.

Reason: To ensure that the site is adequately drained and to avoid pollution.
This Condition is imposed in accordance with Policy 30 of the South East Lincolnshire Local Plan, 2019.

14 Before the commencement of any development hereby permitted, full details of biodiversity enhancement measures to be implemented in conjunction with the development, shall be submitted to and approved in writing by the Local Planning Authority. The details shall demonstrate how the measures comply with Policy 28 of the South East Lincolnshire Local Plan (2019).

The measures shall thereafter be constructed/installed in accordance with the details so approved, prior to the development being brought into use and shall thereafter be retained.

Note: Development can incorporate a number of simple, low-cost measures to deliver biodiversity benefits and enhance priority habitats and species, such as, the use of bat and barn owl roost boxes and integrating nesting opportunities into buildings. The use of swift bricks on new developments would help minimise the decline in swifts, a priority species.

Reason: To ensure that the development is able to deliver and incorporate biodiversity enhancement measures within the scheme.
This Condition is imposed in accordance with Policy 28 of the South East Lincolnshire Local Plan, 2019.

15 Notwithstanding the details submitted, before any part of the development hereby permitted is occupied, the first floor windows to the side elevations of each dwelling, serving bathrooms to each plot, shall be obscure glazed with no opening part being less than 1.7m above the floor level immediately below the centre of the opening part. The obscure glazing must be obscured to a minimum of Pilkington - Privacy Level 3 or an equivalent product.

Once installed, the window units shall thereafter be retained as such at all times.

Reason: To prevent overlooking in the interests of the amenity of nearby residents.
This Condition is imposed in accordance with Policy 3 of the South East Lincolnshire Local Plan, 2019 and with national guidance contained in Section 12 of the National Planning Policy Framework 2023.

16 Three swift nest bricks shall be incorporated within the external walls of each dwelling hereby approved and shall be retained thereafter.

Reason: In the interests of biodiversity.
This Condition is imposed in accordance with Policy 28 of the South East Lincolnshire Local Plan, 2019.

Notes:

The Local Planning Authority has acted positively and proactively in determining this application by assessing it against all material considerations, including national guidance, planning policies and representations that have been received during the public consultation exercise, and by identifying matters of concern within the application and negotiating, with the Applicant, acceptable amendments to the proposal to address those concerns. As a result, the Local Planning Authority has been able to grant planning permission for an acceptable proposal.

This decision notice, the relevant accompanying report and the determined plans can be viewed online at http://planning.sholland.gov.uk/OcellaWeb/planningSearch

The permitted development requires the formation of a new/amended vehicular access. These works will require approval from the Highway Authority in accordance with Section 184 of the Highways Act. Any traffic management required to undertake works within the highway will be subject to agreement. The access must be constructed in accordance with a current specification issued by the Highway Authority. Any requirement to relocate existing apparatus, underground services, or street furniture because of the installation of an access will be the responsibility, and cost, of the applicant and must be agreed prior to a vehicle access application. The application form, costs and guidance documentation can be found on the highway authority's website, accessible via the following link:
https://www.lincolnshire.gov.uk/licences-permits/apply-dropped-kerb.

All roads within the development hereby permitted must be constructed to an acceptable engineering standard. Those roads that are not to be voluntarily put forward for adoption as public highways, may be subject to action by the Highway Authority under Section 219 (the Advance Payments code) of the Highways Act 1980. For guidance, please refer to

https://www.lincolnshire.gov.uk

Please contact the Lincolnshire County Council Streetworks and Permitting Team on 01522 782070 to discuss any proposed statutory utility connections, Section 50 licences and any other works which will be required within the public highway in association with the development permitted under this Consent. This will enable Lincolnshire County Council to assist in the coordination and timings of these works.

For further guidance please visit the highway authority's website via the following link: Traffic Management - https://www.lincolnshire.gov.uk/traffic-management



Phil Norman
Head of Planning
South Holland District Council

BUILDING REGULATIONS:
This decision refers only to planning permission as granted under the Town and Country Planning Act 1990. The works that you are proposing may also require Building Regulations and this planning permission does not give authority under Building Regulations to commence work. Please contact the Building Control section for further information on 01775 764557 or bcadmin@sholland.gov.uk

RIGHTS OF APPEAL

Appeals to the Secretary of State

If you are aggrieved by the decision of your Local Planning Authority to refuse permission for the proposed development or grant consent subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990 or Section 20 of the Planning (Listed Building and Conservation Areas) Act 1990.

Timescales for appealing

The deadlines for appeals are calculated from the **date of decision** and are as follows for the types of applications below:

12 Weeks	6 Months	8 Weeks
Householder Applications	Planning Permission	Consent to Display Adverts
Minor Commercial Development	Listed Building Consent	
Agricultural Determinations	Other Prior Approval Applications	
Householder Prior Approval Applications		

https://www.gov.uk/appeal-householder-planning-decision

https://www.gov.uk/appeal-planning-decision

If you intend to submit an appeal that you would like examined by inquiry then you must notify the Local Planning Authority and Planning Inspectorate (inquiryappeals@planning inspectorate.gov.uk) at least 10 days before submitting the appeal. Further details are on GOV.UK.

Enforcement Notices

If an enforcement notice was served prior to the planning application being determined then the deadline for appealing is 28 days from the date of the **planning refusal**.

If an enforcement notice is served after the planning application is determined then the deadline for appealing is 28 days from the date of the **enforcement notice** OR **the timescales stated above for each application type** from the date of the planning refusal - whichever is sooner.

Appeals can be made online at: https://www.gov.uk/planning-inspectorate. If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in

giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to the Secretary of State that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under the order.

Purchase Notices

If either the Local Planning Authority or the Secretary of State refuses permission to develop land or grant it subject to conditions the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor can he render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of the Part VI of the Town and Country Planning Act 1990 or Section 32 of the Planning (Listed Building and Conservation Areas) Act 1990.

Compensation

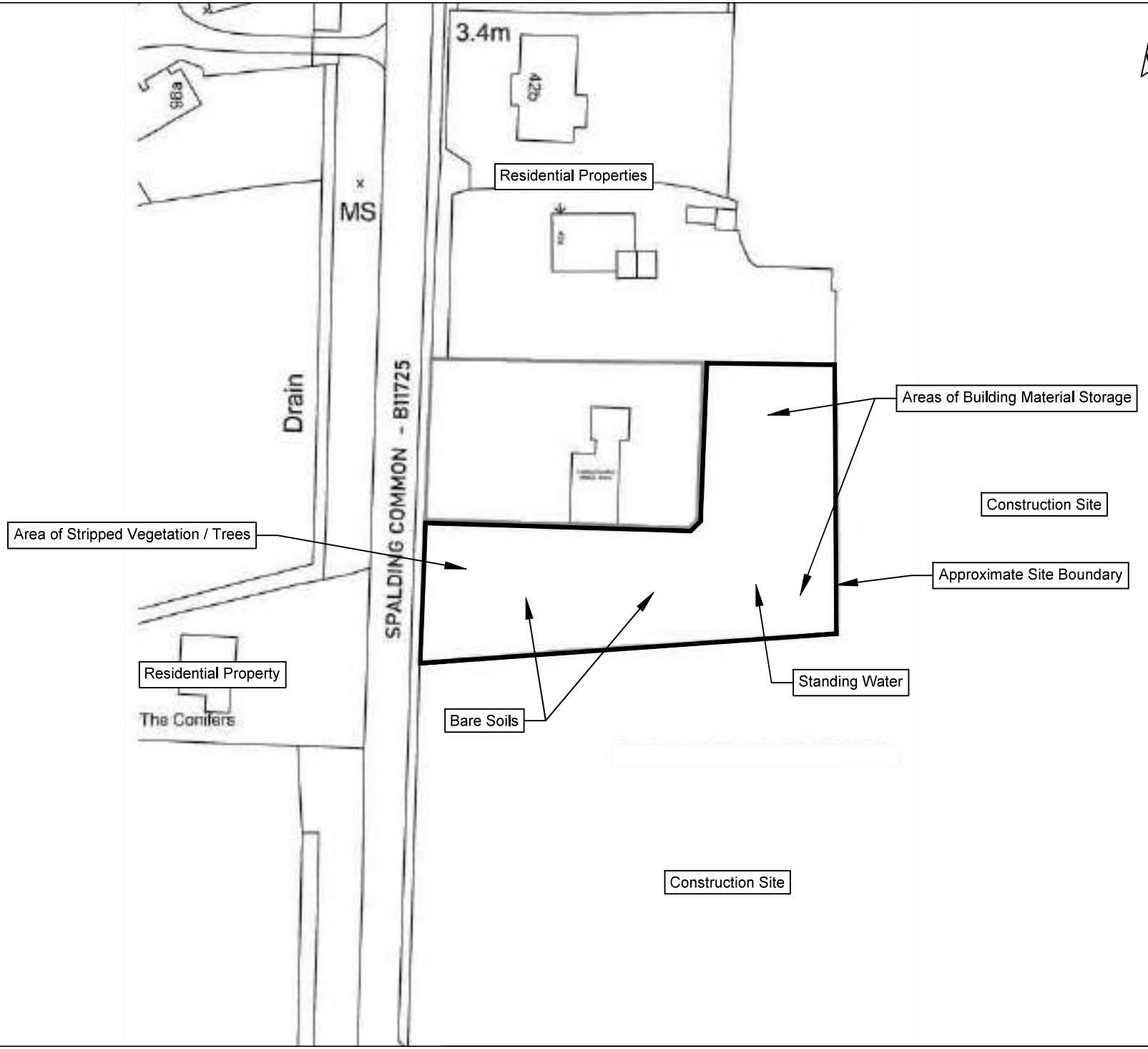
In certain circumstances compensation may be claimed from the Local Planning Authority if permission is refused or granted subject to conditions by the Secretary of State on appeal or on reference of the application to him.

These circumstances are set out in Section 114 and related provisions of the Town and Country Planning Act 1990 and Section 27 of the Planning (Listed Building and Conservation Areas) Act 1990.

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APPENDIX IV

Annotated Site Plan
(Figure No. D44007/02)



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- Based on drawing entitled 'Location Plan' by Seagate Homes Drawing No. MHS-SH-PD-LP-01 Dated: 21/07/2022. Used, edited and reproduced with permission of the Client.

Project No.	D44007
Client	Seagate Homes
Project	Millfield House, Spalding Common, Spalding
Title	Annotated Site Plan
Drawn By	SJ
Checked By	DB
Approved By	PK
Scale	NTS
Date Drawn	16/02/2024
Revision	
Figure No.	D44007/02

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Derby 01332 290 798

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www.geodyne.co.uk

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APPENDIX V

Site Plan Showing General Site Views
(Figure No. D44007/03)



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- Based on drawing entitled 'Location Plan' by Seagate Homes Drawing No. MHS-SH-PD-LP-01 Dated: 21/07/2022. Used, edited and reproduced with permission of the Client.

Project No.	D44007
Client	Seagate Homes
Project	Millfield House, Spalding Common, Spalding
Title	Site Plan Showing General Site Views
Drawn By	SJ
Checked By	DB
Approved By	PK
Scale	NTS
Date Drawn	16/02/2024
Revision	
Figure No.	D44007/03

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APPENDIX VI

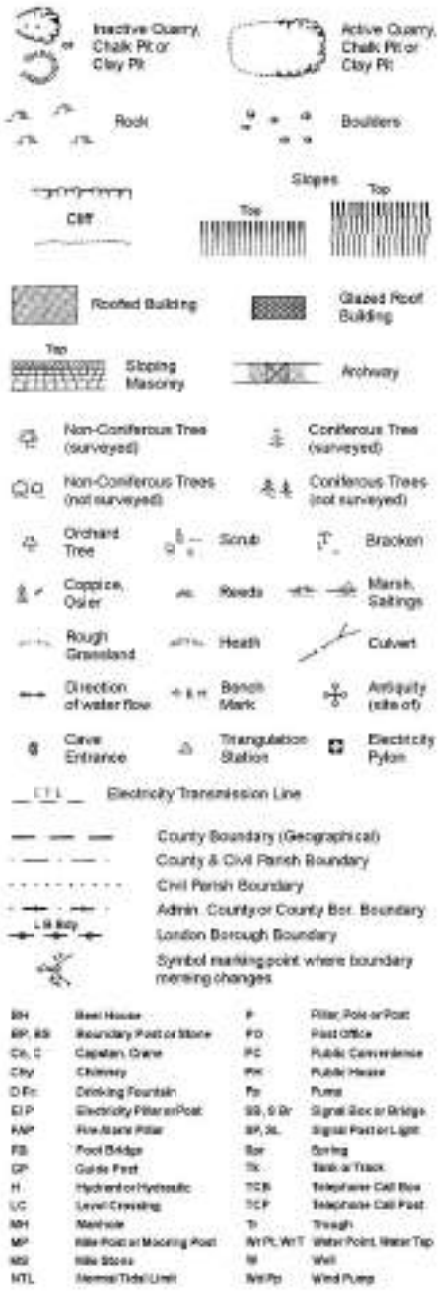
Historical Plans

Historical Mapping Legends

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



Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



Large-Scale National Grid Data 1:2,500 and 1:1,250

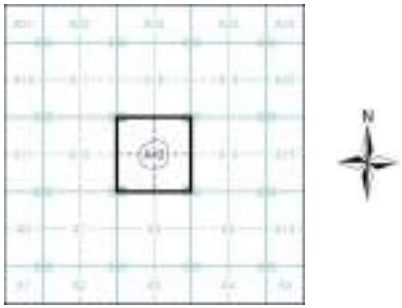


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
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Lincolnshire	1:2,500	1904	3
Lincolnshire	1:2,500	1932	4
Ordnance Survey Plan	1:2,500	1968 - 1969	5
Additional SIMs	1:2,500	1968 - 1990	6
Additional SIMs	1:2,500	1980	7
Additional SIMs	1:2,500	1988	8
Large-Scale National Grid Data	1:2,500	1995	9
Large-Scale National Grid Data	1:2,500	1996	10
Historical Aerial Photography	1:2,500	1999	11

Historical Map - Segment A13



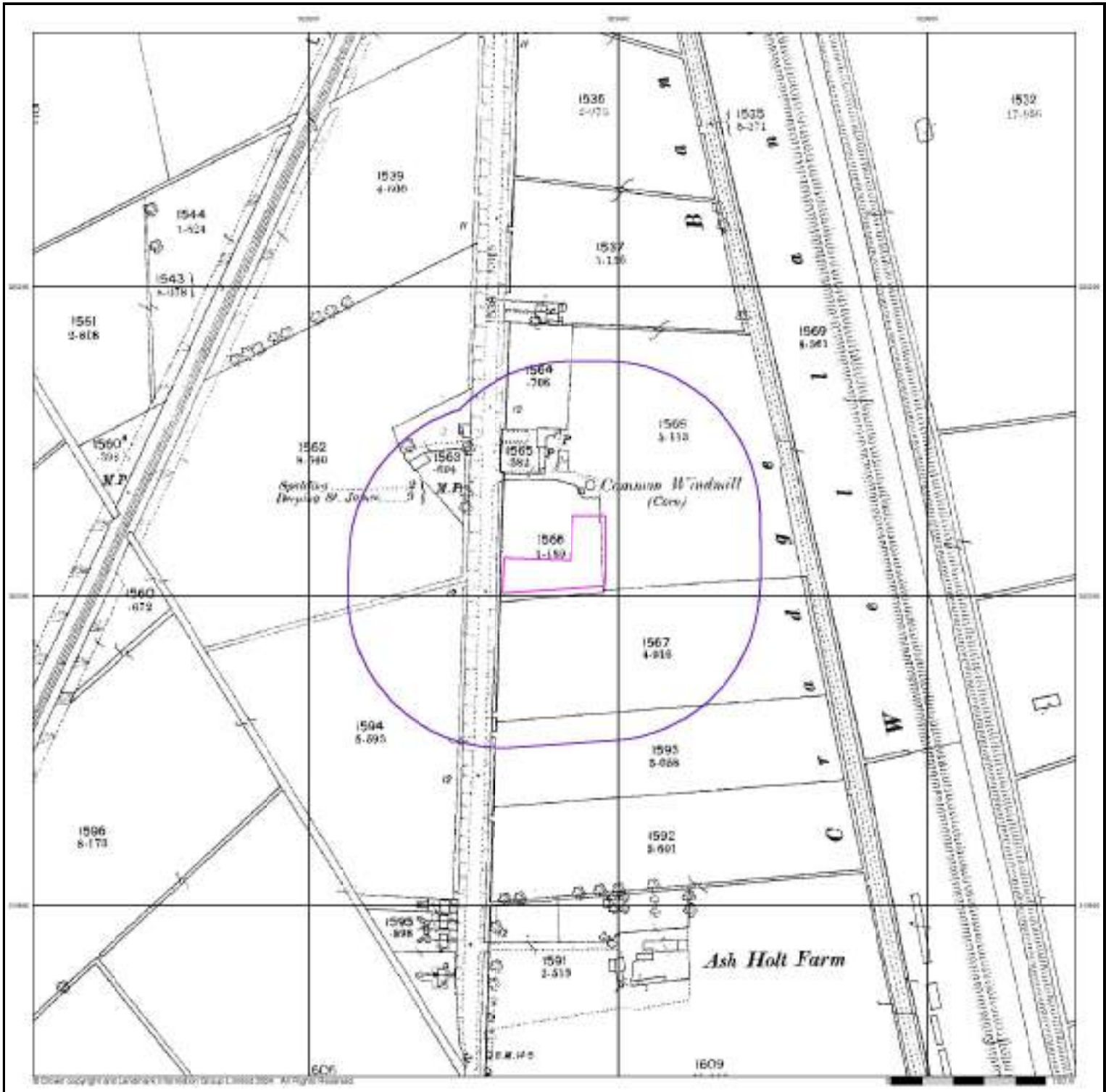
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Customer Ref: D44007
National Grid Reference: 523360, 320020
Slice: A
Site Area (Ha): 0.2
Search Buffer (m): 100

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Lincolnshire

Published 1888

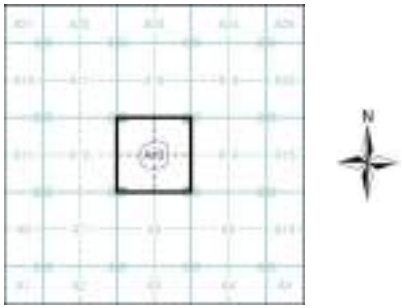
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered 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 A13

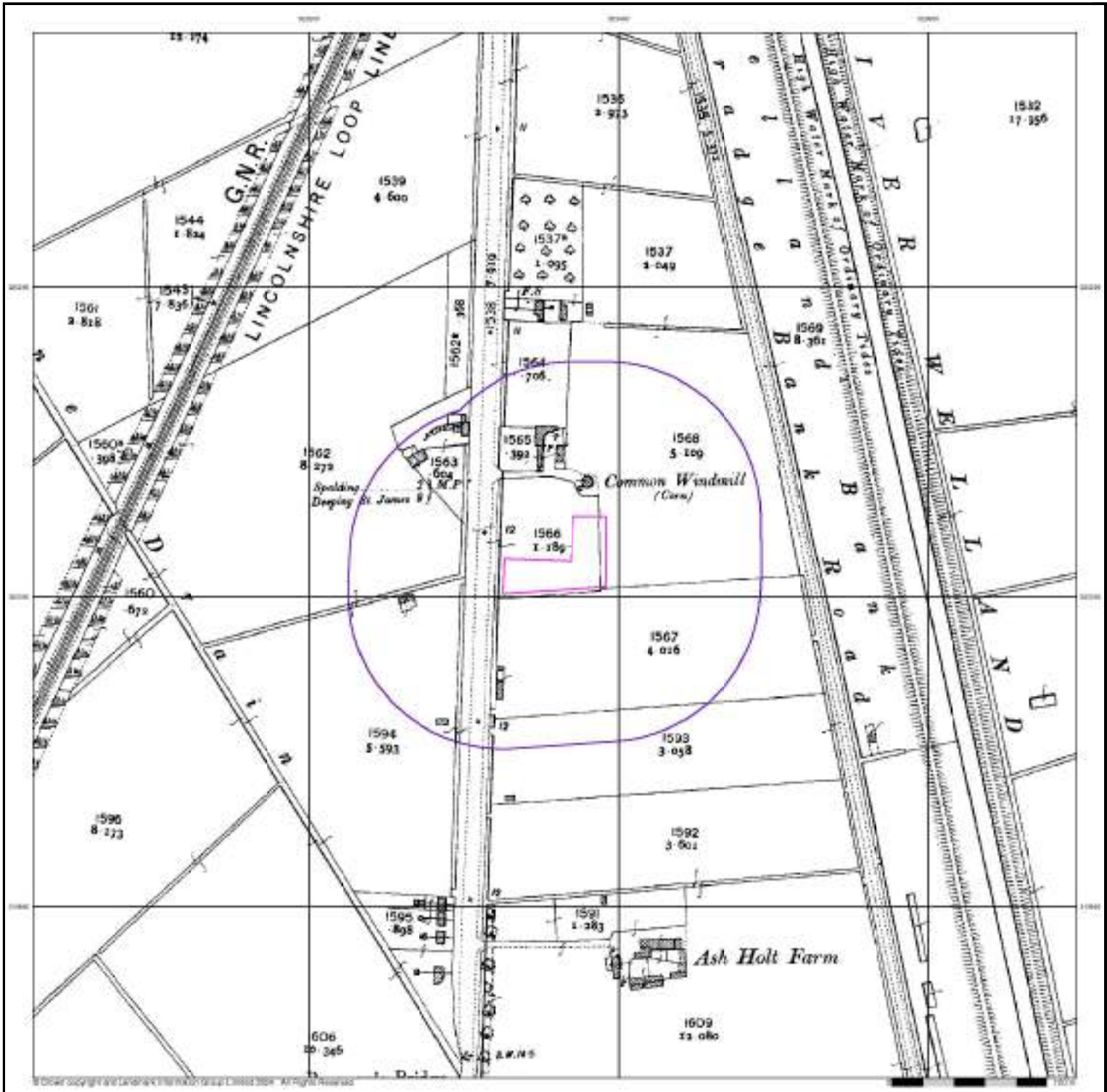


Order Details

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Customer Ref:	D44007
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Search Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding



GeoDyne

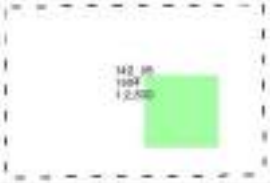
Lincolnshire

Published 1904

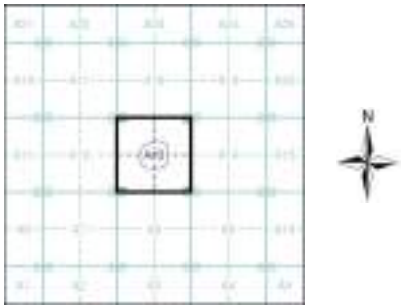
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered 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 A13

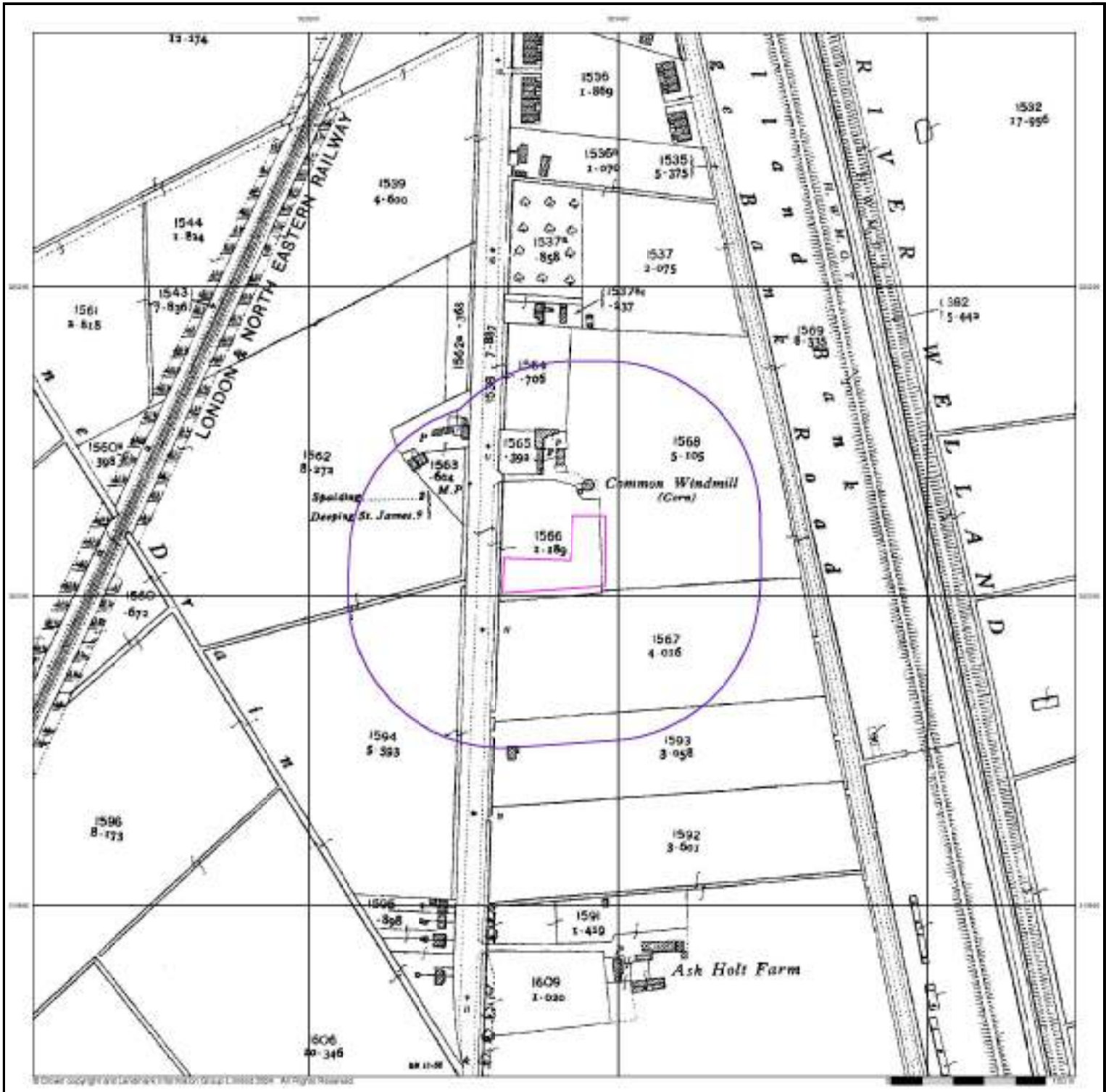


Order Details

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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding



GeoDyne

Lincolnshire

Published 1932

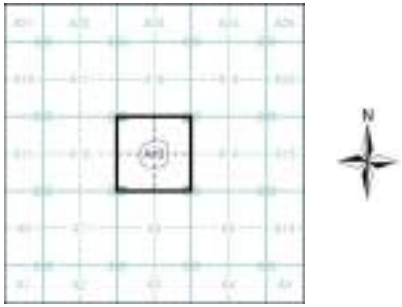
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Map Name(s) and Date(s)



Historical Map - Segment A13



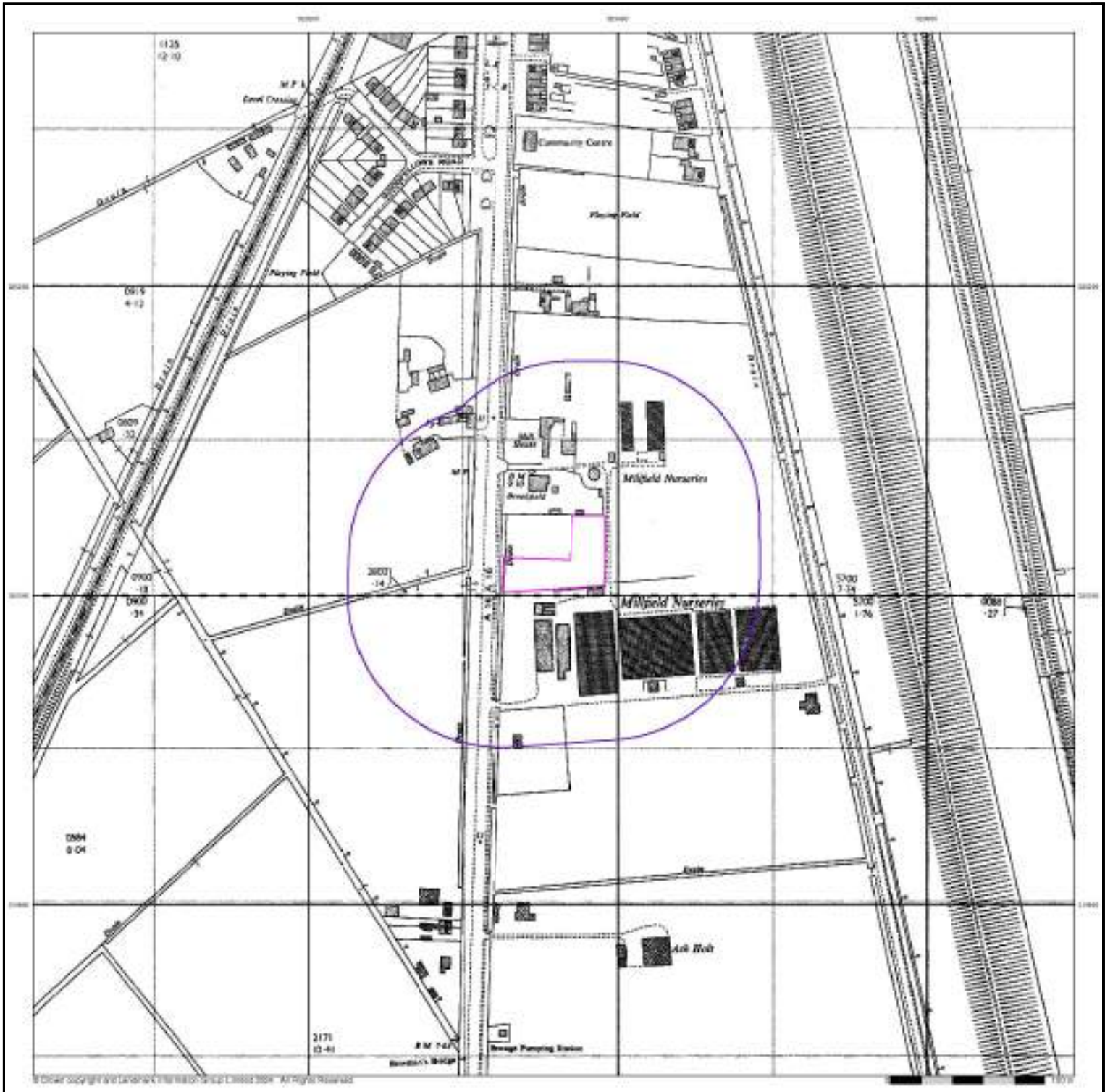
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



GeoDyne

Ordnance Survey Plan

Published 1968 - 1969

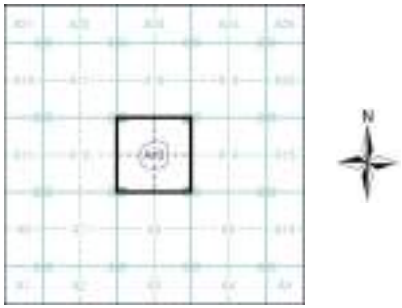
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



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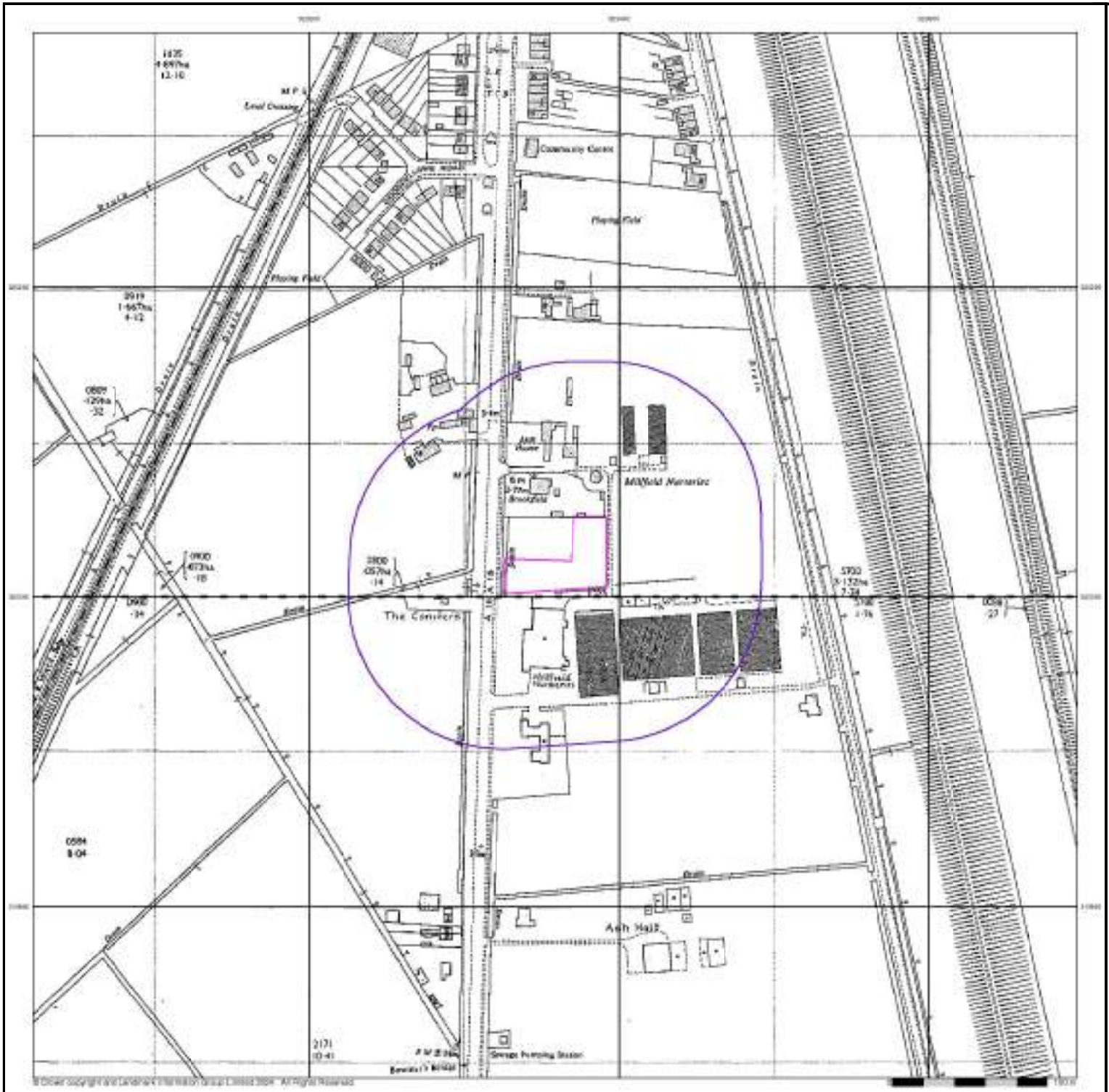
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Search Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

Tel: 0844 844 9952
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Web: www.envirocheck.co.uk



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Additional SIMs

Published 1968 - 1990

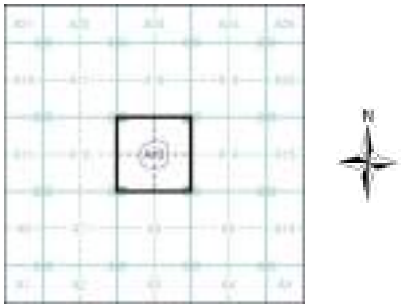
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

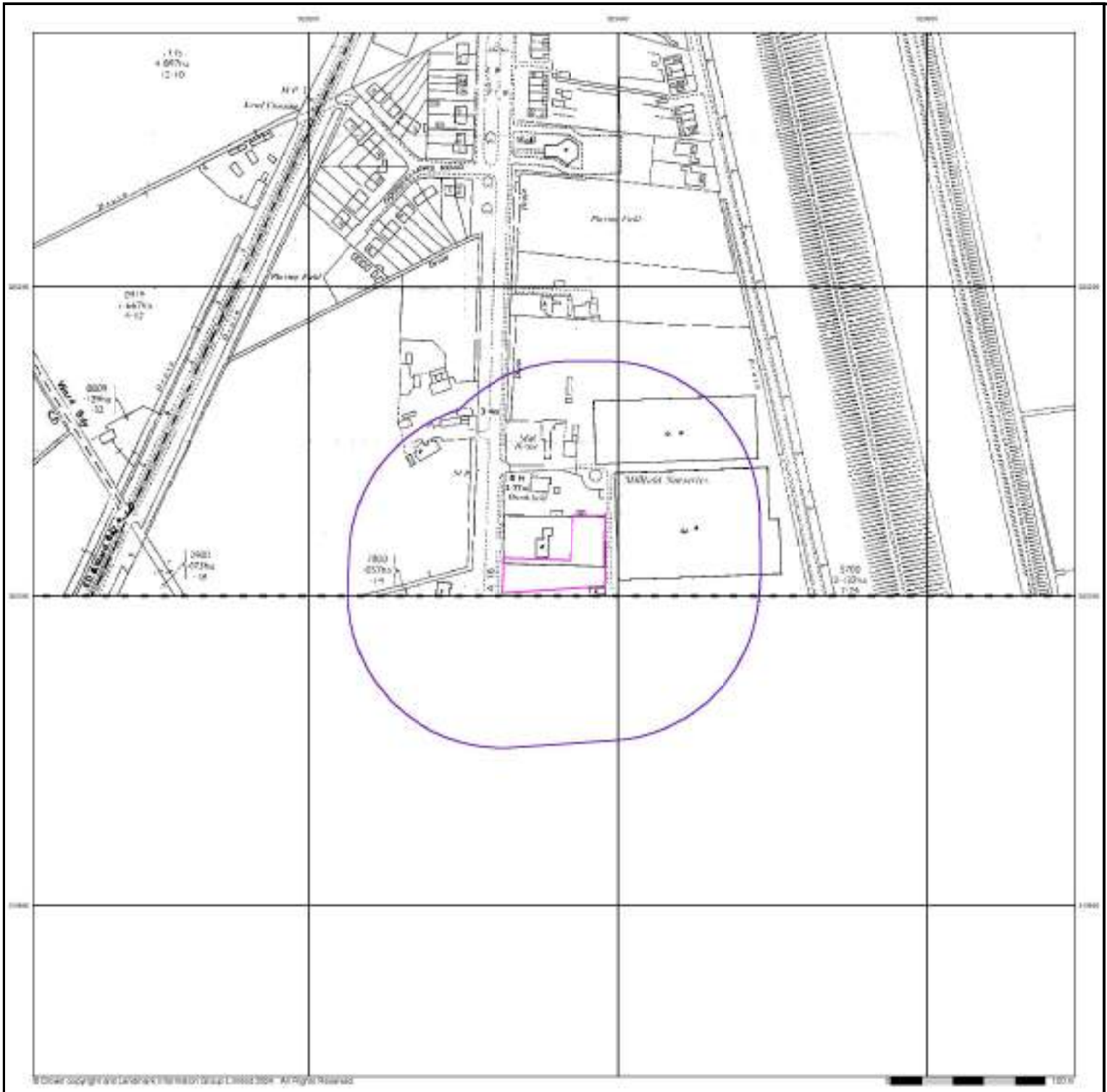
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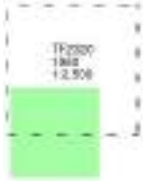
Additional SIMs

Published 1980

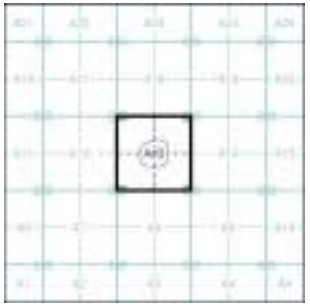
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Map Name(s) and Date(s)



Historical Map - Segment A13



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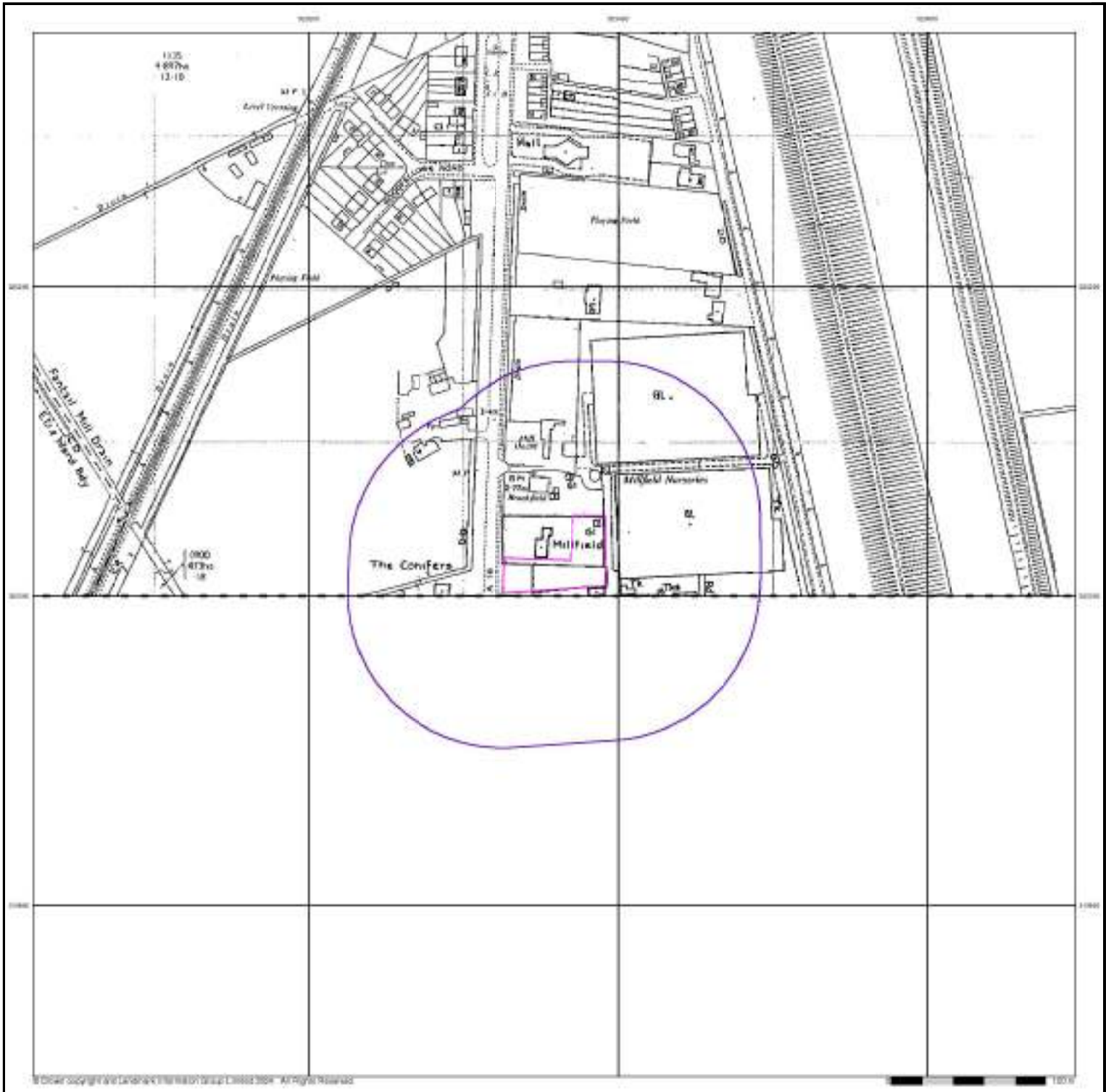
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Site Details

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Additional SIMs

Published 1988

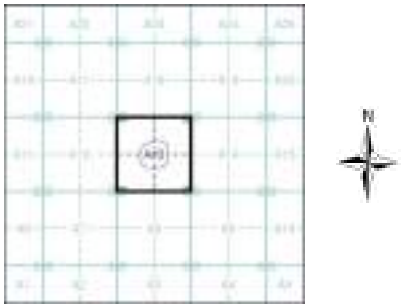
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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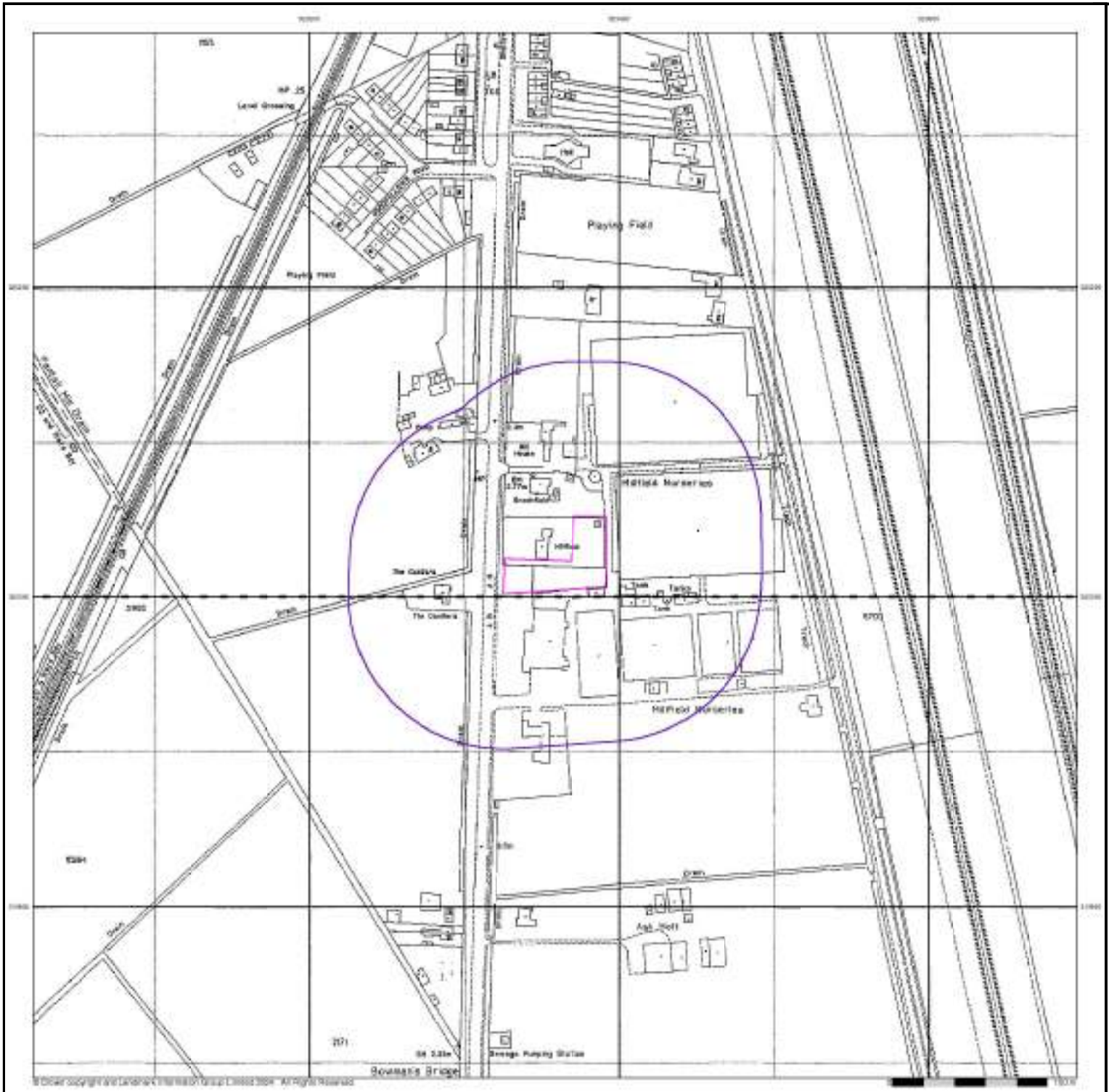
Site Details

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Large-Scale National Grid Data

Published 1995

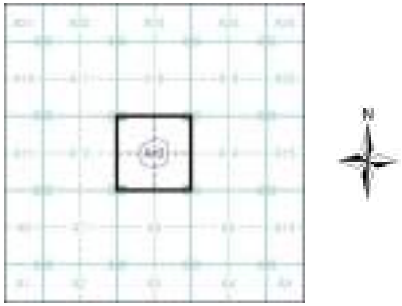
Source map scale - 1:2,500

'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)



Historical Map - Segment A13



Order Details

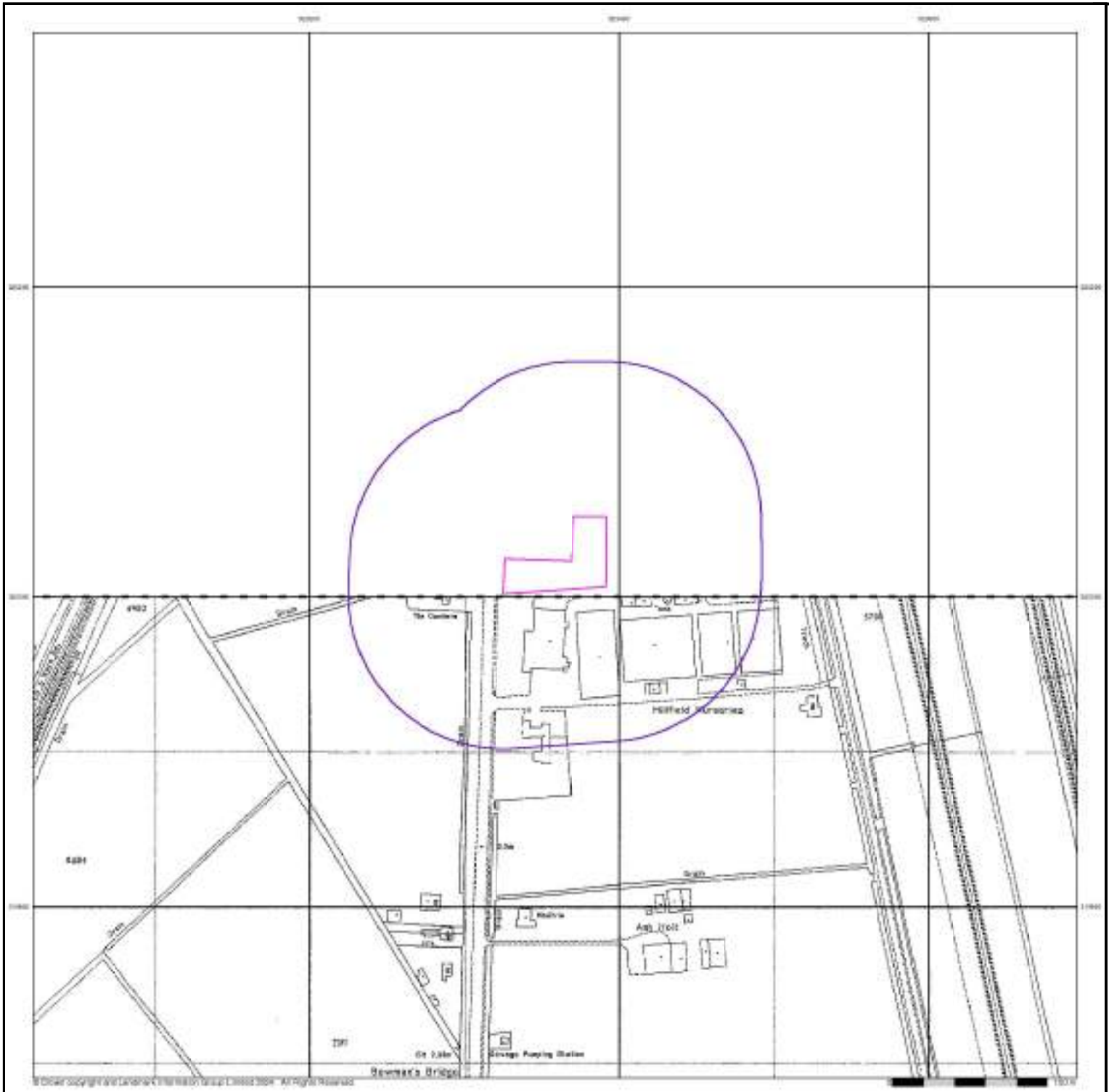
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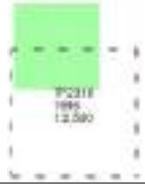
Large-Scale National Grid Data

Published 1996

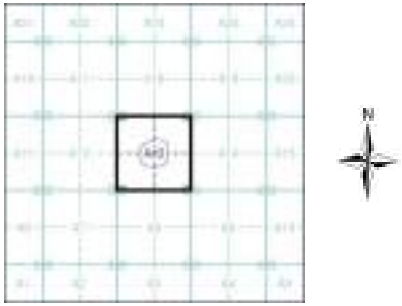
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

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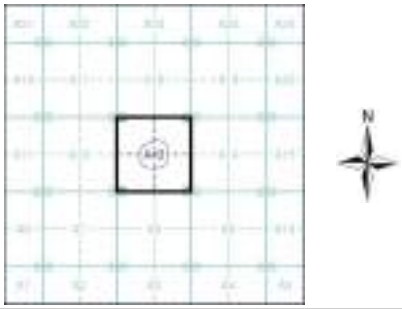
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Historical Aerial Photography

Published 1999

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
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Site Details

Millfield House, Spalding Common, Spalding

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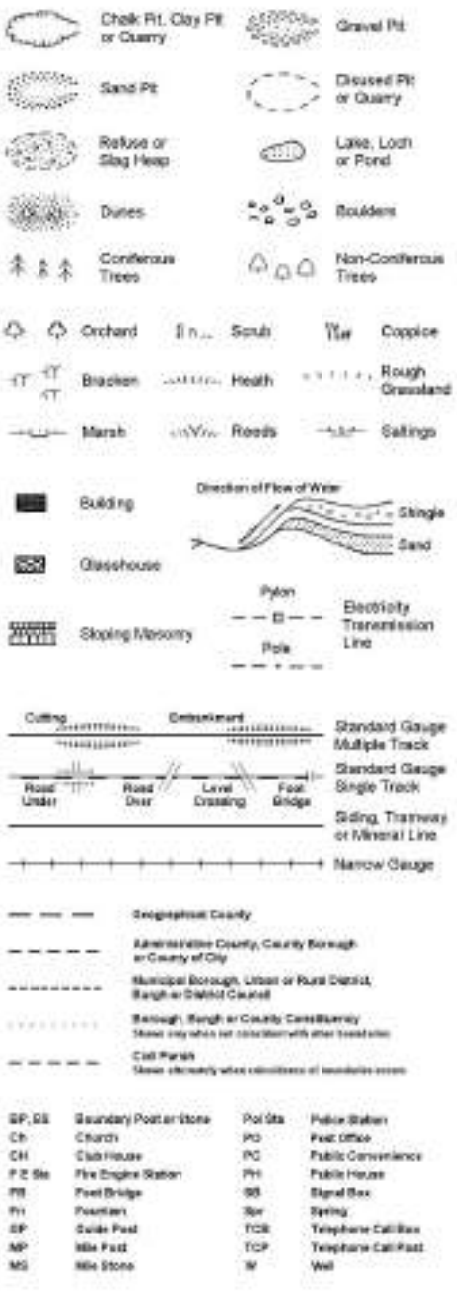
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Web: www.envirocheck.co.uk

Historical Mapping Legends

Ordnance Survey County Series 1:10,560



Ordnance Survey Plan 1:10,000



1:10,000 Raster Mapping

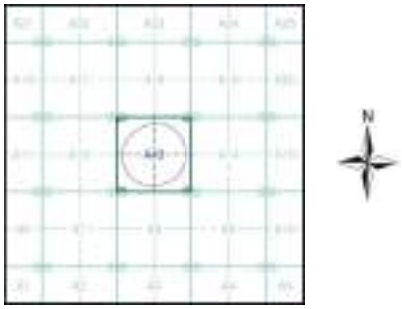


GeoDyne

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lincolnshire	1:10,560	1887 - 1888	2
Lincolnshire	1:10,560	1906	3
Lincolnshire	1:10,560	1906	4
Lincolnshire	1:10,560	1932	5
Lincolnshire	1:10,560	1938 - 1952	6
Ordnance Survey Plan	1:10,000	1958 - 1959	7
Ordnance Survey Plan	1:10,000	1971 - 1979	8
Ordnance Survey Plan	1:10,000	1982	9
Ordnance Survey Plan	1:10,000	1992	10
10K Raster Mapping	1:10,000	2000	11
10K Raster Mapping	1:10,000	2006	12
VectorMap Local	1:10,000	2023	13

Historical Map - Slice A



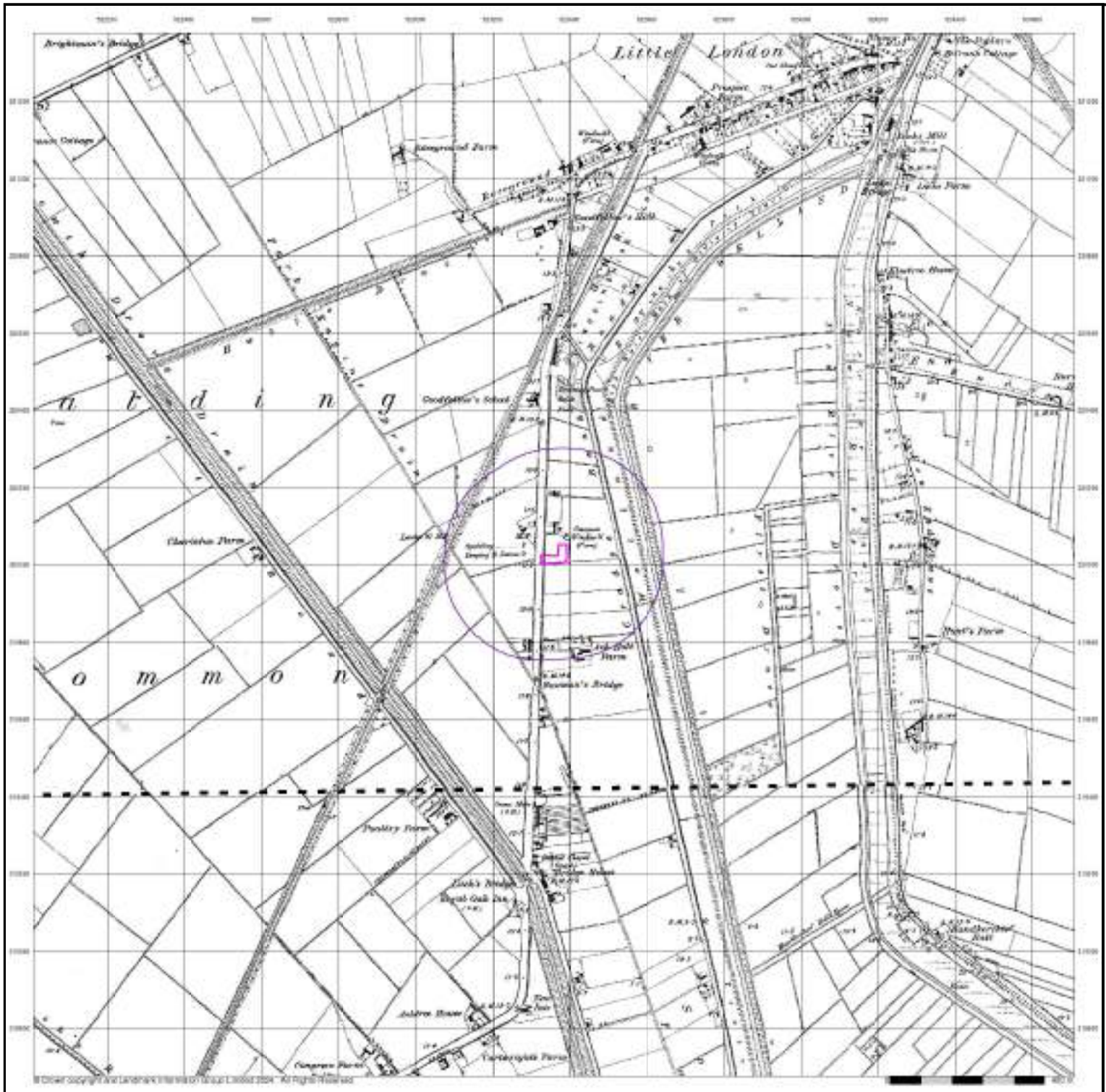
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Site Details

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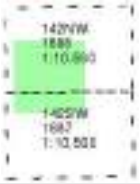
Lincolnshire

Published 1887 - 1888

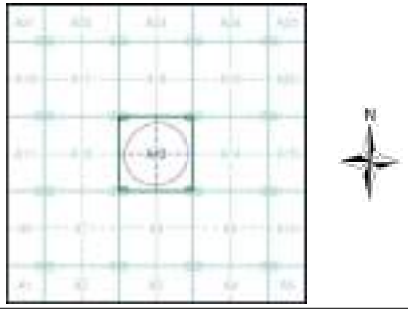
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



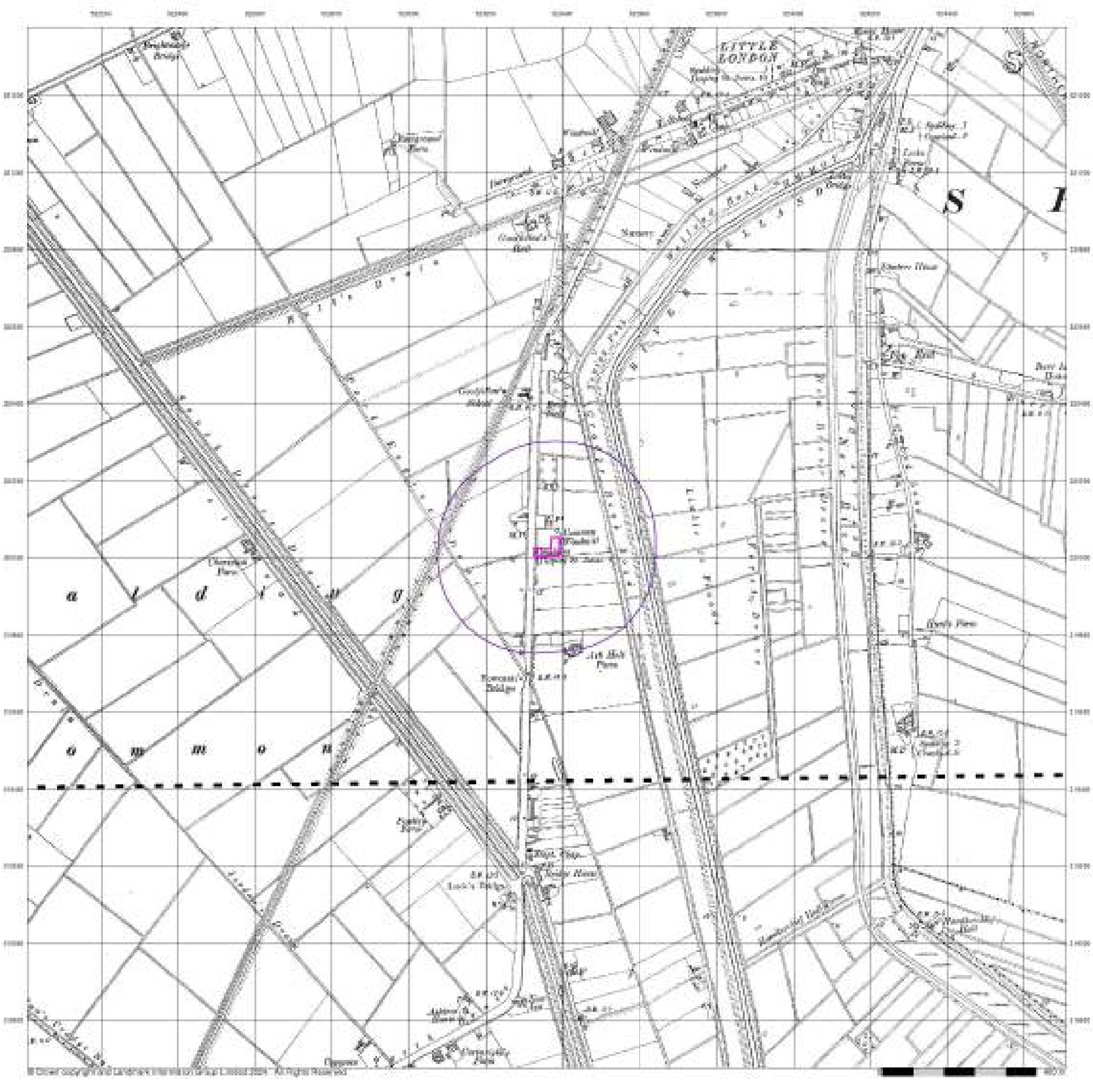
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Search Buffer (m):	250

Site Details

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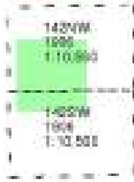
Lincolnshire

Published 1906

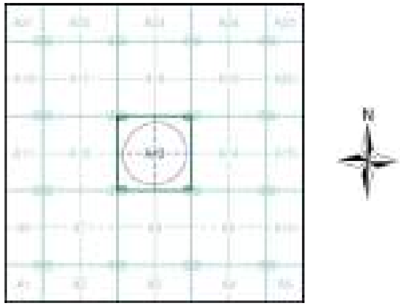
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

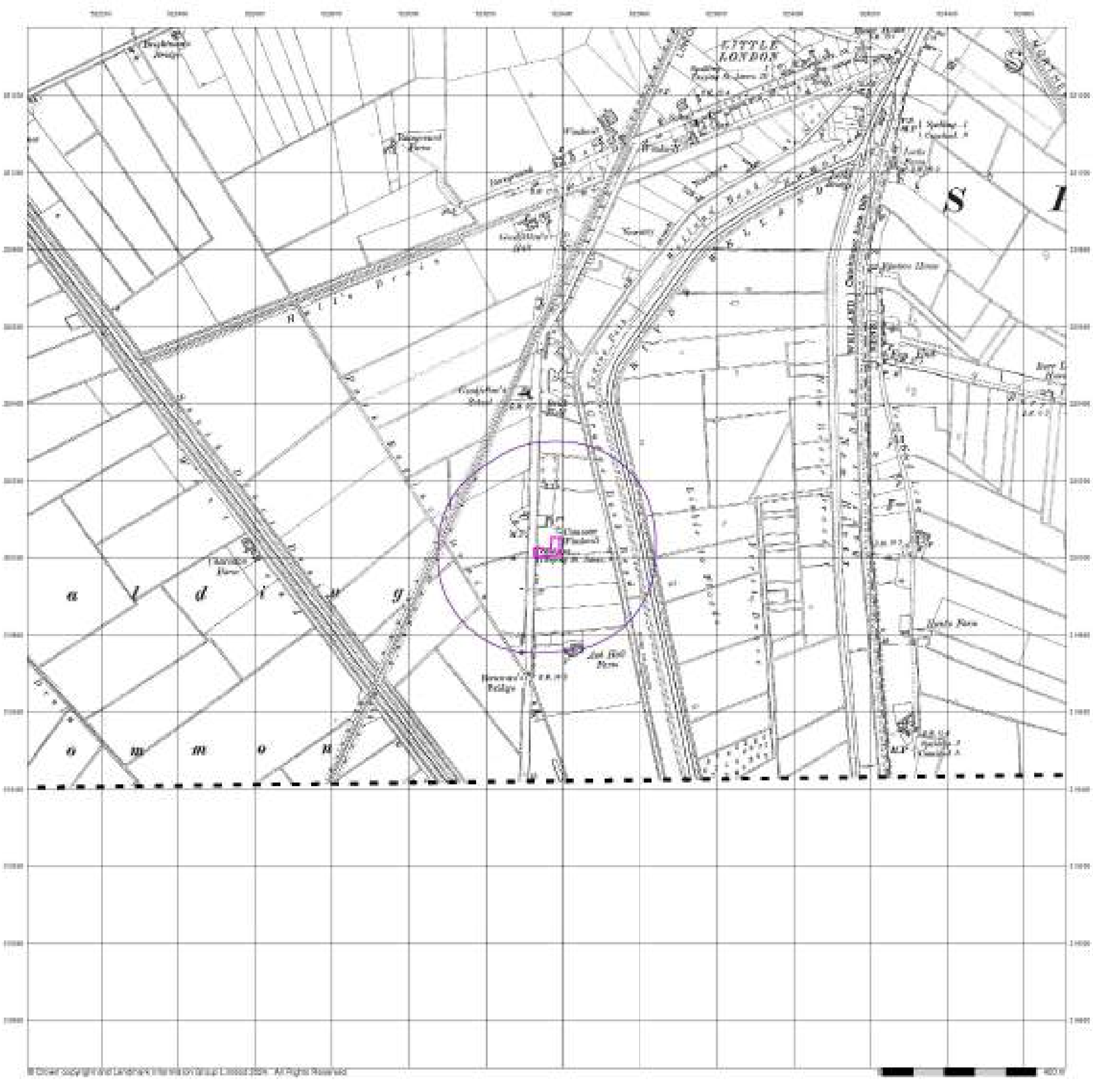
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Site Details

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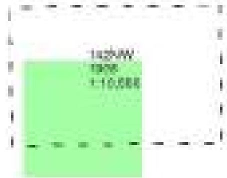
Lincolnshire

Published 1906

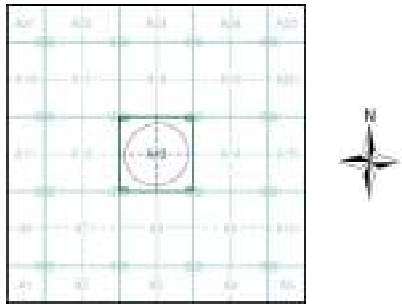
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



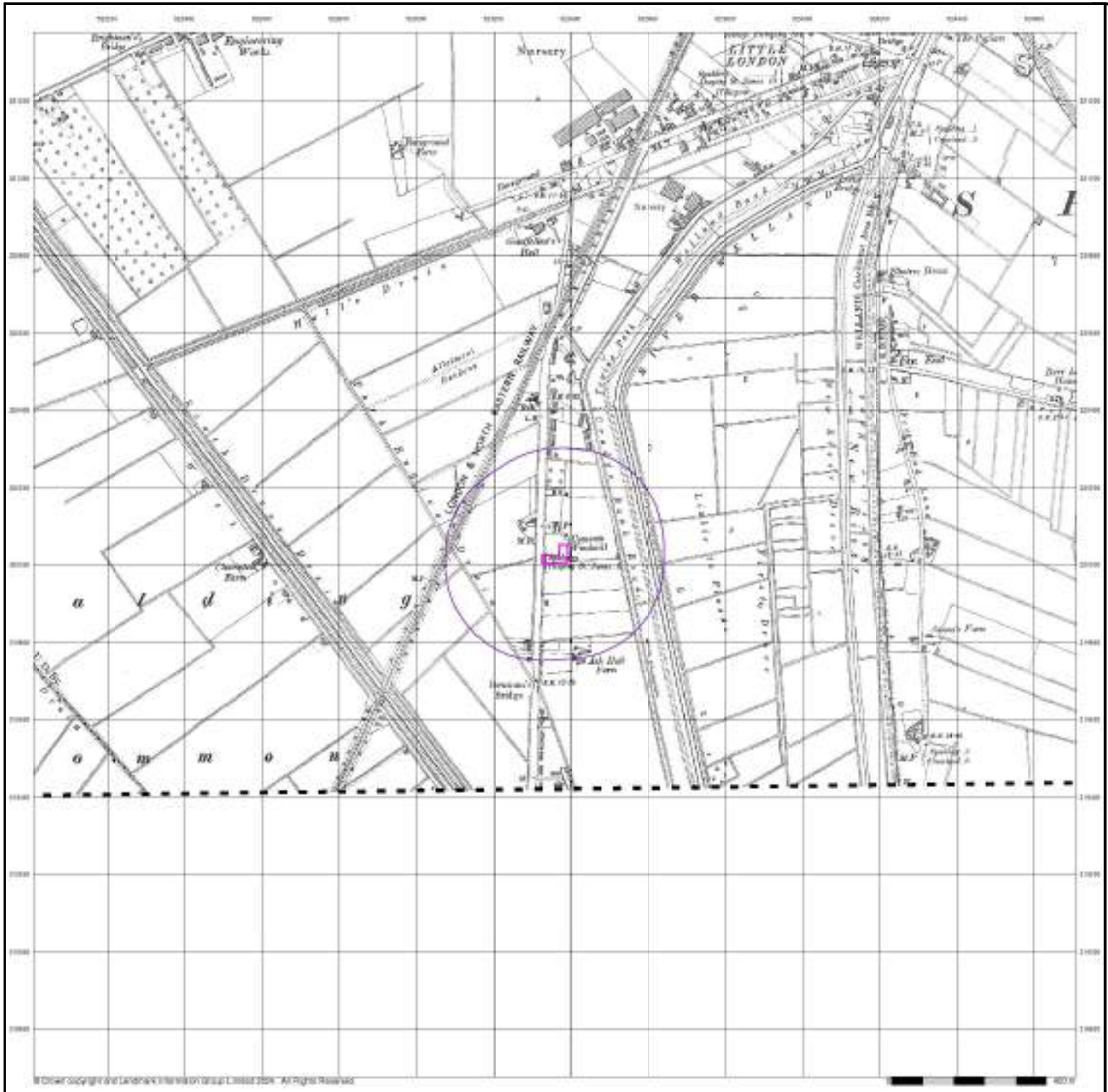
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Site Details

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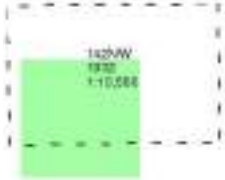
Lincolnshire

Published 1932

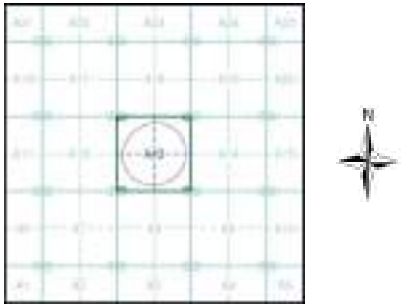
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

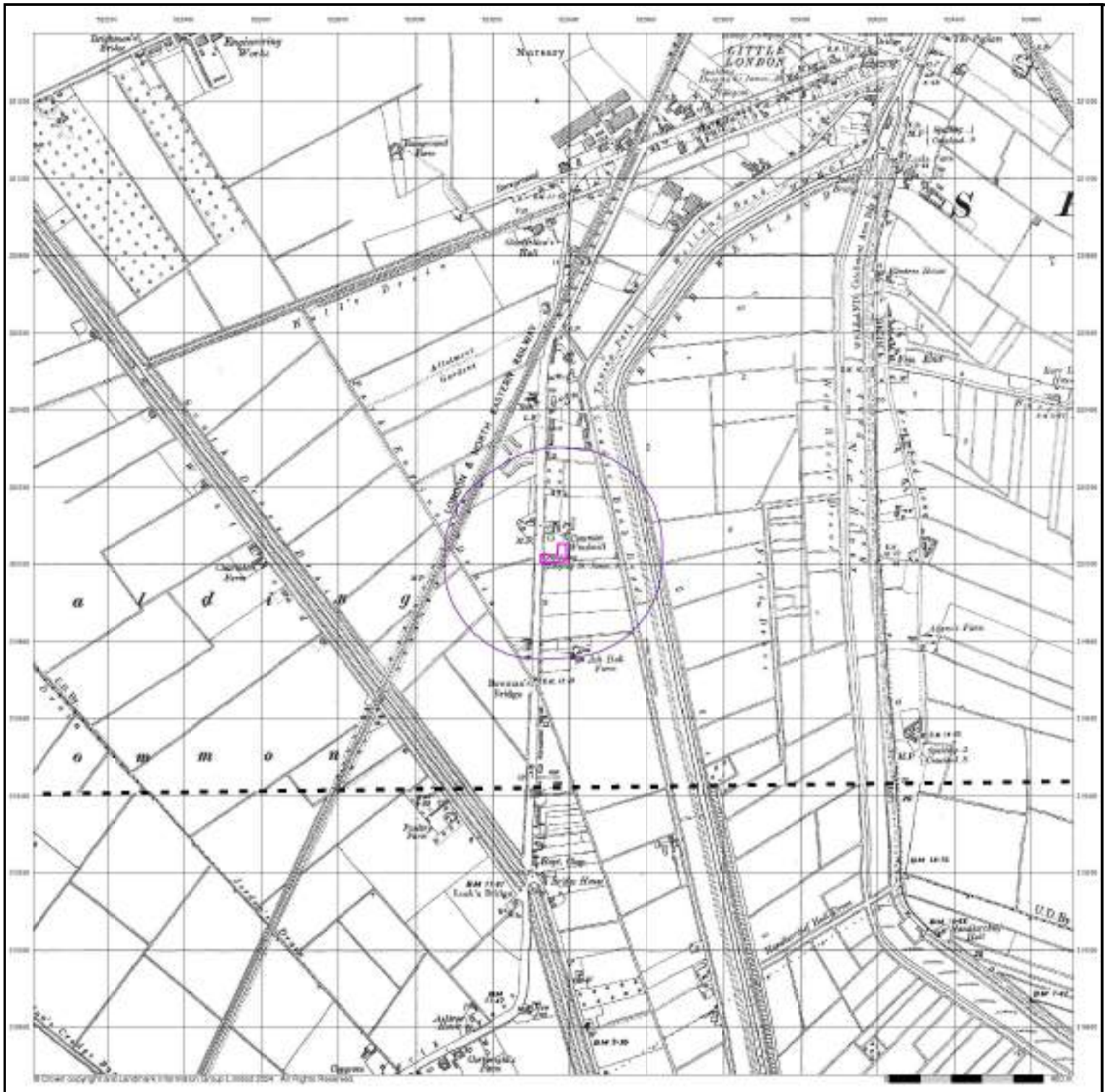
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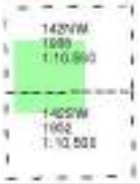
Lincolnshire

Published 1938 - 1952

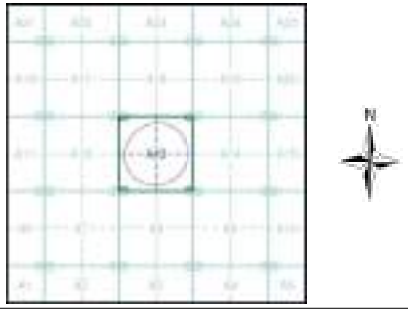
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps.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

Map Name(s) and Date(s)



Historical Map - Slice A



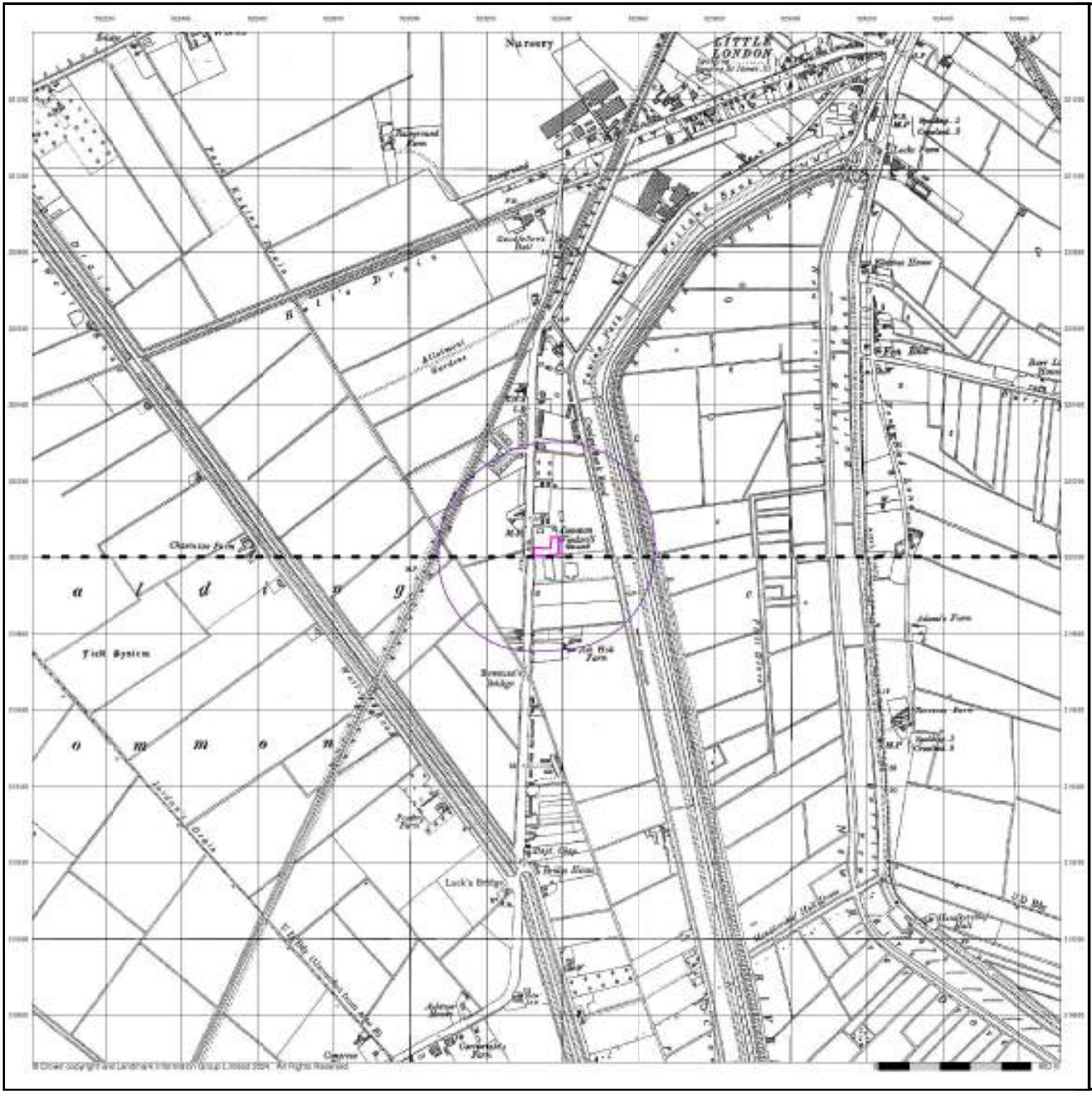
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Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
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GeoDyne

Ordnance Survey Plan

Published 1958 - 1959

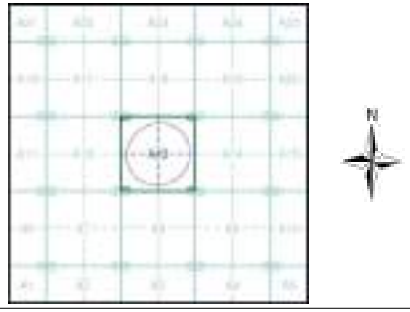
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

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GeoDyne

Ordnance Survey Plan

Published 1971 - 1979

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)

TF22SW
1971
1:10,000

TF21NW
1979
1:10,000

Historical Map - Slice A

Order Details

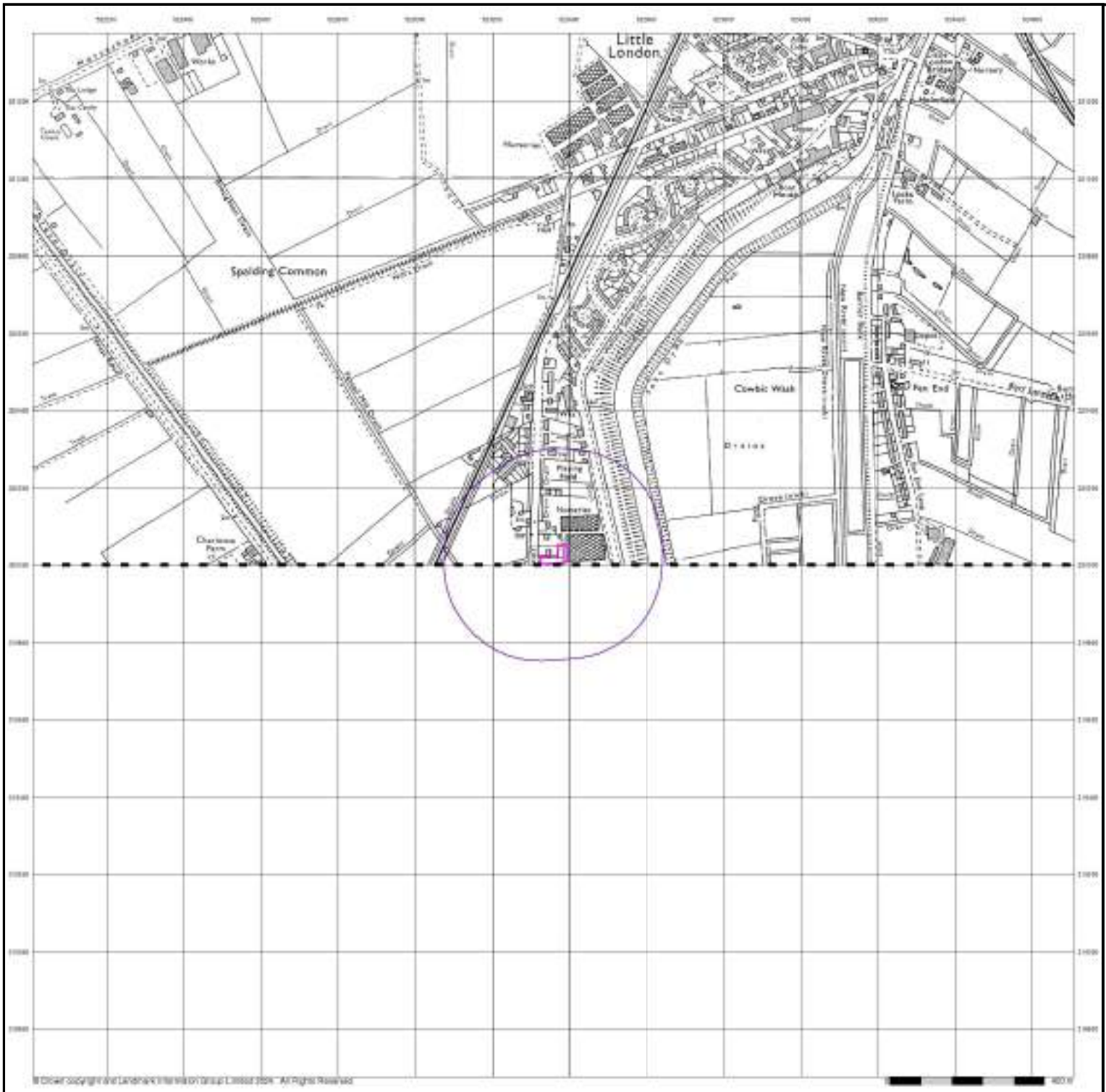
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National Grid Reference:	523360, 320020
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Site Area (Ha):	0.2
Search Buffer (m):	250

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GeoDyne

Ordnance Survey Plan

Published 1982

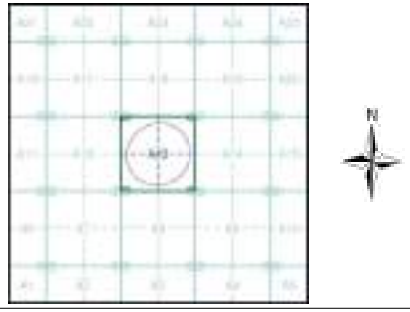
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

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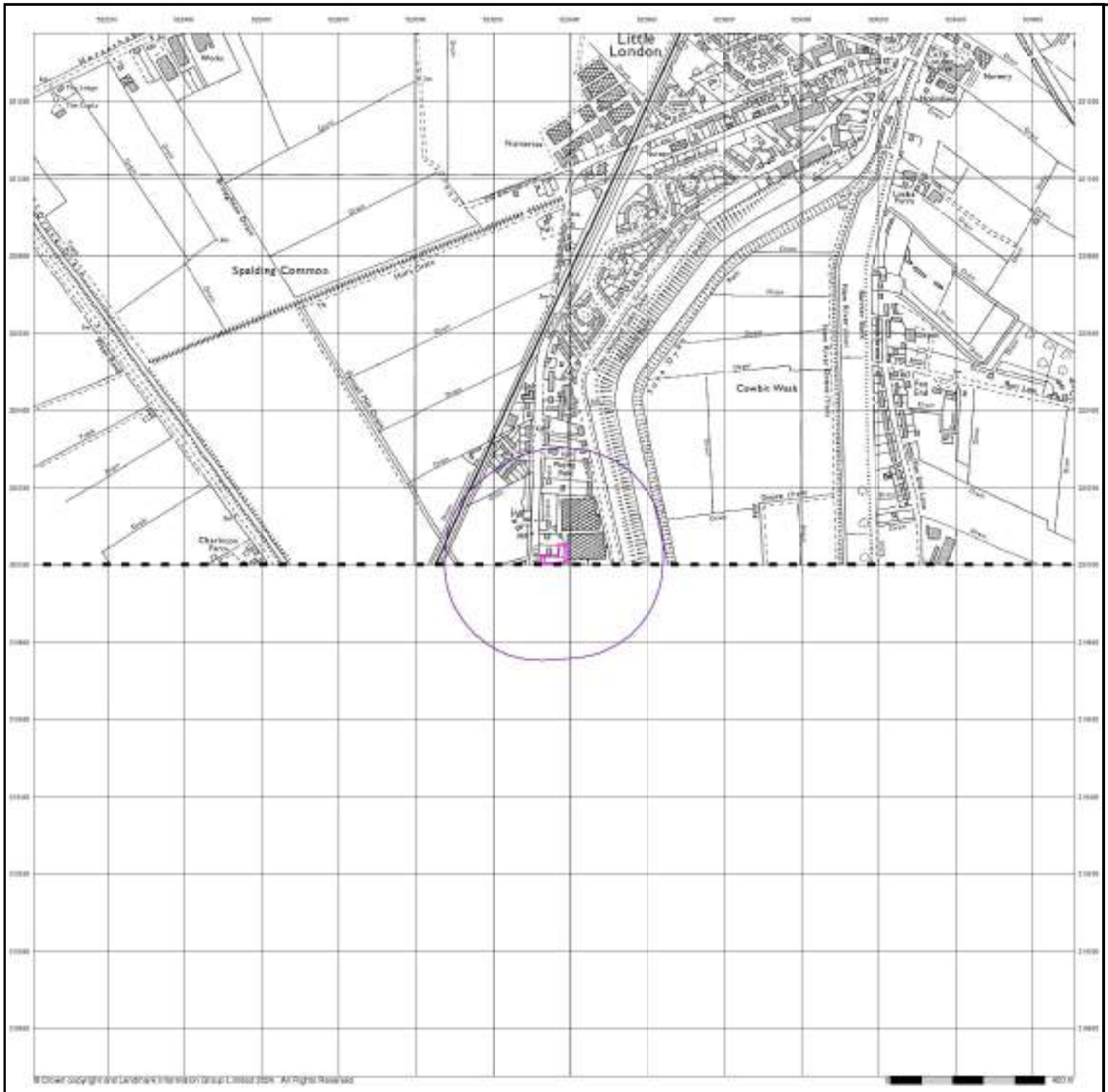
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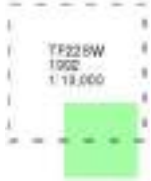
Ordnance Survey Plan

Published 1992

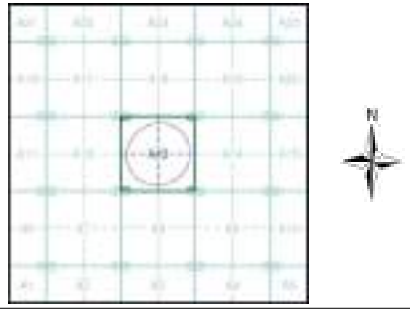
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

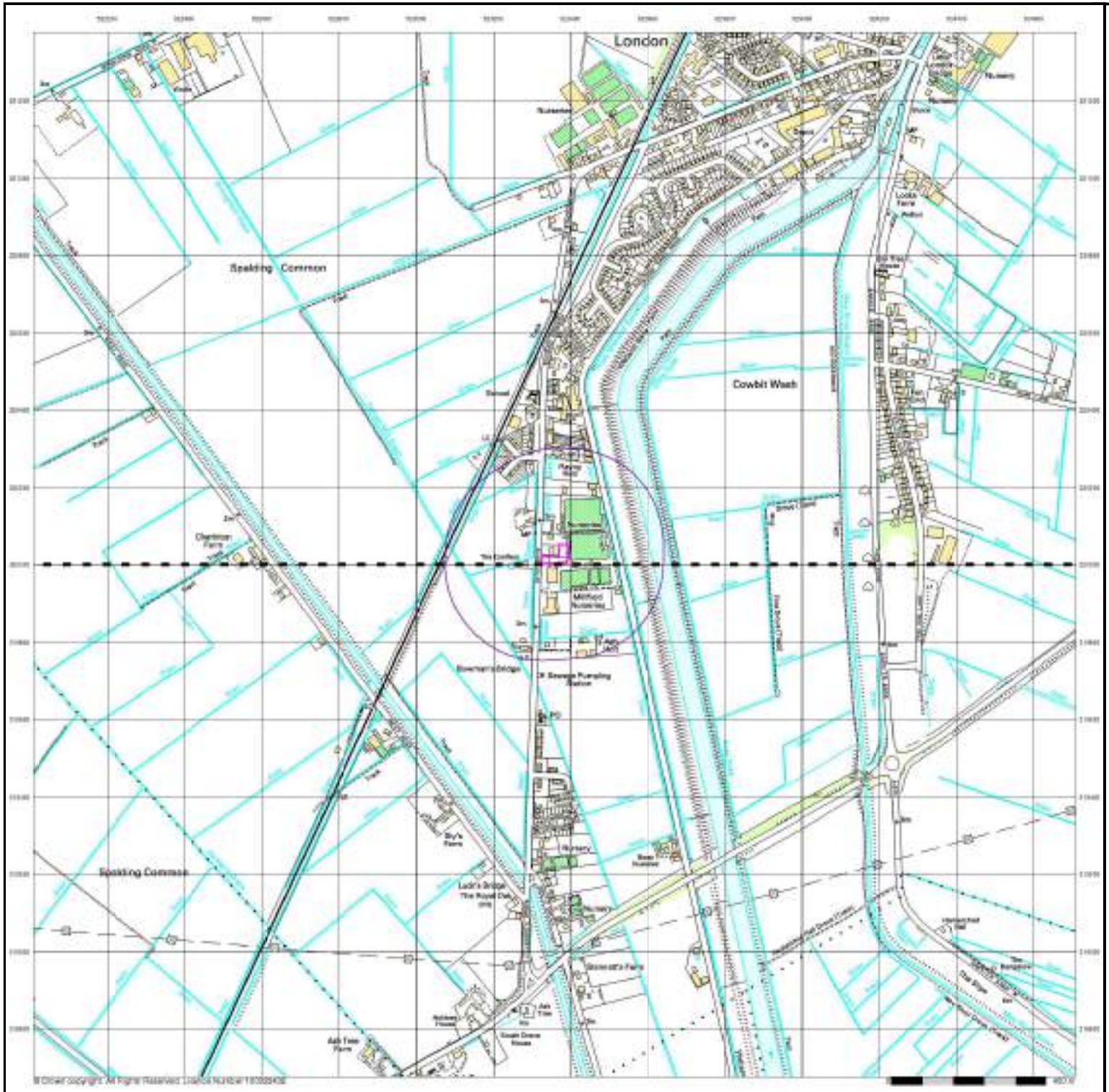
Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

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10k Raster Mapping

Published 2000

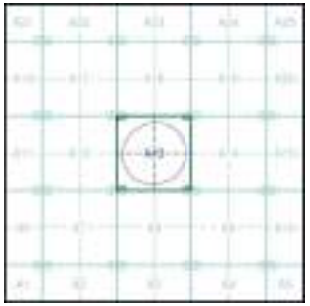
Source map scale - 1:10,000

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)



Historical Map - Slice A



Order Details

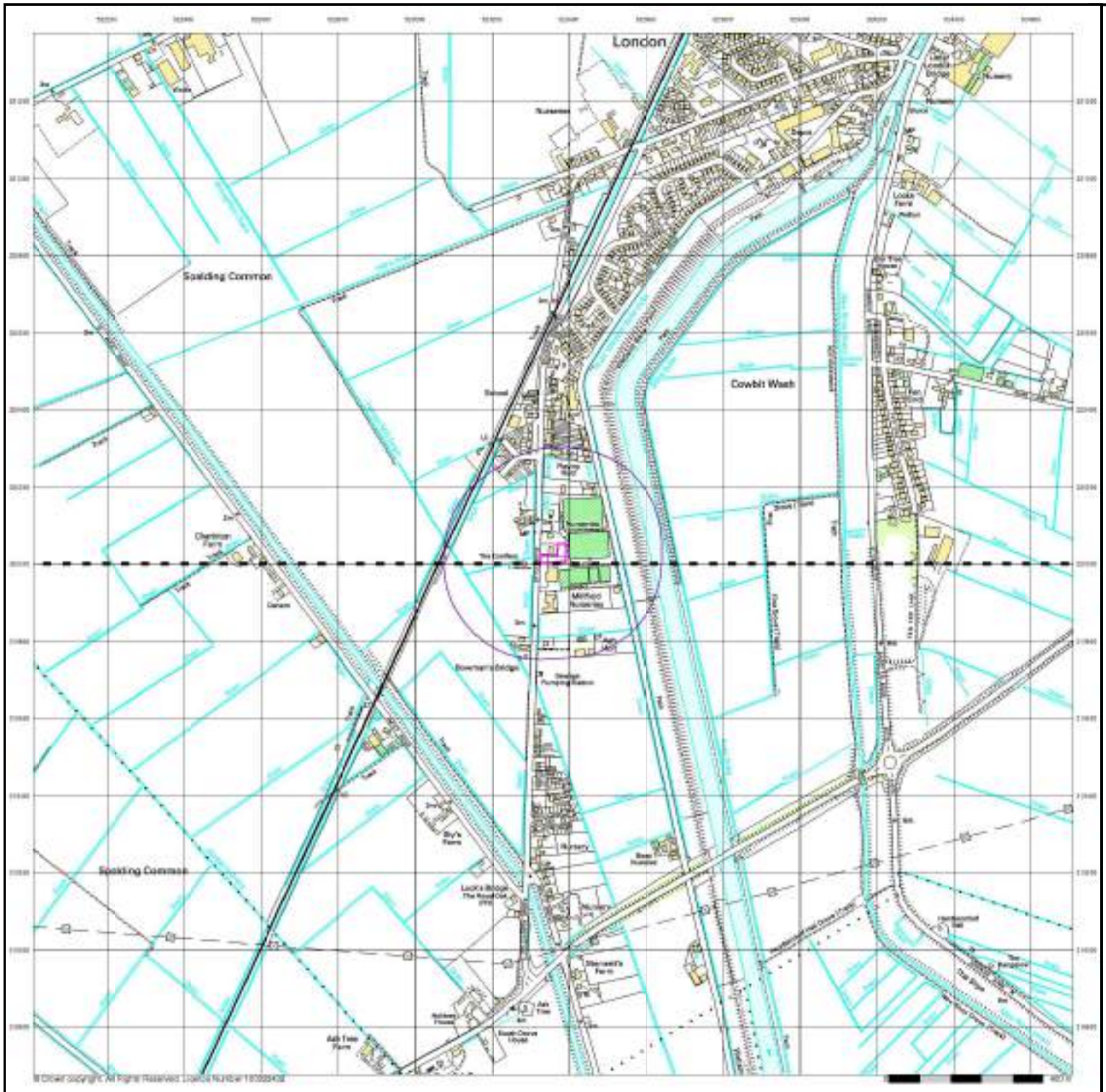
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National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

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GeoDyne

10k Raster Mapping

Published 2006

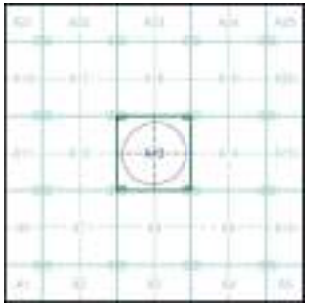
Source map scale - 1:10,000

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)



Historical Map - Slice A



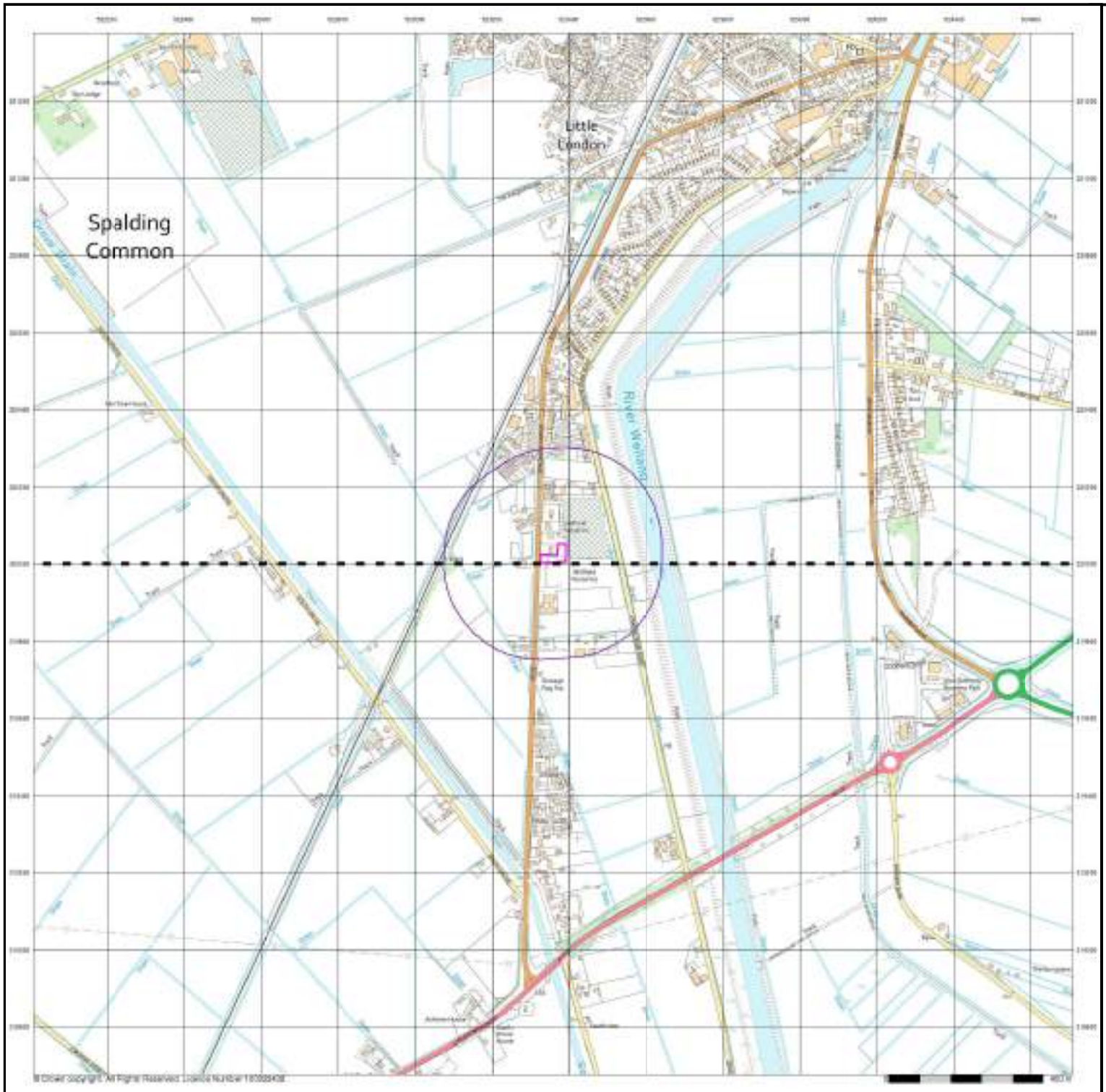
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

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VectorMap Local

Published 2023

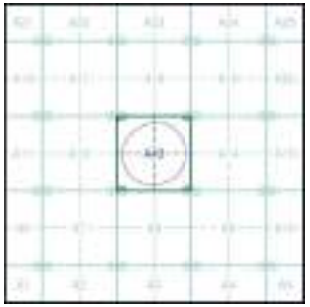
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
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Site Area (Ha):	0.2
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APPENDIX VII

Landmark Geological Plans

Geology 1:50,000 Maps Legends

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TFD	Tidal Flat Deposits	Clay and Silt	Not Supplied - Holocene
	TFD1	Tidal Flat Deposits, 1	Clay and Silt	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	OXC	Oxford Clay Formation	Mudstone	Not Supplied - Callovian

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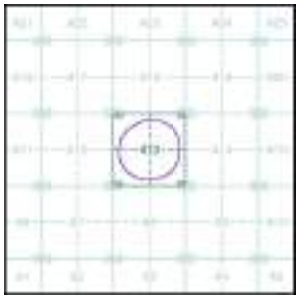
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**144**
Map Name:	**Spalding**
Map Date:	**1992**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Not Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A

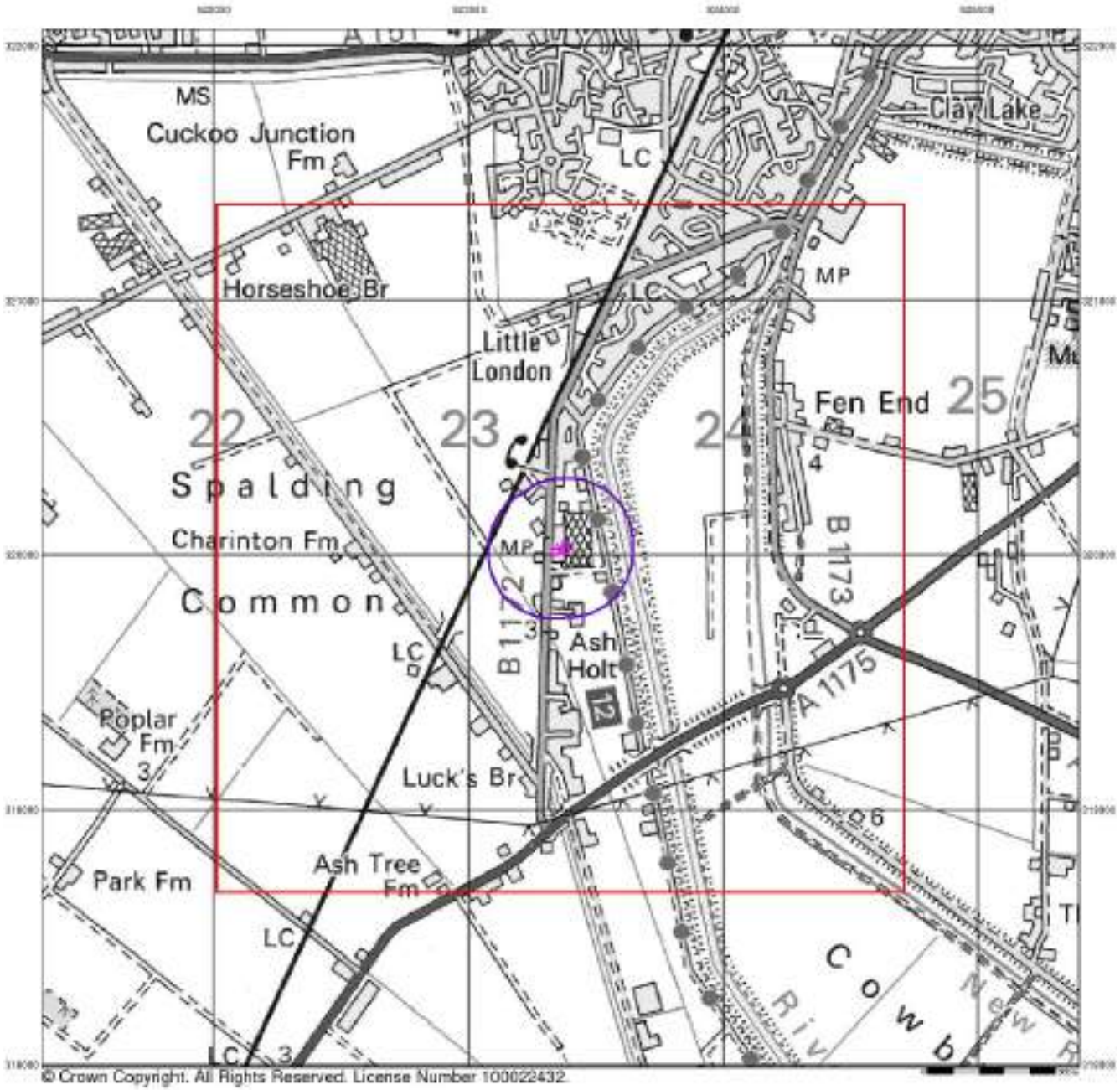


Order Details:

Order Number:	332430294_1_1
Customer Reference:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details:

Millfield House, Spalding Common, Spalding



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Artificial Ground and Landslip

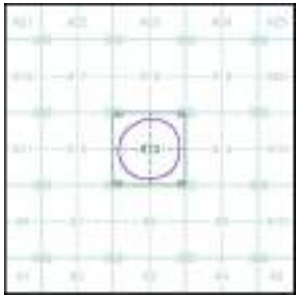
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



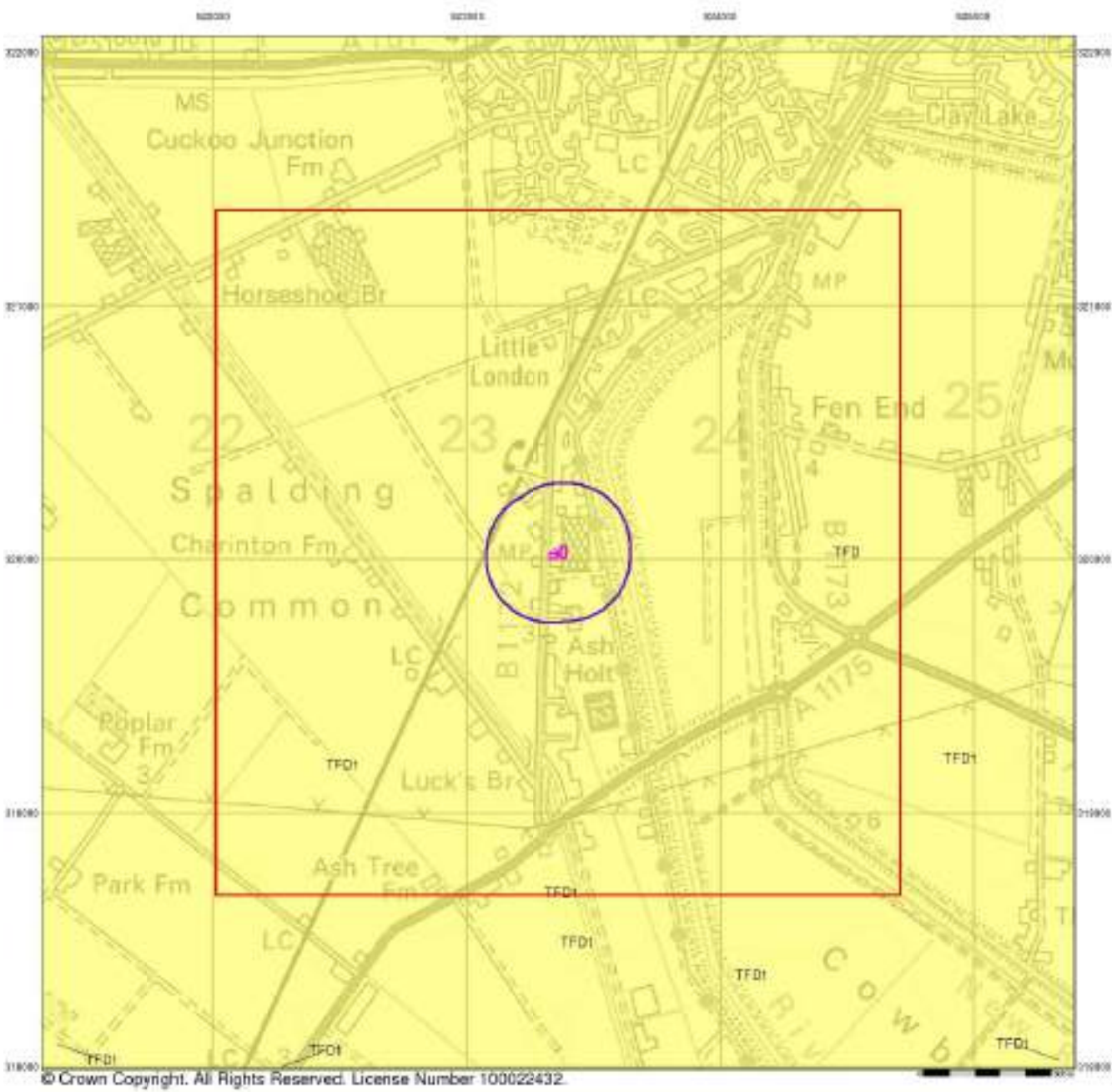
Order Details:

Order Number:	332430294_1_1
Customer Reference:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details:

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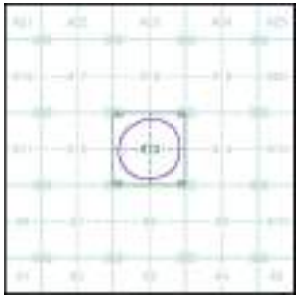
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



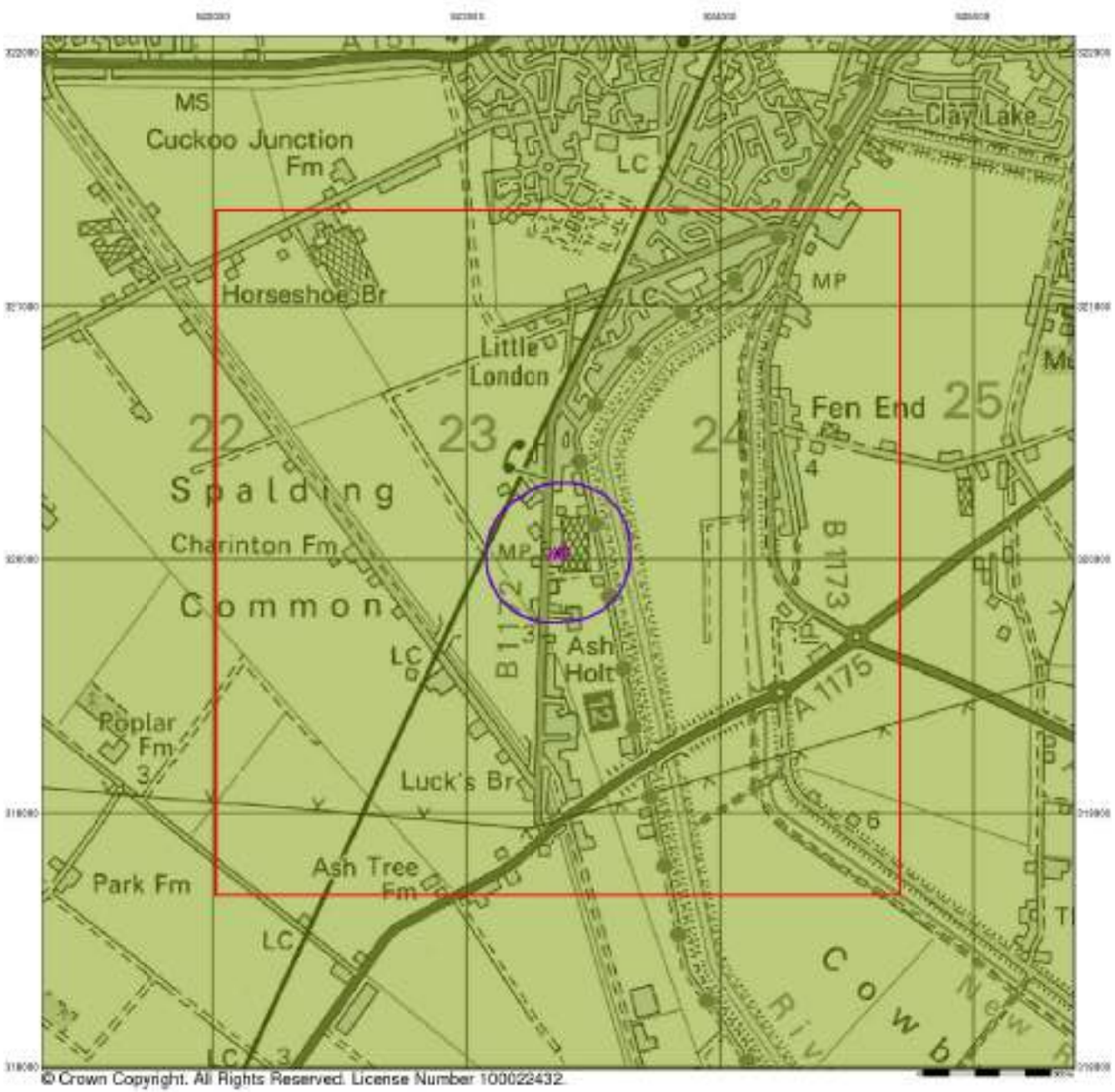
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Bedrock and Faults

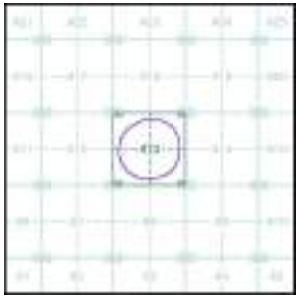
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



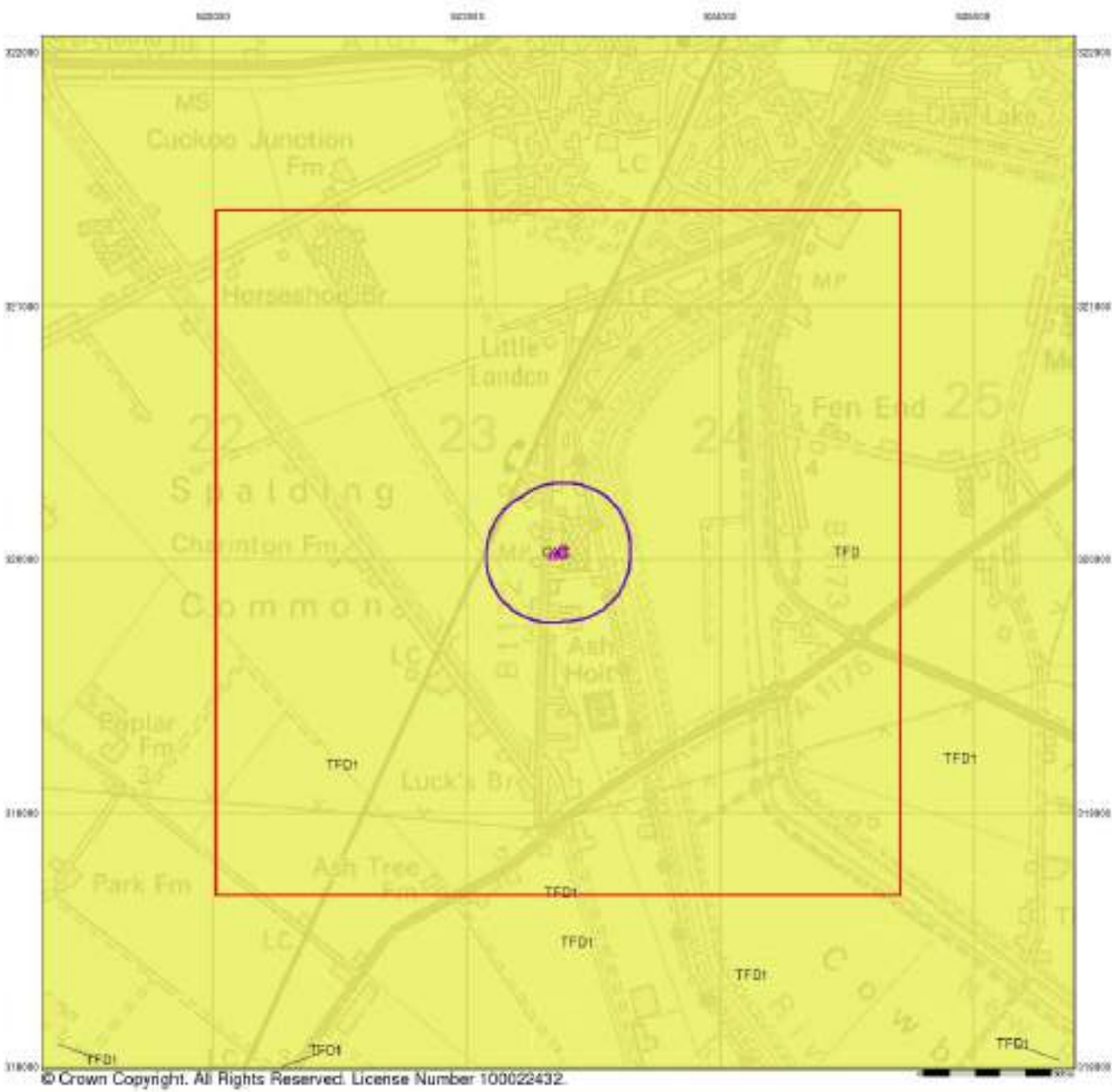
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Order Number:	332430294_1_1
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National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

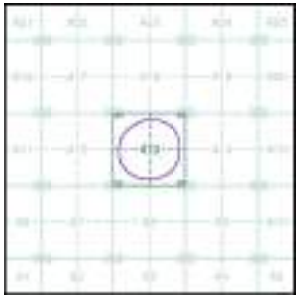
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

Order Number:	332430294_1_1
Customer Reference:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details:

Millfield House, Spalding Common, Spalding

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APPENDIX VIII

Zetica UXO Bomb Risk Map

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 523349,320013



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**

Transport | **Docks** | **Luftwaffe targets**

Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm 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.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to uxo@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

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 range of sources and should be used with the accompanying notes on our website.

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 acknowledgement. The copyright remains with Zetica Ltd.

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APPENDIX IX

Landmark Envirocheck Report

GeoDyne

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
332430294_1_1

Customer Reference:
D44007

National Grid Reference:
523360, 320020

Slice:
A

Site Area (Ha):
0.2

Search Buffer (m):
250

Site Details:

Millfield House, Spalding Common
Spalding

Client Details:

Mr J Hollands
GeoDyne Ltd
Clarendon House
Clarendon Business Park
Clumber Avenue
Nottingham
NG5 1AH

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	6
Hazardous Substances	-
Geological	7
Industrial Land Use	9
Sensitive Land Use	10
Data Currency	11
Data Suppliers	16
Useful Contacts	17

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

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Report Version v53.0

GeoDyne

Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Agency & Hydrological			
BGS Groundwater Flooding Susceptibility			
Contaminated Land Register Entries and Notices			
Discharge Consents	pg 1		1
Prosecutions Relating to Controlled Waters			n/a
Enforcement and Prohibition Notices			
Integrated Pollution Controls			
Integrated Pollution Prevention And Control			
Local Authority Integrated Pollution Prevention And Control			
Local Authority Pollution Prevention and Controls			
Local Authority Pollution Prevention and Control Enforcements			
Nearest Surface Water Feature	pg 1		Yes
Pollution Incidents to Controlled Waters	pg 1		1
Prosecutions Relating to Authorised Processes			
Registered Radioactive Substances			
River Quality			
River Quality Biology Sampling Points			
River Quality Chemistry Sampling Points			
Substantiated Pollution Incident Register			
Water Abstractions	pg 1		1 (*1)
Water Industry Act Referrals			
Groundwater Vulnerability Map	pg 2	Yes	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a
Groundwater Vulnerability - Local Information			n/a
Bedrock Aquifer Designations	pg 2	Yes	n/a
Superficial Aquifer Designations	pg 2	Yes	n/a
Source Protection Zones			
Extreme Flooding from Rivers or Sea without Defences	pg 2	Yes	
Flooding from Rivers or Sea without Defences	pg 2		Yes
Areas Benefiting from Flood Defences			
Flood Water Storage Areas			
Flood Defences	pg 2		Yes
OS Water Network Lines	pg 2		29

GeoDyne

Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Waste			
BGS Recorded Landfill Sites			
Historical Landfill Sites			
Integrated Pollution Control Registered Waste Sites			
Licensed Waste Management Facilities (Landfill Boundaries)			
Licensed Waste Management Facilities (Locations)			
Local Authority Landfill Coverage	pg 6	2	n/a
Local Authority Recorded Landfill Sites			
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Registered Landfill Sites			
Registered Waste Transfer Sites			
Registered Waste Treatment or Disposal Sites			
Hazardous Substances			
Control of Major Accident Hazards Sites (COMAH)			
Explosive Sites			
Notification of Installations Handling Hazardous Substances (NIHHS)			
Planning Hazardous Substance Consents			
Planning Hazardous Substance Enforcements			

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Geological			
BGS 1:625,000 Solid Geology	pg 7	Yes	n/a
BGS Estimated Soil Chemistry	pg 7	Yes	
BGS Recorded Mineral Sites			
BGS Urban Soil Chemistry			
BGS Urban Soil Chemistry Averages			
CBSCB Compensation District			n/a
Coal Mining Affected Areas			n/a
Mining Instability			n/a
Man-Made Mining Cavities			
Natural Cavities			
Non Coal Mining Areas of Great Britain			
Potential for Collapsible Ground Stability Hazards			
Potential for Compressible Ground Stability Hazards	pg 7	Yes	Yes
Potential for Ground Dissolution Stability Hazards			
Potential for Landslide Ground Stability Hazards	pg 7	Yes	Yes
Potential for Running Sand Ground Stability Hazards	pg 7	Yes	Yes
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 7	Yes	Yes
Radon Potential - Radon Affected Areas			n/a
Radon Potential - Radon Protection Measures			n/a
Industrial Land Use			
Contemporary Trade Directory Entries	pg 9		1
Fuel Station Entries			
Points of Interest - Commercial Services			
Points of Interest - Education and Health			
Points of Interest - Manufacturing and Production	pg 9		6
Points of Interest - Public Infrastructure			
Points of Interest - Recreational and Environmental	pg 9		1
Gas Pipelines			
Underground Electrical Cables			

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Sensitive Land Use			
Ancient Woodland			
Areas of Adopted Green Belt			
Areas of Unadopted Green Belt			
Areas of Outstanding Natural Beauty			
Environmentally Sensitive Areas			
Forest Parks			
Local Nature Reserves			
Marine Nature Reserves			
National Nature Reserves			
National Parks			
Nitrate Sensitive Areas			
Nitrate Vulnerable Zones	pg 10	1	1
Ramsar Sites			
Sites of Special Scientific Interest			
Special Areas of Conservation			
Special Protection Areas			
World Heritage Sites			

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: Mr K A Hayhurst Property Type: Domestic Property (Single) Location: Spalding Common No.42 Spalding Common, Spalding, Lincolnshire, Pe11 3au Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prnlf02525 Permit Version: 1 Effective Date: 24th April 1990 Issued Date: 24th April 1990 Revocation Date: 23rd July 1997 Discharge Type: Unknown Discharge Environment: Land/Soakaway Receiving Water: Land **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	111	1	523420 319900
	Nearest Surface Water Feature	A13SW (W)	20	-	523306 320016
2	**Pollution Incidents to Controlled Waters** Property Type: Sheep Location: Spalding District, SPALDING Authority: Environment Agency, Anglian Region Pollutant: Organic Wastes: Animal Carcasses Note: River Welland Incident Date: 15th February 1999 Incident Reference: 2791 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	184	1	523500 320200
3	**Water Abstractions** Operator: R Chappell & Sons Licence Number: 5/31/14/*S/0020 Permit Version: 100 Location: R Welland & Drains,Cowbit Wash Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 1st April 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	119	1	523500 320100
	Water Abstractions Operator: W D Branton Licence Number: 5/31/14/*S/0158 Permit Version: 100 Location: South Drove Drain Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Status: Perpetuity Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st June 1983 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	471	1	522900 319800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Unproductive Aquifer (may have productive aquifer beneath) Combined Vulnerability: Unproductive Combined Aquifer: Unproductive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A13SE (N)	0	3	523362 320024
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (N)	0	3	523362 320024
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (N)	0	3	523362 320024
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (N)	0	1	523362 320024
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (N)	13	1	523362 320064
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences Type: Flood Defences Reference: Not Supplied	A13NE (E)	175	1	523567 320065
4	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 262.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SW (W)	21	4	523305 320025
5	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 153.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SW (SW)	36	4	523304 319973
6	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (N)	83	4	523330 320125
7	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 280.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (NW)	108	4	523309 320140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NE (NE)	122	4	523507 320092
9	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NE (E)	122	4	523515 320058
10	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SW (S)	133	4	523322 319870
11	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 541.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Welland Soke Dyke Catchment Name: Welland Primacy: 2	A13NE (E)	134	4	523527 320058
12	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SW (S)	147	4	523321 319856
13	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SE (SE)	161	4	523539 319943
14	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (N)	176	4	523334 320224
15	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 692.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Fantail Mill Drain Catchment Name: Welland Primacy: 2	A13SW (SW)	179	4	523174 319906
16	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SE (SE)	180	4	523545 319913

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NE (NE)	182	4	523480 320211
18	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 243.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SE (S)	193	4	523381 319812
19	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SW (S)	196	4	523319 319806
20	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Fantail Mill Drain Catchment Name: Welland Primacy: 2	A13SW (W)	196	4	523132 319974
21	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SE (SE)	207	4	523552 319877
22	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (NW)	219	4	523136 320133
23	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NE (N)	219	4	523378 320271
24	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 180.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (NW)	222	4	523145 320152
25	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7054.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Welland Catchment Name: Welland Primacy: 1	A13NE (E)	230	4	523620 320084

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: Underground Permanent: True Watercourse Name: River Welland Soke Dyke Catchment Name: Welland Primacy: 2	A13SE (SE)	232	4	523569 319857
27	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Fantail Mill Drain Catchment Name: Welland Primacy: 2	A13NW (W)	235	4	523092 320040
28	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 556.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Welland Soke Dyke Catchment Name: Welland Primacy: 2	A13SE (SE)	236	4	523569 319851
29	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: Underground Permanent: True Watercourse Name: Fantail Mill Drain Catchment Name: Welland Primacy: 2	A13NW (W)	240	4	523088 320045
30	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 186.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13NW (NW)	245	4	523111 320140
31	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Welland Primacy: 2	A13SE (SE)	247	4	523561 319828
32	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Fantail Mill Drain Catchment Name: Welland Primacy: 2	A13NW (W)	249	4	523080 320057

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: South Holland District Council - Has no landfill data to supply		0	2	523362 320024
	Local Authority Landfill Coverage Name: Lincolnshire County Council - Had landfill data but passed it to the relevant environment agency		0	5	523362 320024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Kellaways Formation And Oxford Clay Formation (Undifferentiated)	A13SE (N)	0	6	523362 320024
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (N)	0	6	523362 320024
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages 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: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	6	523362 320000
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	6	523362 320024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Contemporary Trade Directory Entries** Name: Freshco (Spalding) Ltd Location: Spalding Common, Spalding, Lincolnshire, PE11 3JZ Classification: Frozen Food Processors & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	33	-	523355 319971
34	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE11 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	23	7	523414 320008
34	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE11 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (E)	37	7	523428 320002
34	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE11 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (E)	42	7	523432 319999
34	**Points of Interest - Manufacturing and Production** Name: Tanks Location: PE11 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	49	7	523440 320006
34	**Points of Interest - Manufacturing and Production** Name: Tank Location: PE11 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A13SE (E)	52	7	523442 319998
35	**Points of Interest - Manufacturing and Production** Name: H Freeman & Sons Location: The Conifers, Spalding Common, Spalding, PE11 3AU Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A13SW (W)	38	7	523288 319998
36	**Points of Interest - Recreational and Environmental** Name: Play Area Location: PE11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A13NW (NW)	223	7	523199 320207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Nitrate Vulnerable Zones** Name: Vernatt'S Drain Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SE (N)	0	3	523362 320024
38	**Nitrate Vulnerable Zones** Name: River Welland Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (E)	181	3	523573 320074

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Environment Agency - Head Office South Holland District Council - Environmental Services	 November 2023 September 2017	 Annually Annual Rolling Update
Discharge Consents Environment Agency - Anglian Region	 October 2023	 Quarterly
Enforcement and Prohibition Notices Environment Agency - Anglian Region	 March 2013	
Integrated Pollution Controls Environment Agency - Anglian Region	 January 2009	
Integrated Pollution Prevention And Control Environment Agency - Anglian Region	 January 2023	 Quarterly
Local Authority Integrated Pollution Prevention And Control South Holland District Council - Environmental Services	 October 2014	 Variable
Local Authority Pollution Prevention and Controls South Holland District Council - Environmental Services	 October 2014	 Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements South Holland District Council - Environmental Services	 October 2014	 Variable
Nearest Surface Water Feature Ordnance Survey	 November 2023	
Pollution Incidents to Controlled Waters Environment Agency - Anglian Region	 September 1999	
Prosecutions Relating to Authorised Processes Environment Agency - Anglian Region	 July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - Anglian Region	 March 2013	
Registered Radioactive Substances Environment Agency - Anglian Region Environment Agency - Head Office	 June 2016 May 2023	 As notified Quarterly
River Quality Environment Agency - Head Office	 November 2001	 Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	 April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	 April 2012	
Substantiated Pollution Incident Register Environment Agency - Anglian Region - Northern Area	 October 2023	 Quarterly
Water Abstractions Environment Agency - Anglian Region	 October 2023	 Quarterly
Water Industry Act Referrals Environment Agency - Anglian Region	 October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	 June 2018	 As notified
Bedrock Aquifer Designations Environment Agency - Head Office	 January 2018	 As notified
Superficial Aquifer Designations Environment Agency - Head Office	 January 2018	 As notified
Source Protection Zones Environment Agency - Head Office	 September 2022	 Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	 December 2023	 Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2023	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2023	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	January 2024	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	October 2023	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	July 2023	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Anglian Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - Anglian Region - Northern Area	January 2024	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - Anglian Region - Northern Area	January 2023	Quarterly
Local Authority Landfill Coverage Lincolnshire County Council South Holland District Council - Environmental Services	February 2003 February 2003	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Lincolnshire County Council South Holland District Council - Environmental Services	October 2018 October 2018	
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	
Registered Landfill Sites Environment Agency - Anglian Region - Northern Area	March 2006	Not Applicable
Registered Waste Transfer Sites Environment Agency - Anglian Region - Northern Area	April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - Anglian Region - Northern Area	June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	March 2023	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
South Holland District Council	February 2023	Variable
Lincolnshire County Council - Highways and Planning Department	January 2023	Variable
Planning Hazardous Substance Consents		
Lincolnshire County Council - Highways and Planning Department	August 2007	Variable
South Holland District Council	January 2016	Variable
Geological	**Version**	**Update Cycle**
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	December 2015	As notified
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	
Cheshire Brine Subsidence Compensation Board (CBSCB)	November 2020	As notified
Coal Mining Affected Areas		
The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Mining Instability		
Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	October 2023	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	October 2023	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2023	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2023	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Points of Interest - Commercial Services PointX	December 2023	Quarterly
Points of Interest - Education and Health PointX	December 2023	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2023	Quarterly
Points of Interest - Public Infrastructure PointX	December 2023	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2023	Quarterly
Underground Electrical Cables National Grid	February 2023	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	October 2023	Bi-Annually
Areas of Adopted Green Belt South Holland District Council	August 2023	Quarterly
Areas of Unadopted Green Belt South Holland District Council	August 2023	Quarterly
Areas of Outstanding Natural Beauty Natural England	November 2023	Bi-Annually
Environmentally Sensitive Areas Natural England	August 2023	
Forest Parks Forestry Commission	May 2023	Not Applicable
Local Nature Reserves Natural England	August 2023	Bi-Annually
Marine Nature Reserves Natural England	October 2023	Bi-Annually
National Nature Reserves Natural England	August 2023	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2023	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 March 2023	Bi-Annually
Ramsar Sites Natural England	October 2023	Bi-Annually
Sites of Special Scientific Interest Natural England	November 2023	Bi-Annually
Special Areas of Conservation Natural England	October 2023	Bi-Annually
Special Protection Areas Natural England	October 2023	Bi-Annually

Data Suppliers

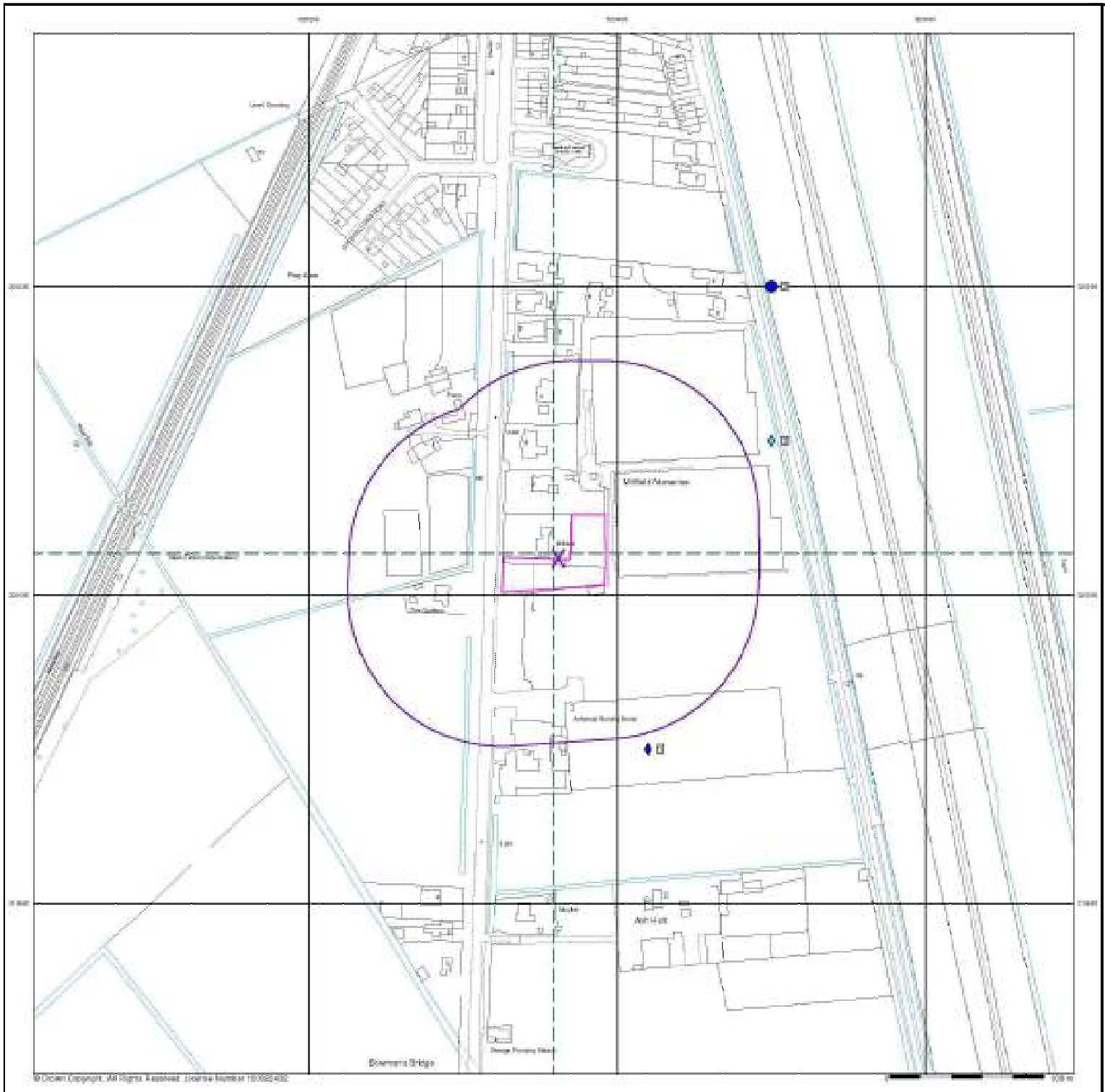
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
2	**South Holland District Council - Environmental Services** Council Offices, Priory Road, Spalding, Lincolnshire, PE11 2XE	Website: www.sholland.gov.uk
3	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	**Lincolnshire County Council** 4th Floor, City Hall, Lincoln, Lincolnshire, LN1 1DN	Telephone: 01522 552222 Fax: 01522 552288 Email: PublicRelations@lincolnshire.gov.uk Website: www.lincolnshire.gov.uk
6	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
7	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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GeoDyne

General

Specified Site | Specified Buffer(s) | Viewing/Reference Point | Map ID
Selected Typical Location | Pylon | Overhead Transmission Line

Agency and Hydrological

Contaminated Land Register Entry or Notice (point)
Contaminated Land Register Entry or Notice
Discharge consent
EPR Enforcement or Prohibition Notice
Integrated Pollution Control
Integrated Pollution Prevention Control
Local Authority Integrated Pollution Prevention and Control
Local Authority Pollution Prevention and Control
Local Authority Pollution Prevention and Control Enforcement
Pollution Incident to Controlled Waters
Prosecution Relating to Authorised Processes
Prosecution Relating to Controlled Waters
Registered Radioactive Substance
River Network in Flood Defence
River Quality Sampling Point
Substantiated Pollution Incident Register
Water Abstraction
Water Industry Act Referrals

Hazardous Substances

COMAH Site | Explosive Site
NIHHS Site
Planning Hazardous Substance Consent
Planning Hazardous Substance Enforcement

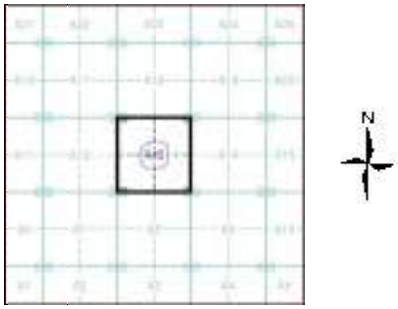
Geological

BGS Recorded Mineral Site

Waste

BGS Recorded Landfill Site (point)
BGS Recorded Landfill Site
EA Historic Landfill (Boreholes Only)
EA Historic Landfill (Polygon)
Integrated Pollution Control Registered Waste Site
Licensed Waste Management Facility (Landfill Boundary)
Licensed Waste Management Facility (point)
Local Authority Recorded Landfill Site (point)
Local Authority Recorded Landfill Site
Potentially Infilled Land (Non-water)
Potentially Infilled Land (Non-water)
Potentially Infilled Land (Non-water)
Potentially Infilled Land (Water)
Potentially Infilled Land (Water)
Potentially Infilled Land (Water)
Registered Landfill Site
Registered Landfill Site (point)
Registered Landfill Site (Part Surrendered - Other)
Registered Landfill Site (Part Surrendered - Other)
Registered Waste Transfer Site (point)
Registered Waste Transfer Site
Registered Waste Treatment or Disposal Site (point)
Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



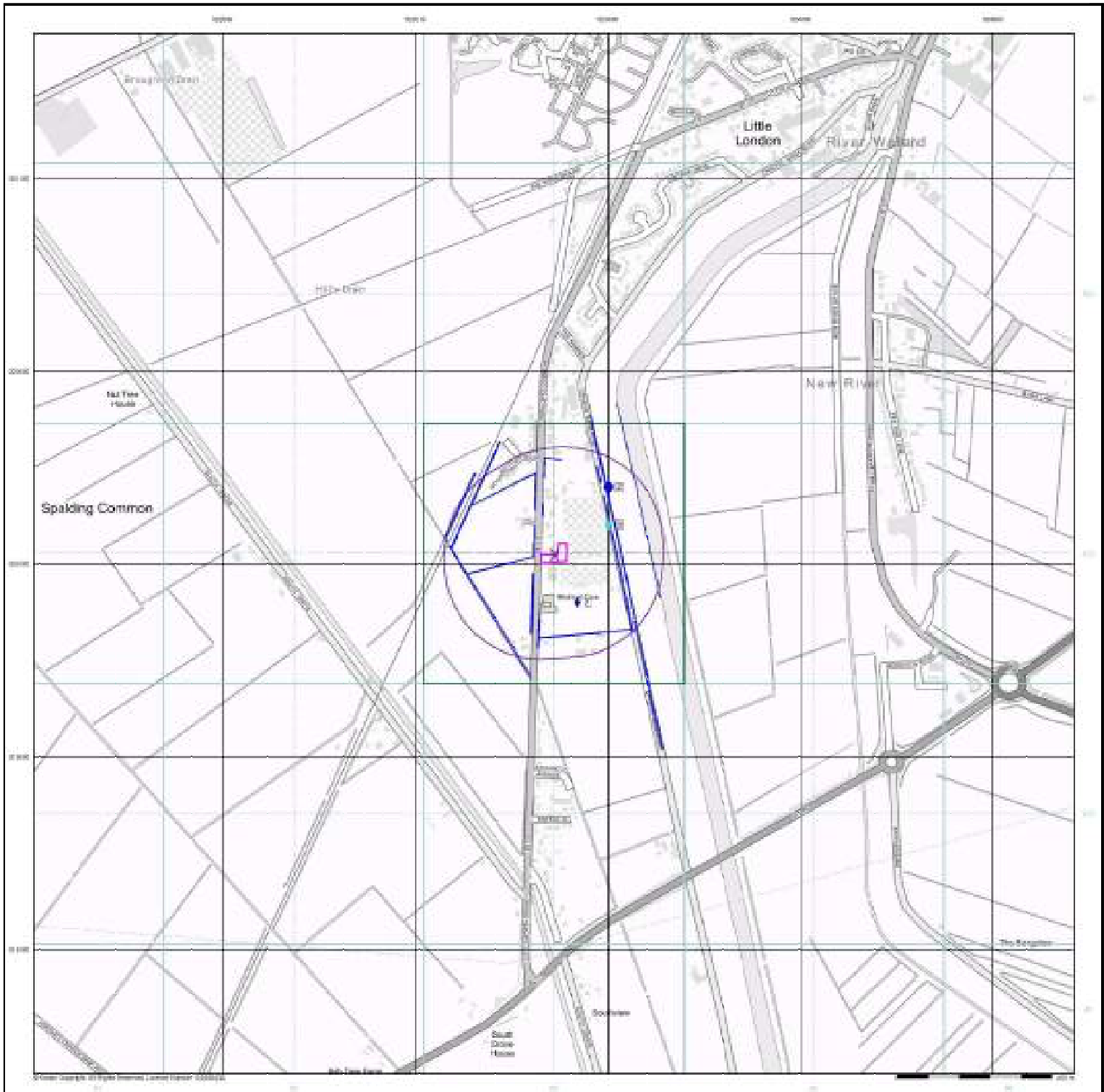
Order Details

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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Plot Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



GeoDyne

General

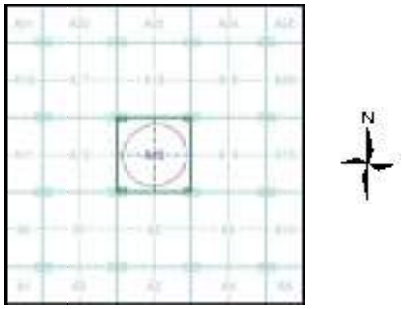
Agency and Hydrological

Waste

Hazardous Substances

Geological

Site Sensitivity Map - Slice A



Order Details

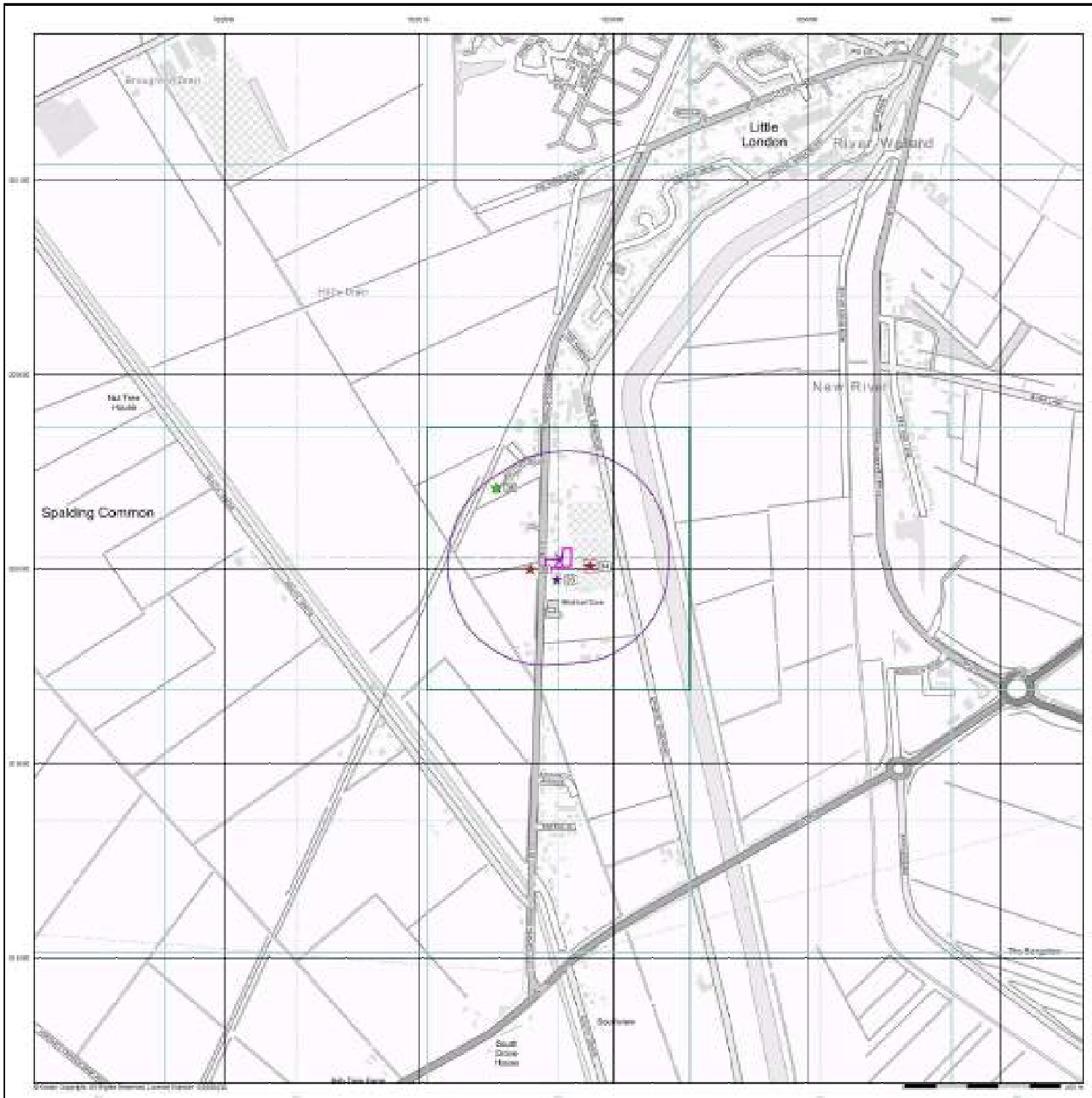
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National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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Web: www.envirocheck.co.uk



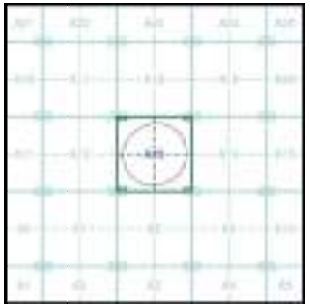
GeoDyne

Industrial Land Use Map

General

Industrial Land Use

Industrial Land Use Map - Slice A



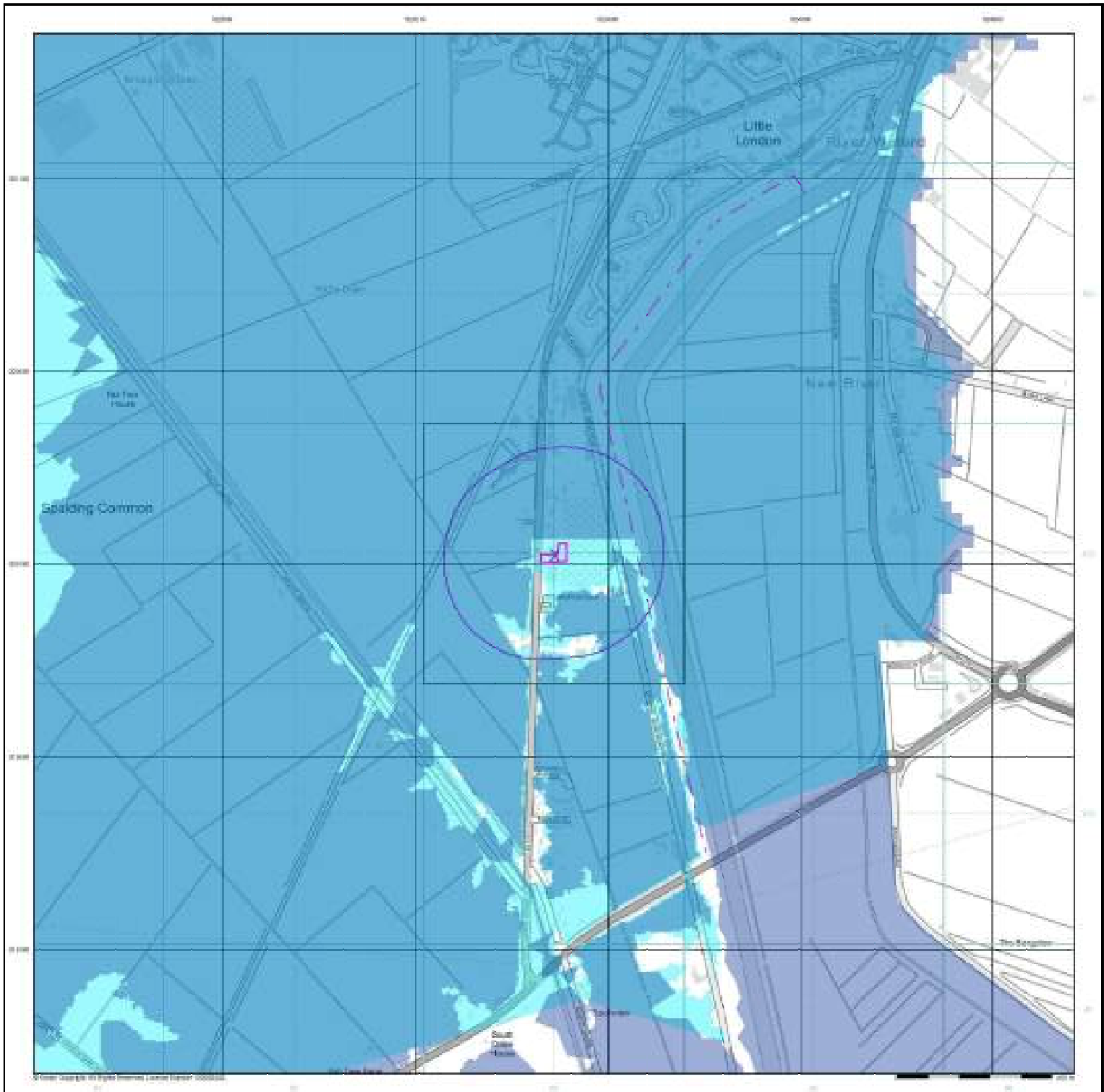
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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Web: www.envirocheck.co.uk



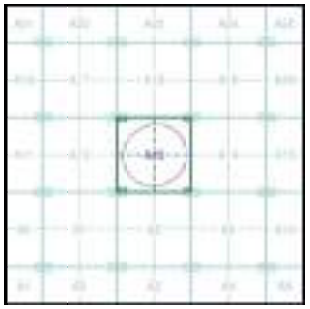
GeoDyne

General

Agency and Hydrological (Flood)

- Extensive Flooding from Rivers or Sea without Defences (Zone 3)
- Flooding from Rivers or Sea without Defences (Zone 2)
- Area Benefiting from Flood Defence
- Flood Water Storage Area
- Flood Defence

Flood Map - Slice A



Order Details

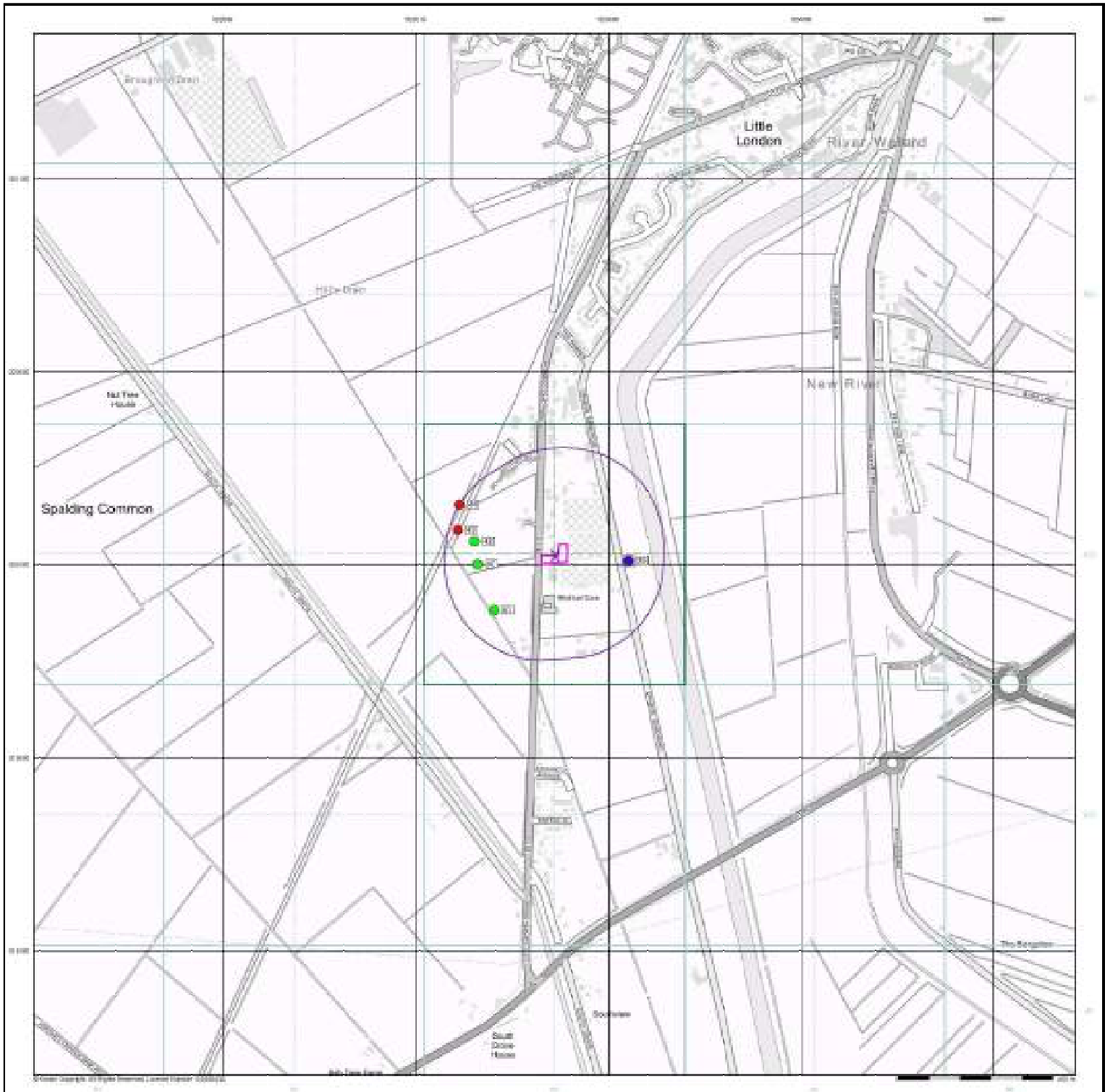
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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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Tel: 0844 844 9952
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Web: www.envirocheck.co.uk



GeoDyne

General

- Specified Site
- Specified Buffer(s)
- Grouping/Reference Point
- Map ID
- Generalised Type-at Location

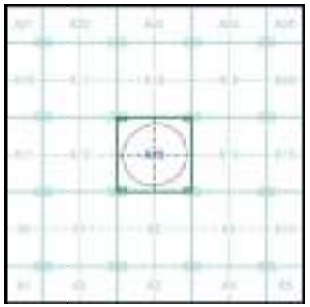
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

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

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

Borehole Map - Slice A



Order Details

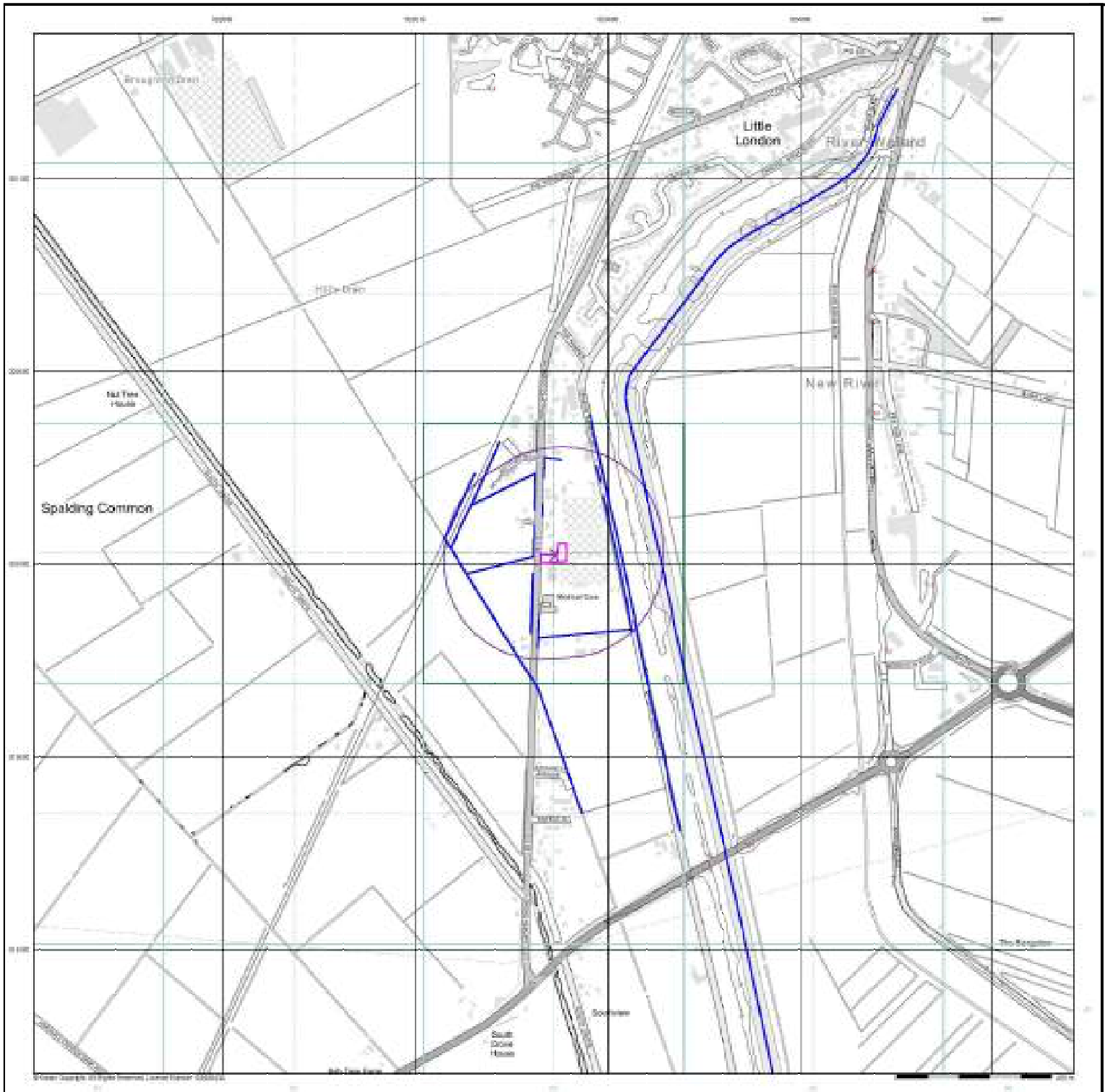
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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



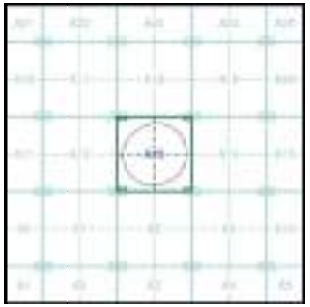
GeoDyne

General
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data
- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in metres)
- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A



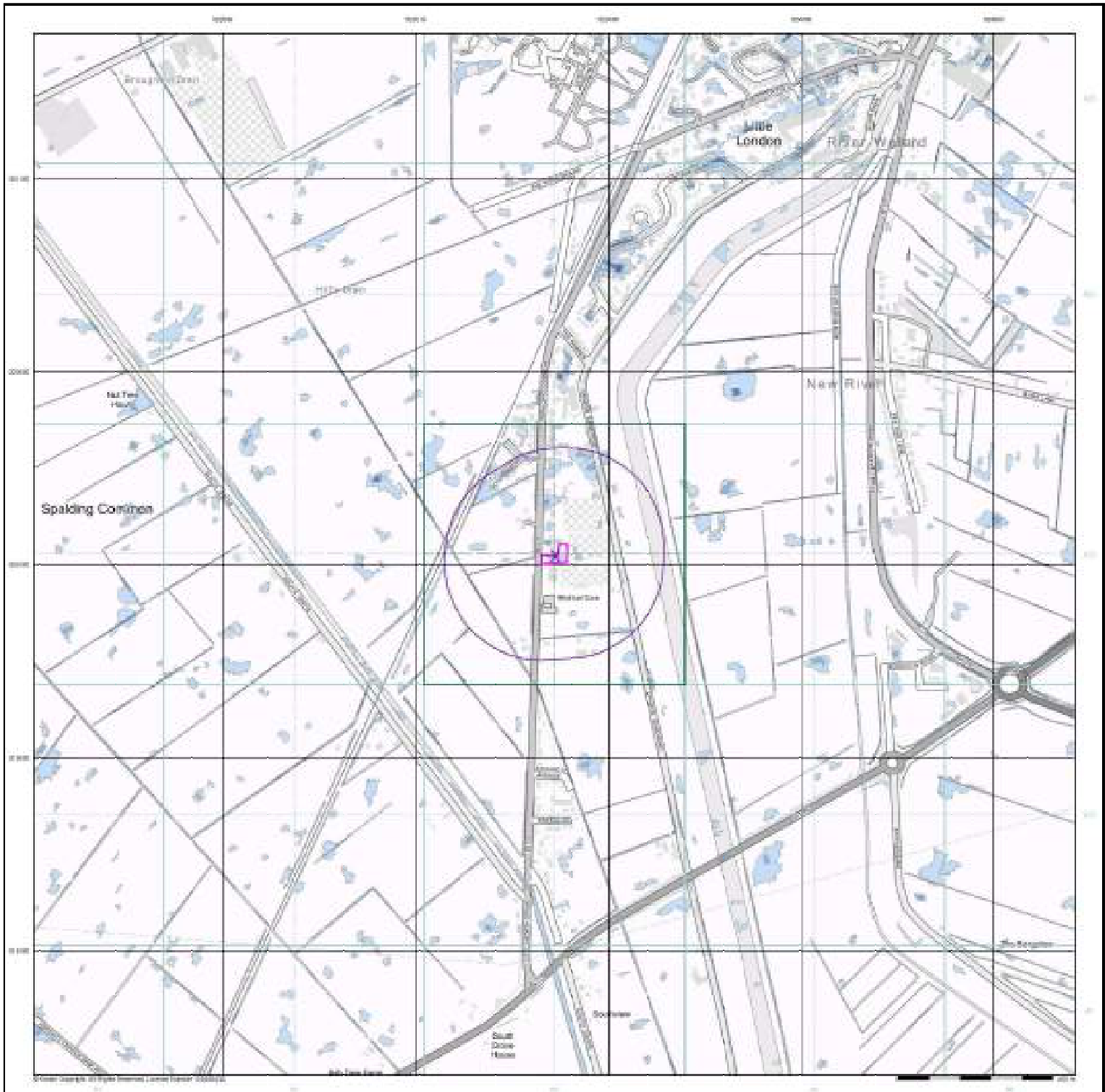
Order Details

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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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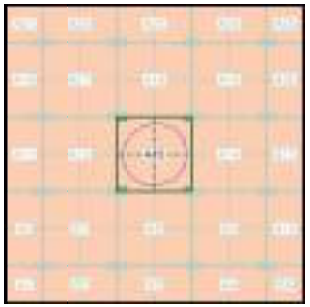
GeoDyne

General

Risk of Flooding from Surface Water

Suitability

EA/NRW Suitability Map - Slice A



Order Details

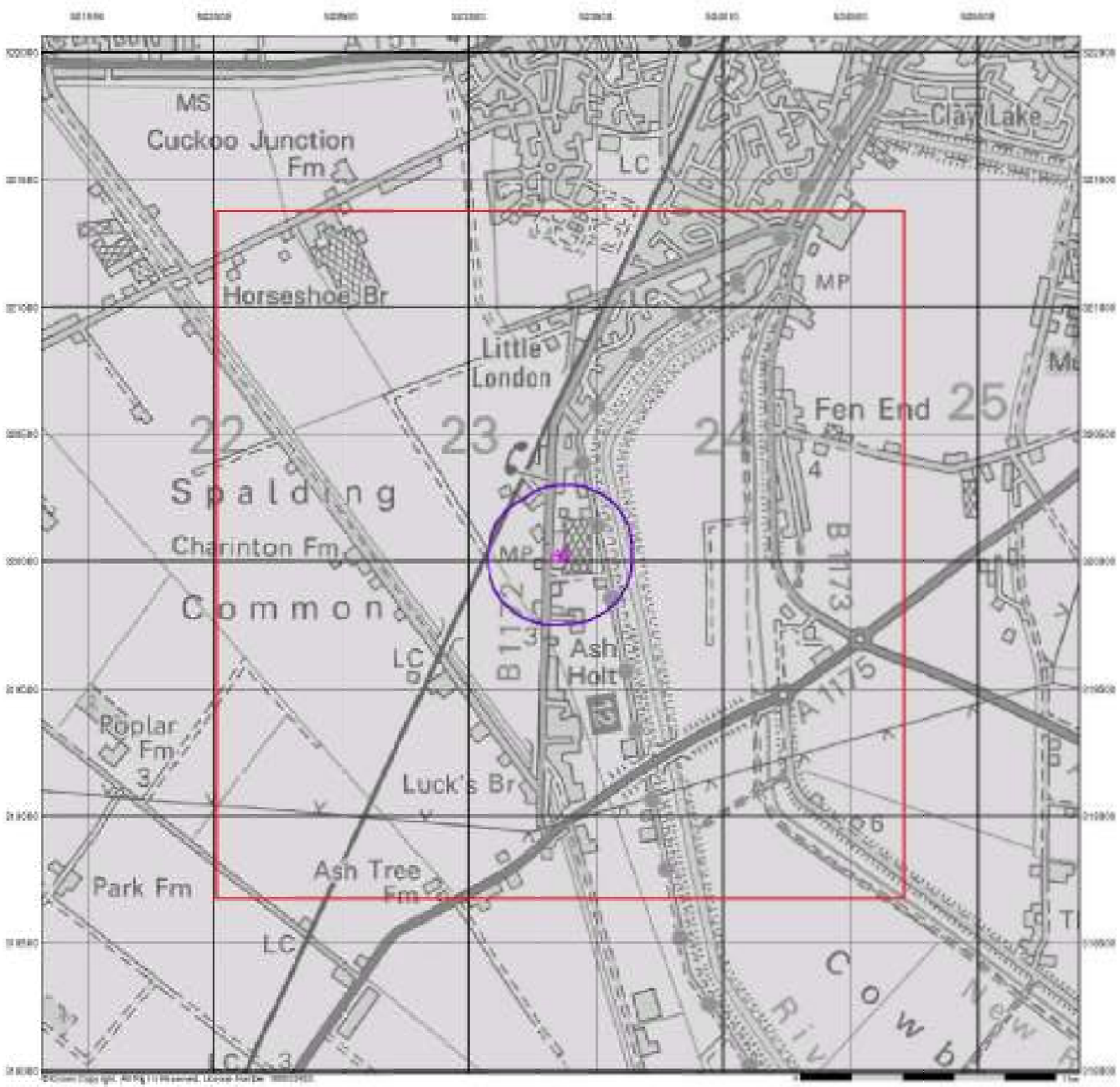
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Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

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Web: www.envirocheck.co.uk



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Groundwater Vulnerability

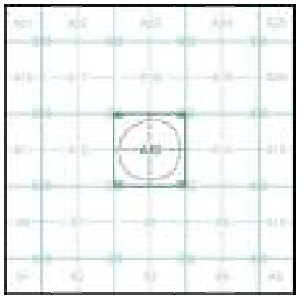
General

Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer
Soluble Rock

Site Sensitivity Context Map - Slice A



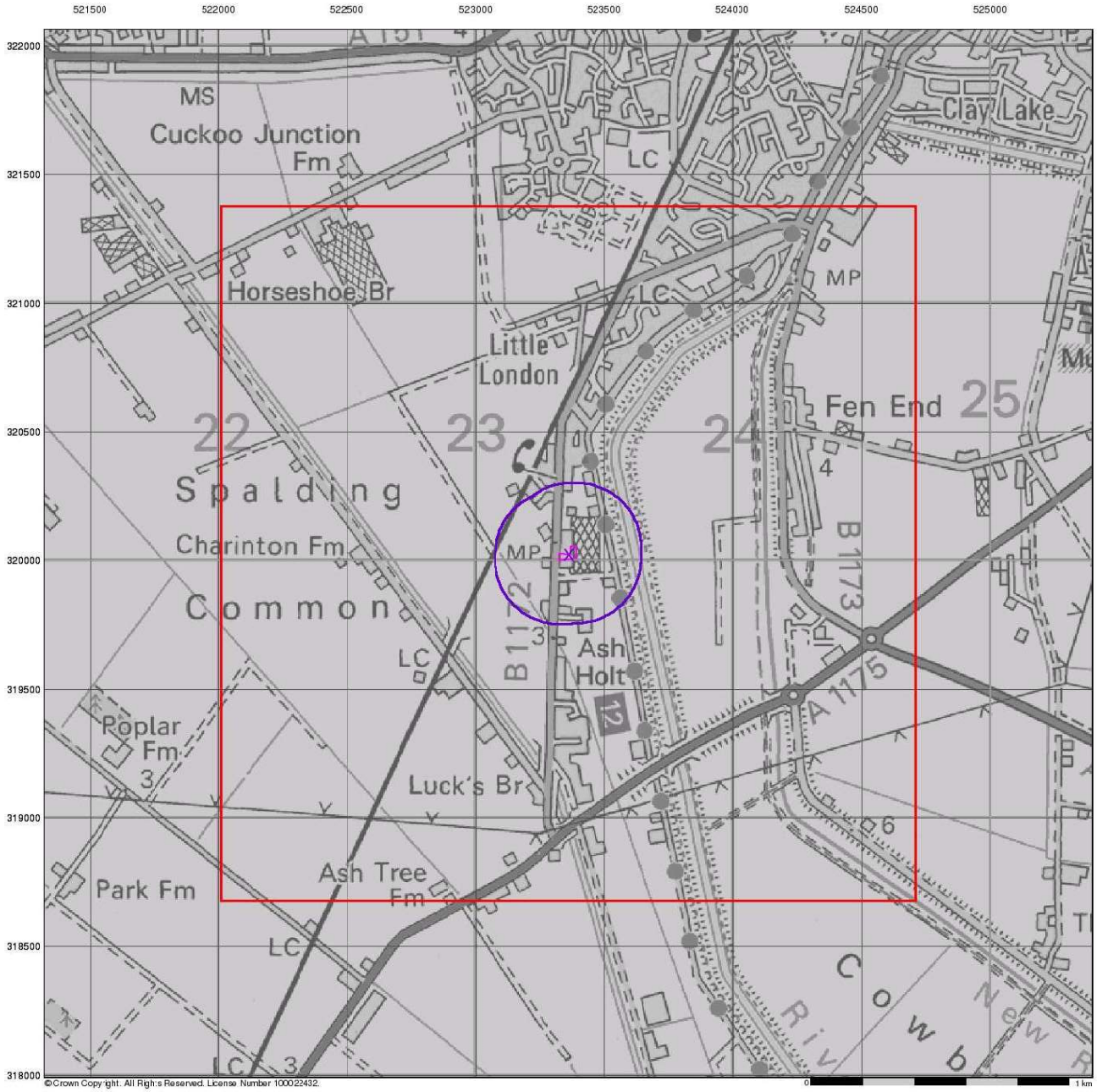
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



GeoDyne

Bedrock Aquifer Designation

General

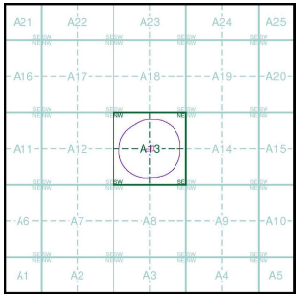
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

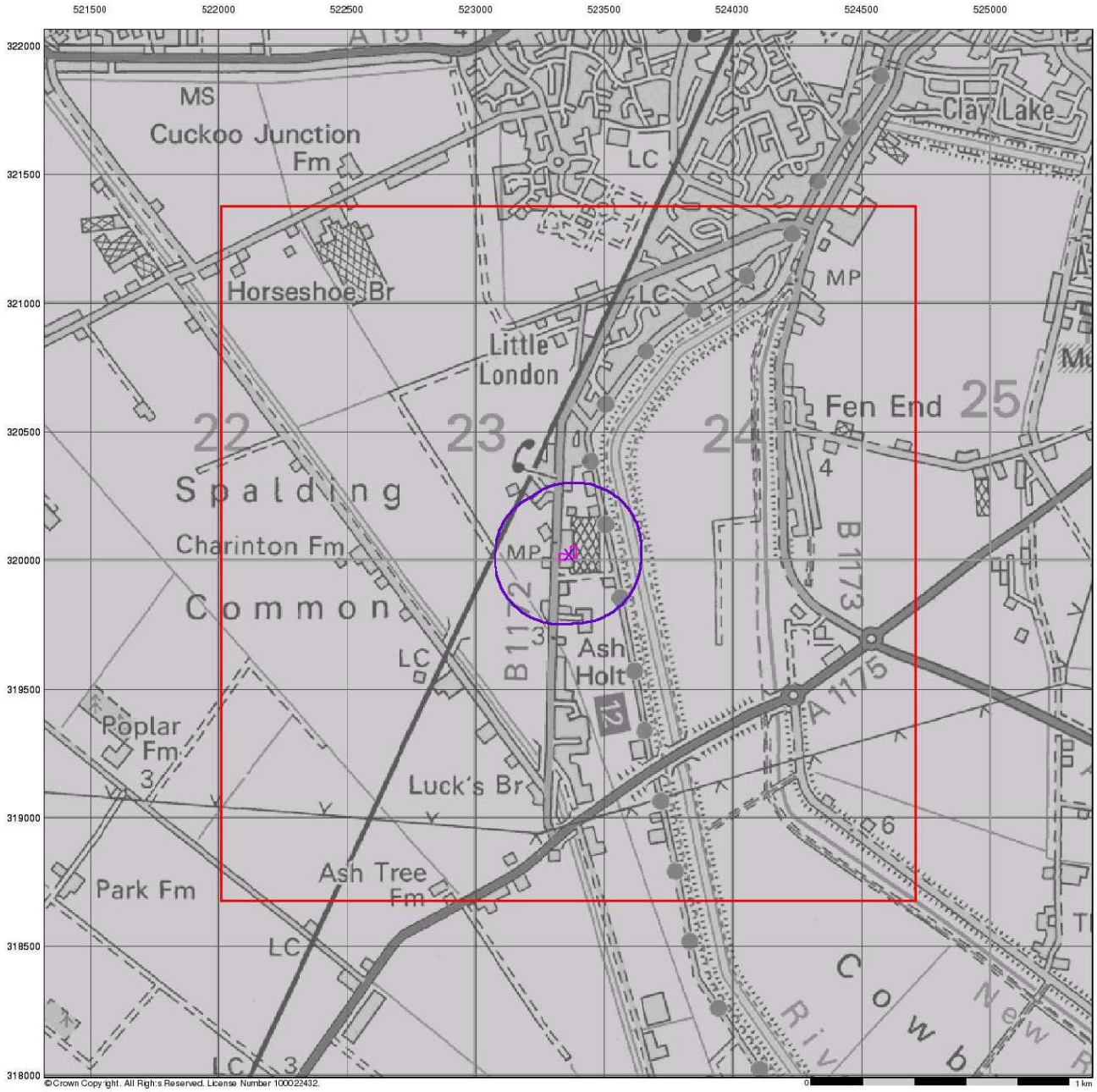


Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding



GeoDyne

Superficial Aquifer Designation

General

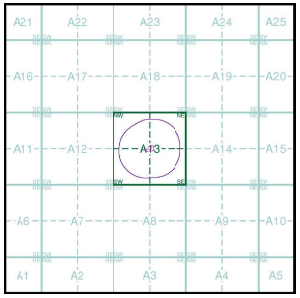
Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

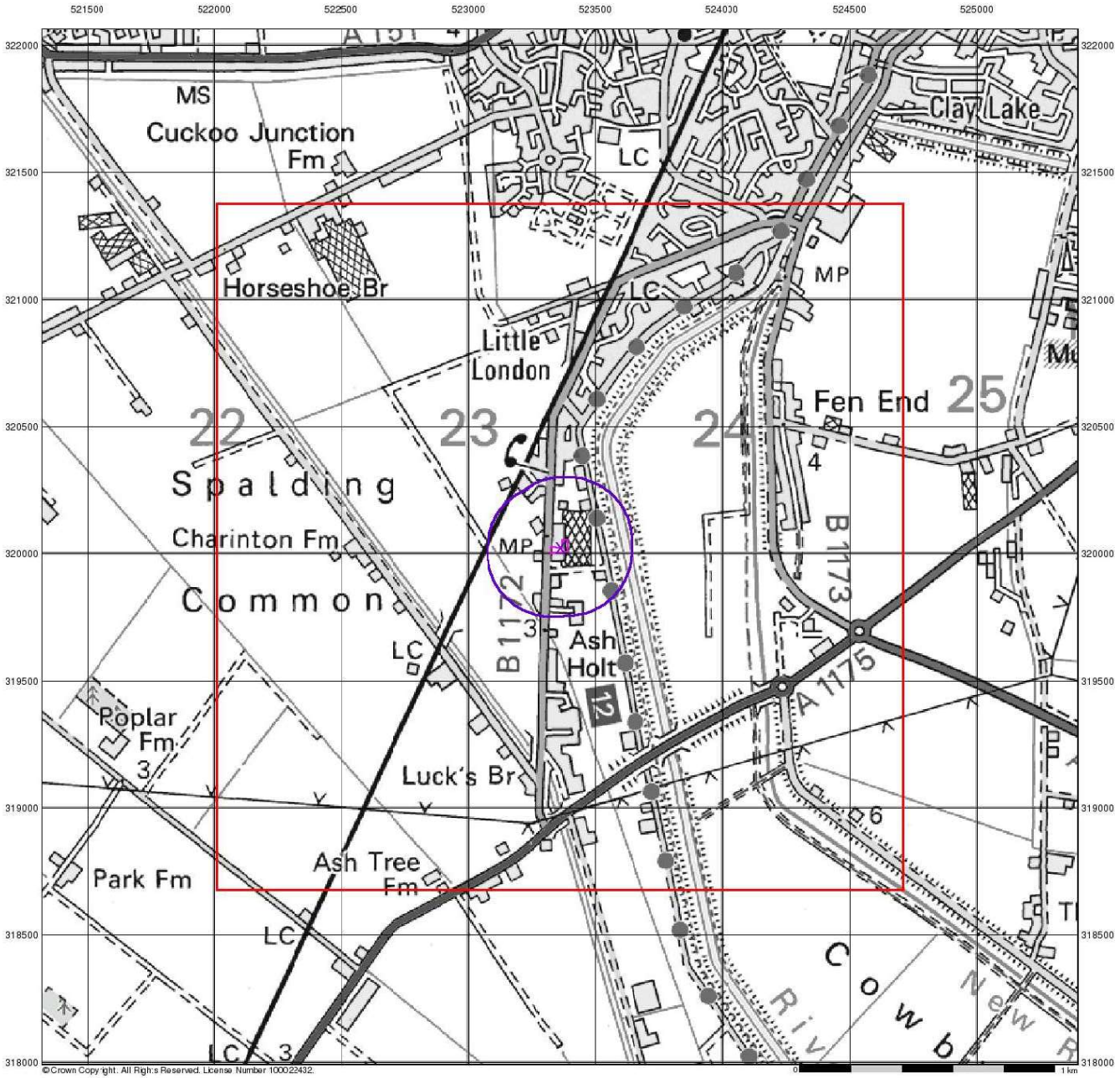


Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding



GeoDyne

Source Protection Zones

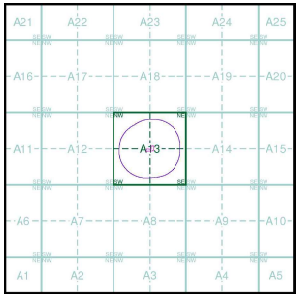
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



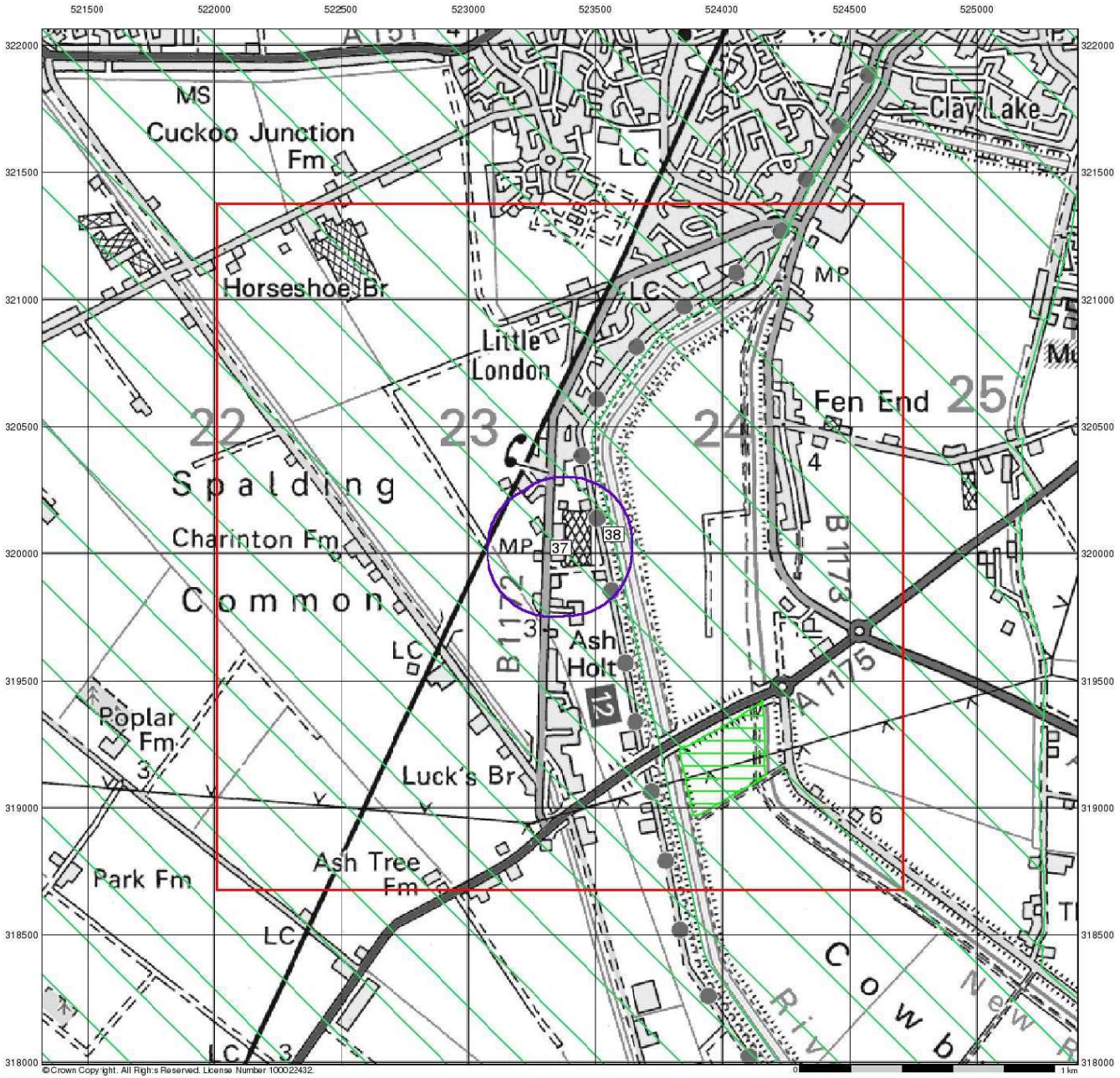
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk



GeoDyne

Sensitive Land Uses

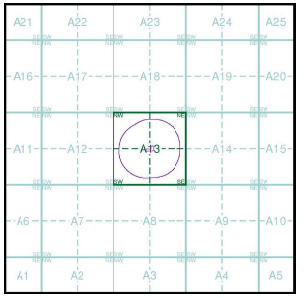
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



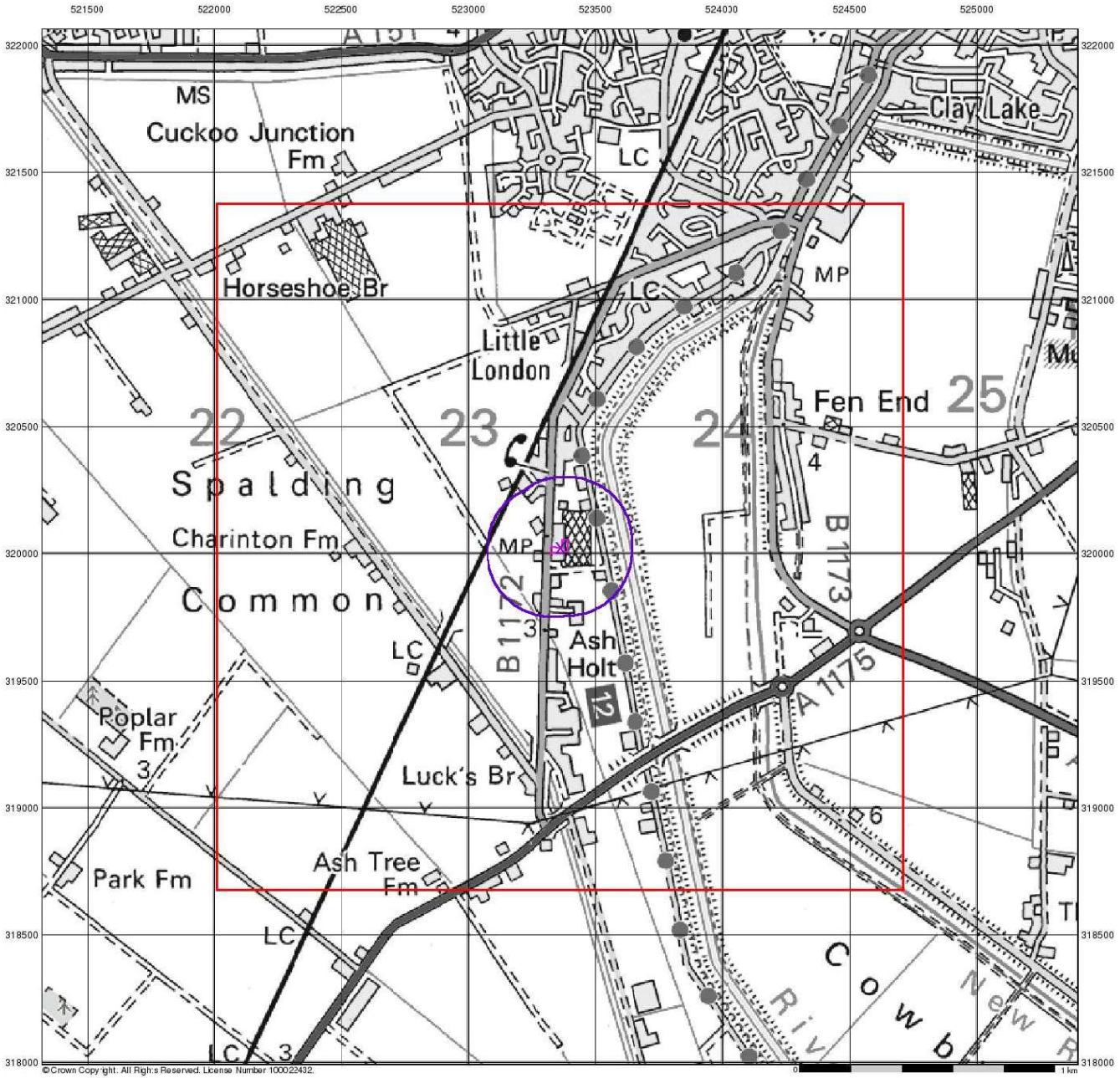
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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BGS Flood GFS Data

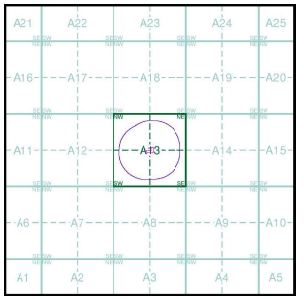
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A

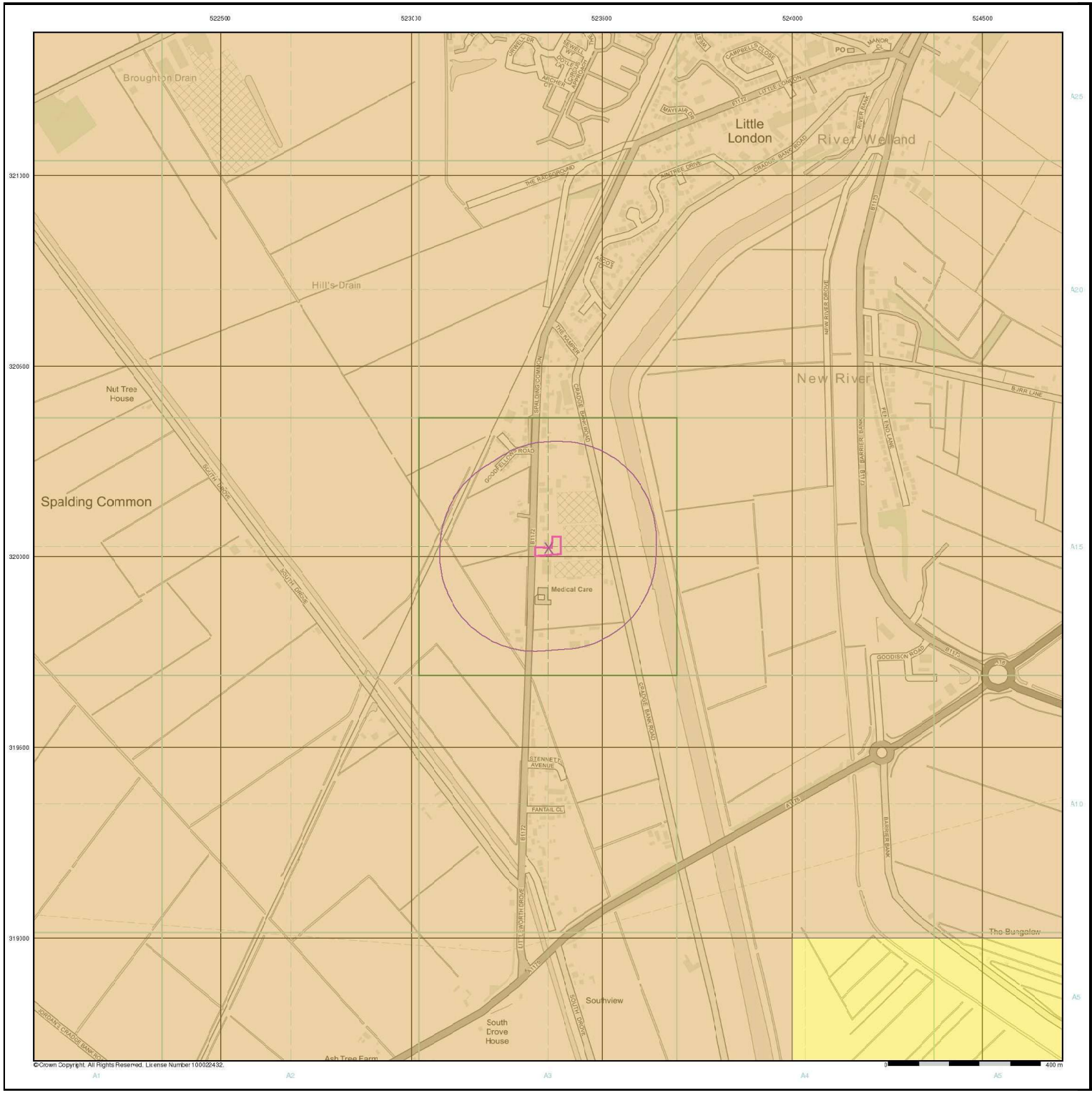


Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

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General

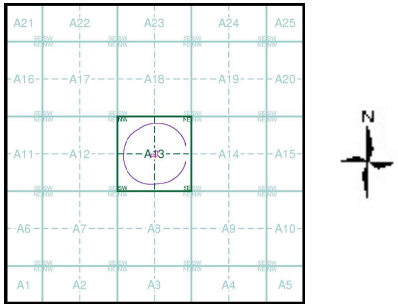
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

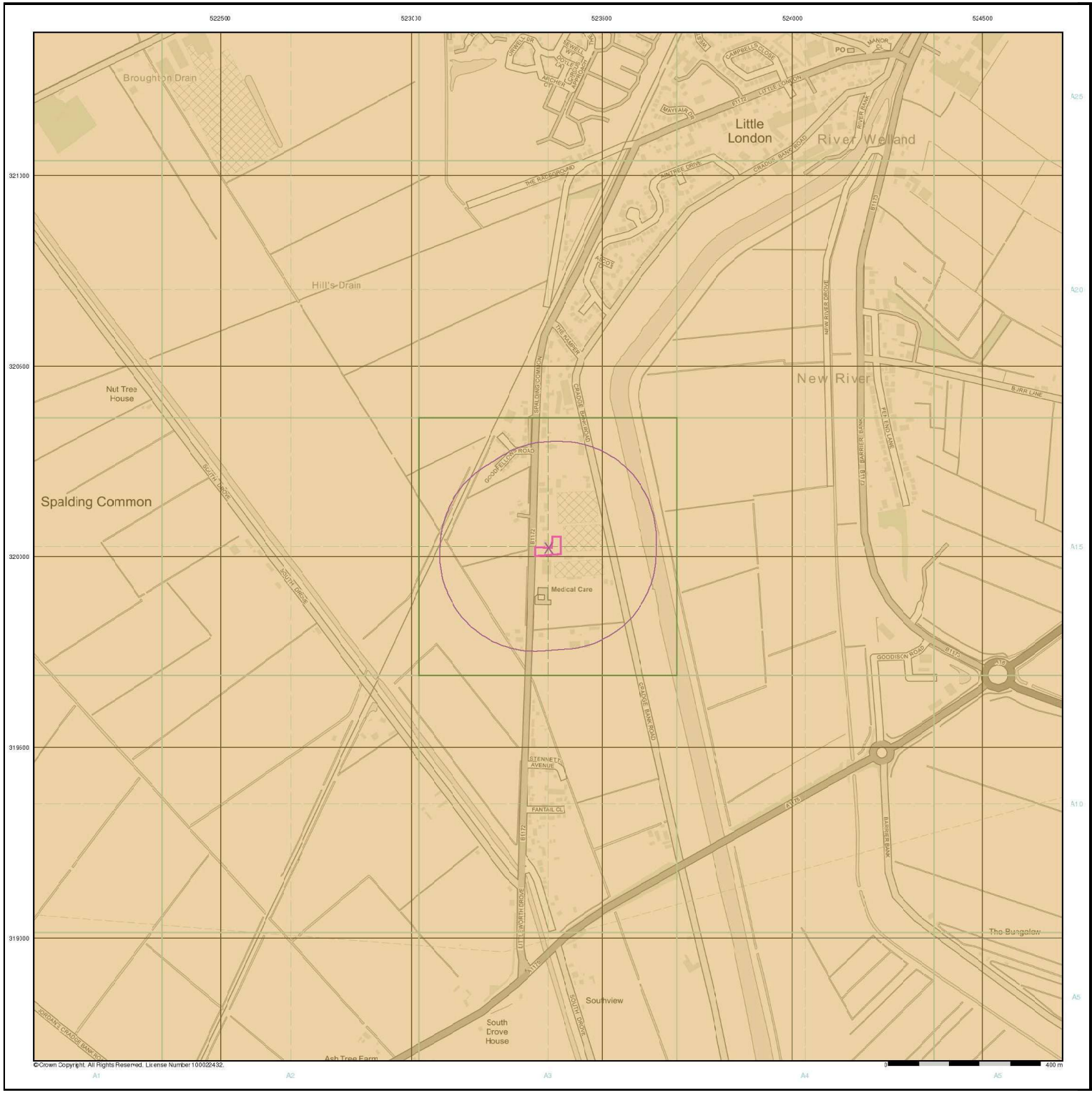
Order Details:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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Fax: 0844 844 9951
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General

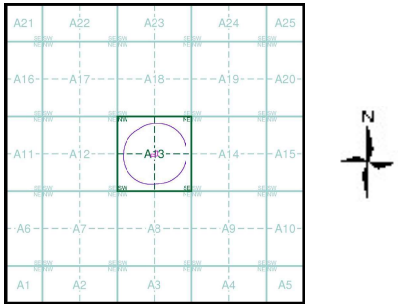
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



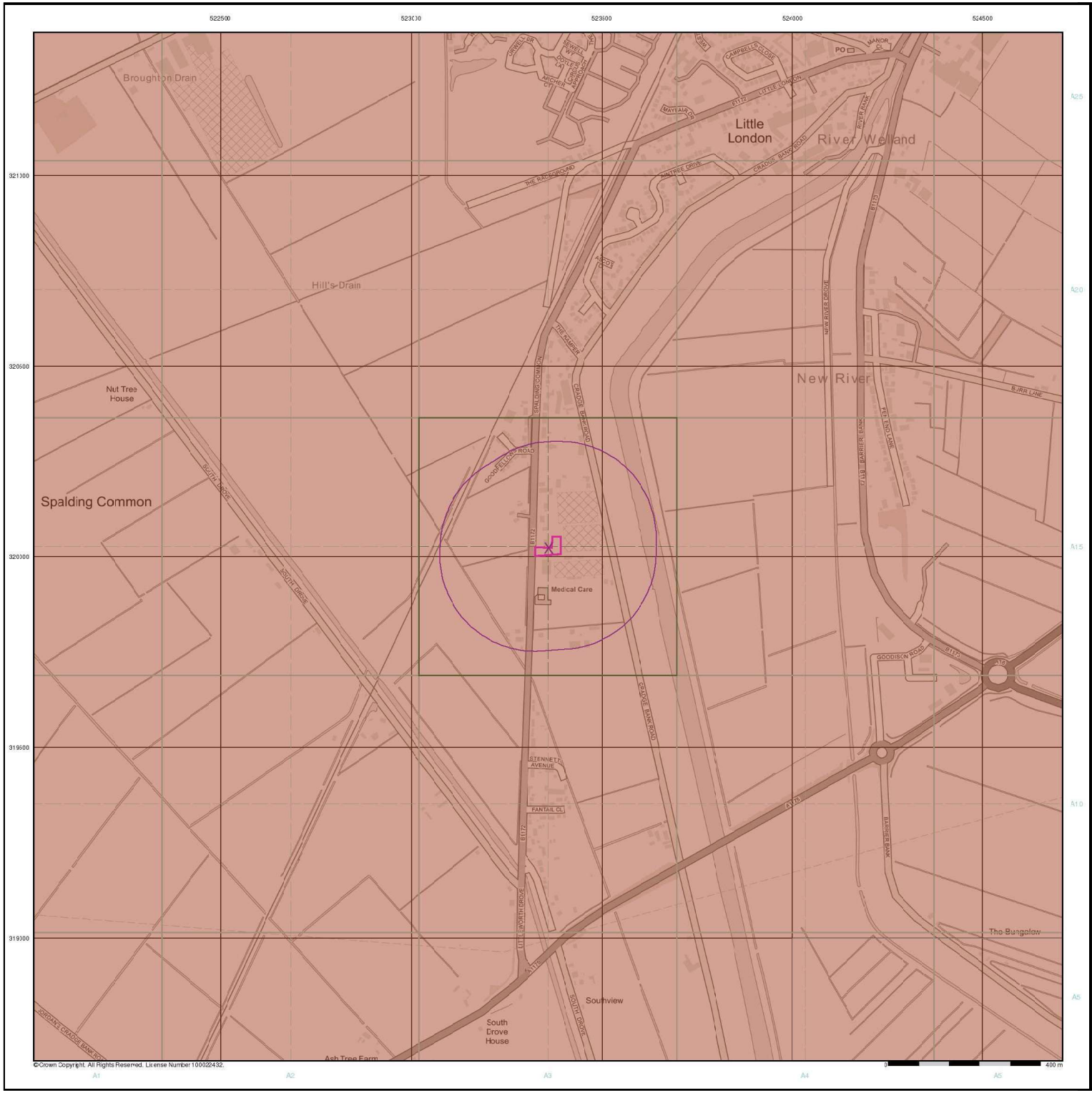
Order Details

Order Details:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

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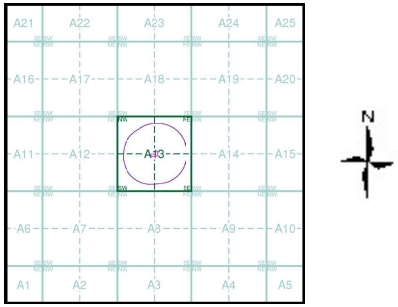
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

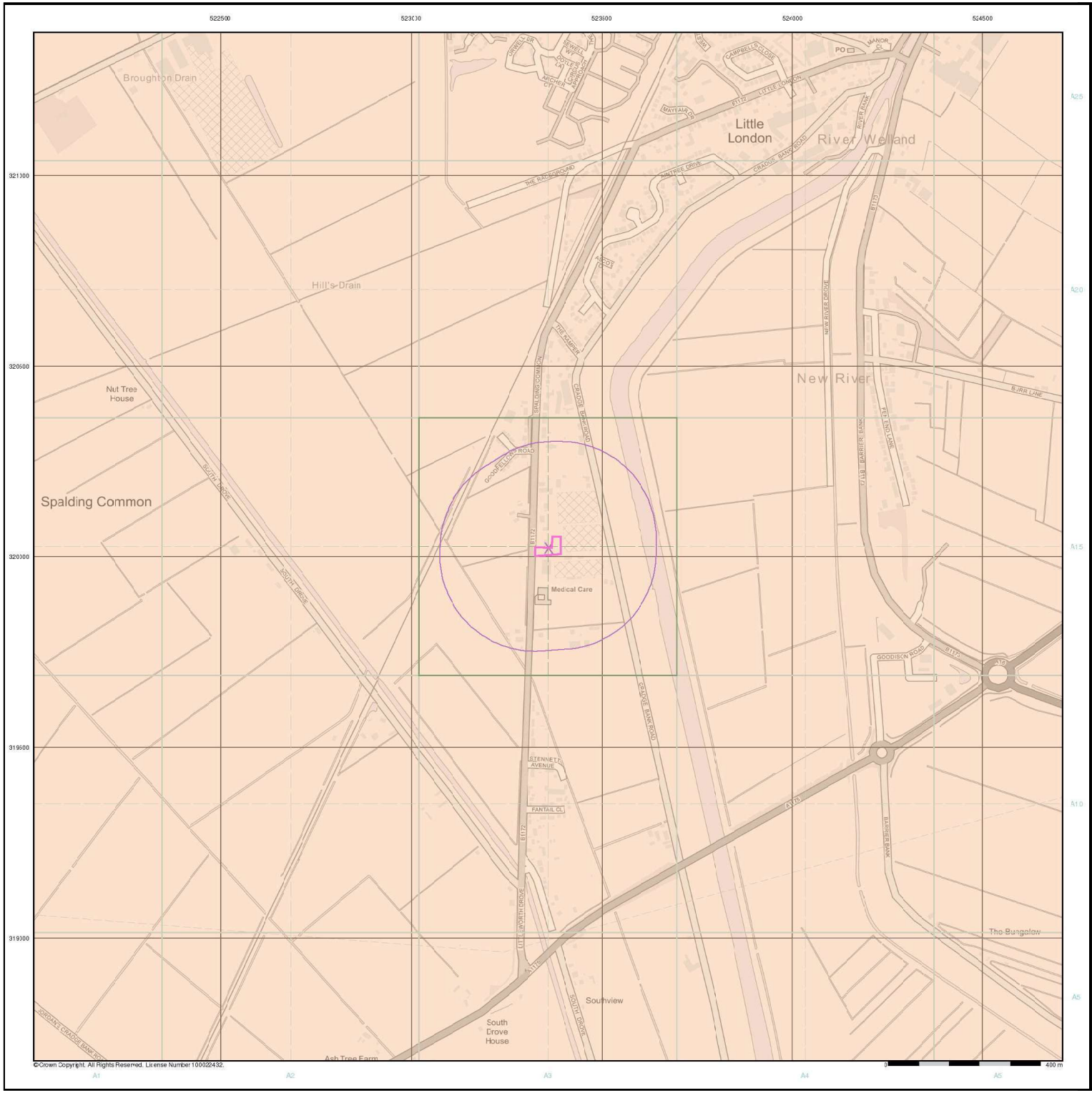
Order Details:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
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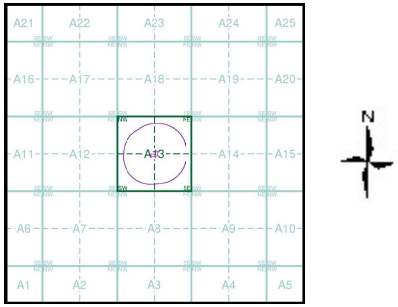
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



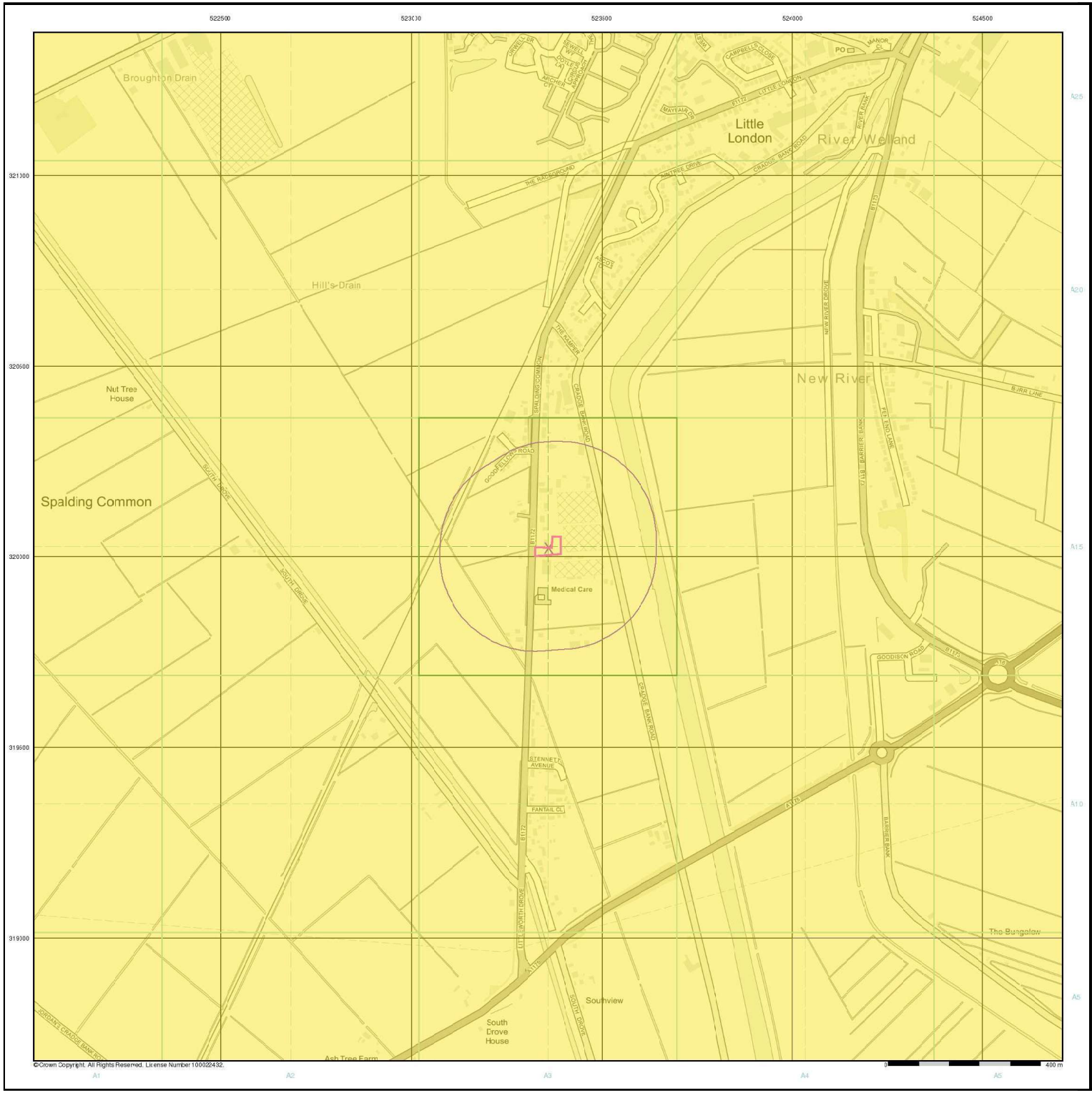
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Order Details:	332430294_1_1
Customer Ref:	D44007
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Slice:	A
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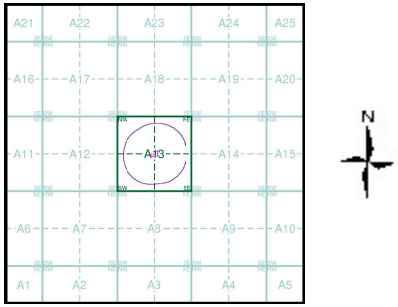
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



Order Details

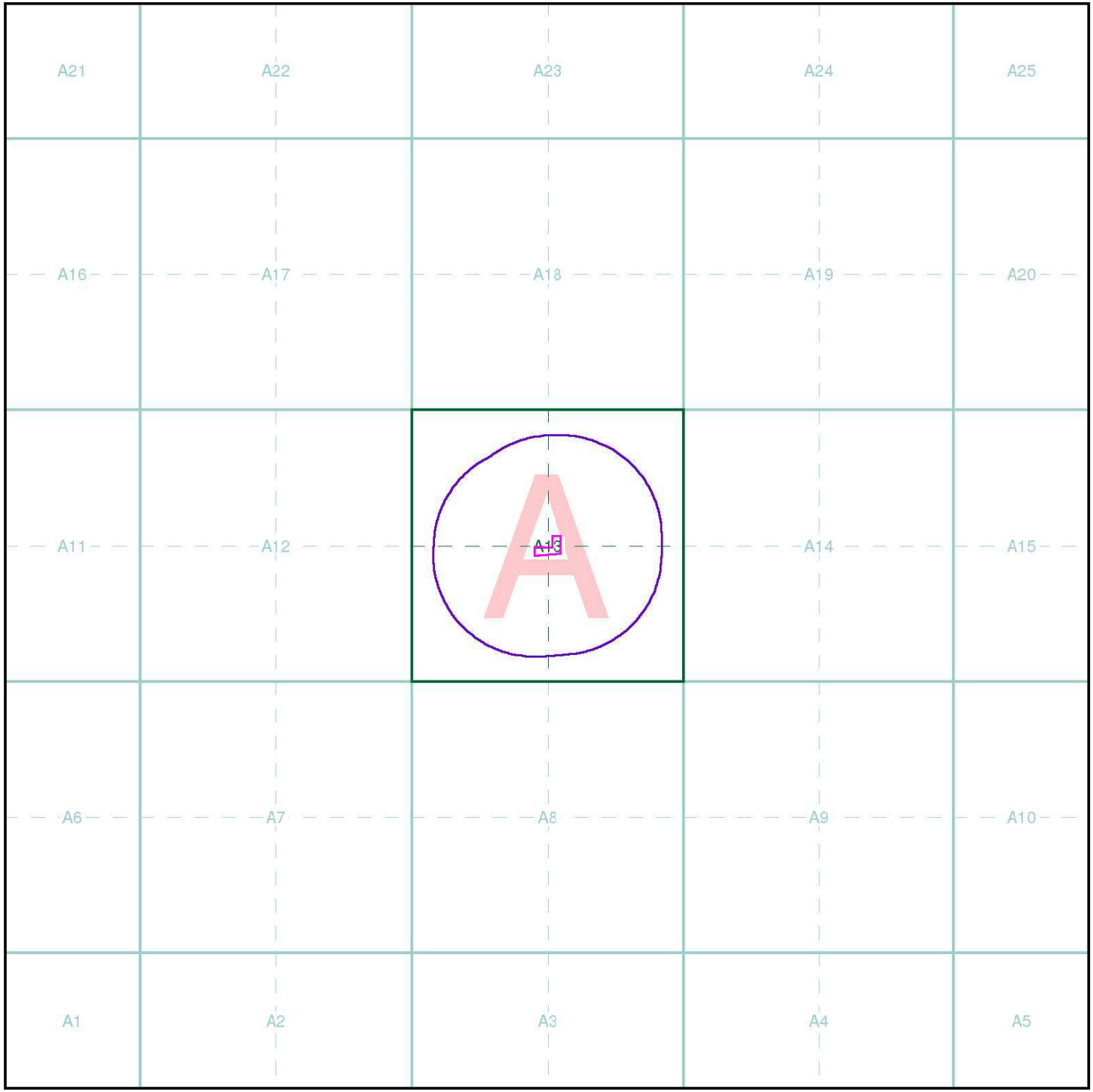
Order Details:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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Web: www.envirocheck.co.uk



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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:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr J Hollands, GeoDyne Ltd, Clarendon House, Clarendon Business Park, Clumber Avenue, Nottingham, NG5 1AH

Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523370, 320020
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

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http://www.landmarkinfo.co.uk/Terms/Show/515

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Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
332430294_1_1

Customer Reference:
D44007

National Grid Reference:
523360, 320020

Slice:
A

Site Area (Ha):
0.2

Search Buffer (m):
250

Site Details:

Millfield House, Spalding Common
Spalding

Client Details:

Mr J Hollands
GeoDyne Ltd
Clarendon House
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Nottingham
NG5 1AH

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Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	-
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	-
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	-
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	1
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	2
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	3
Data Suppliers	4
Useful Contacts	5

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

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

Report Version v53.0

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

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Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000
1	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
2	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000
3	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
4	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000
5	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
6	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000
7	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (N)	0	1	523362 320024
8	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	2	1	523362 320000

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Ordnance Survey Plan	TF2320	1968
Ordnance Survey Plan	TF2319	1969

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

1:10,560	Mapsheet	Published Date
Lincolnshire	142_NW	1889
Lincolnshire	142_SW	1890
Lincolnshire	142_NW	1906
Lincolnshire	142_SW	1906
Lincolnshire	142_NW	1932
Lincolnshire	142_NW	1938
Lincolnshire	142_SW	1952
Ordnance Survey Plan	TF21NW	1958
Ordnance Survey Plan	TF22SW	1959
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	TF21NW	1979
Ordnance Survey Plan	TF22SW	1992

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	June 2023	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	February 2023	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	December 2022	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	December 2022	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	July 2023	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	 As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	

Data Suppliers

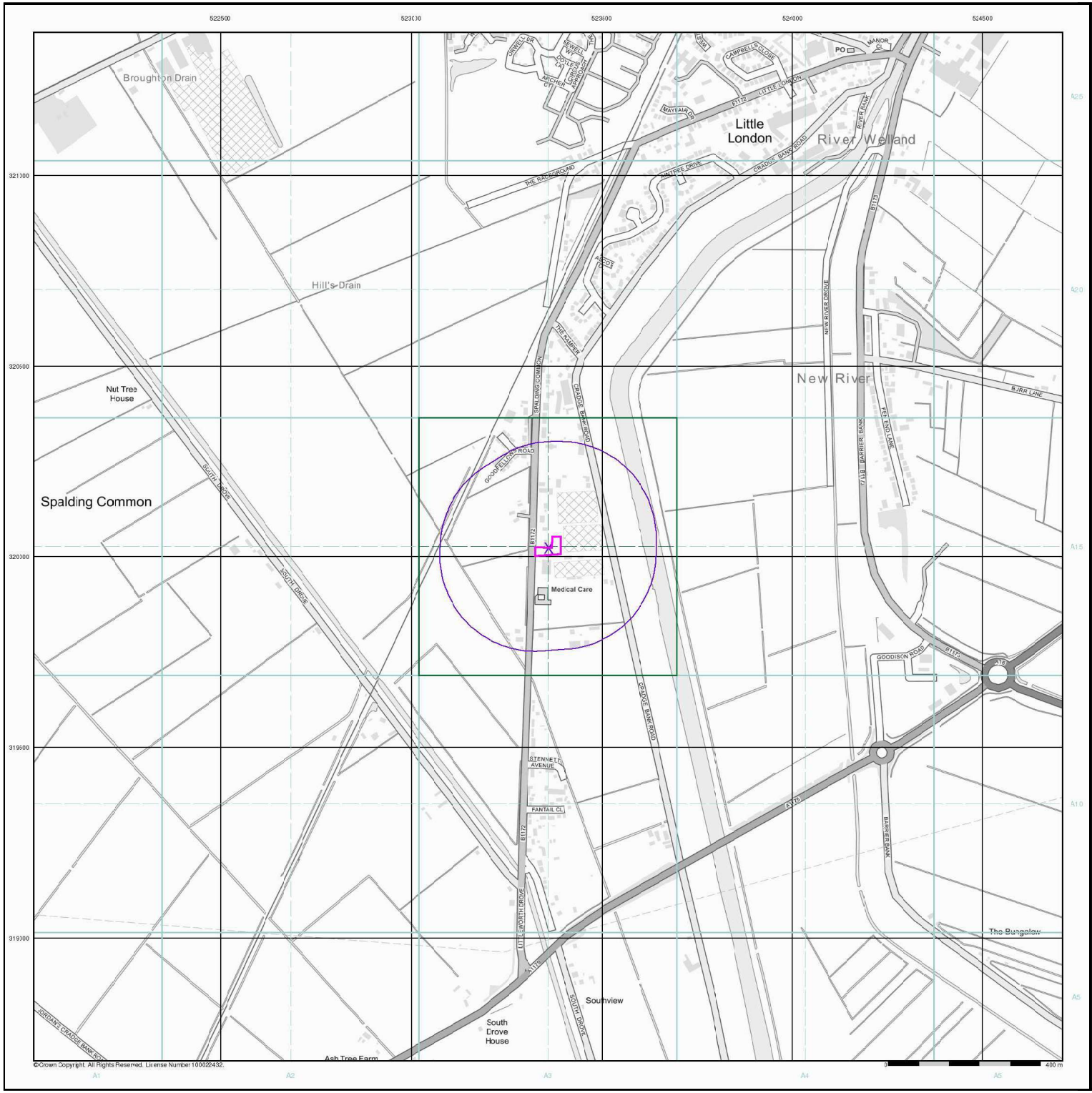
A selection of organisations who provide data within this report

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

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Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



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Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

Historical Land Use

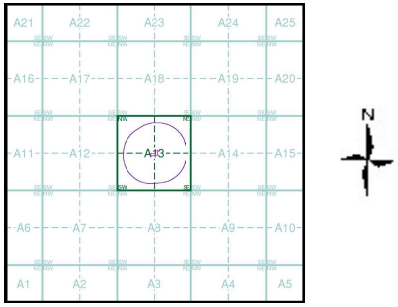
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

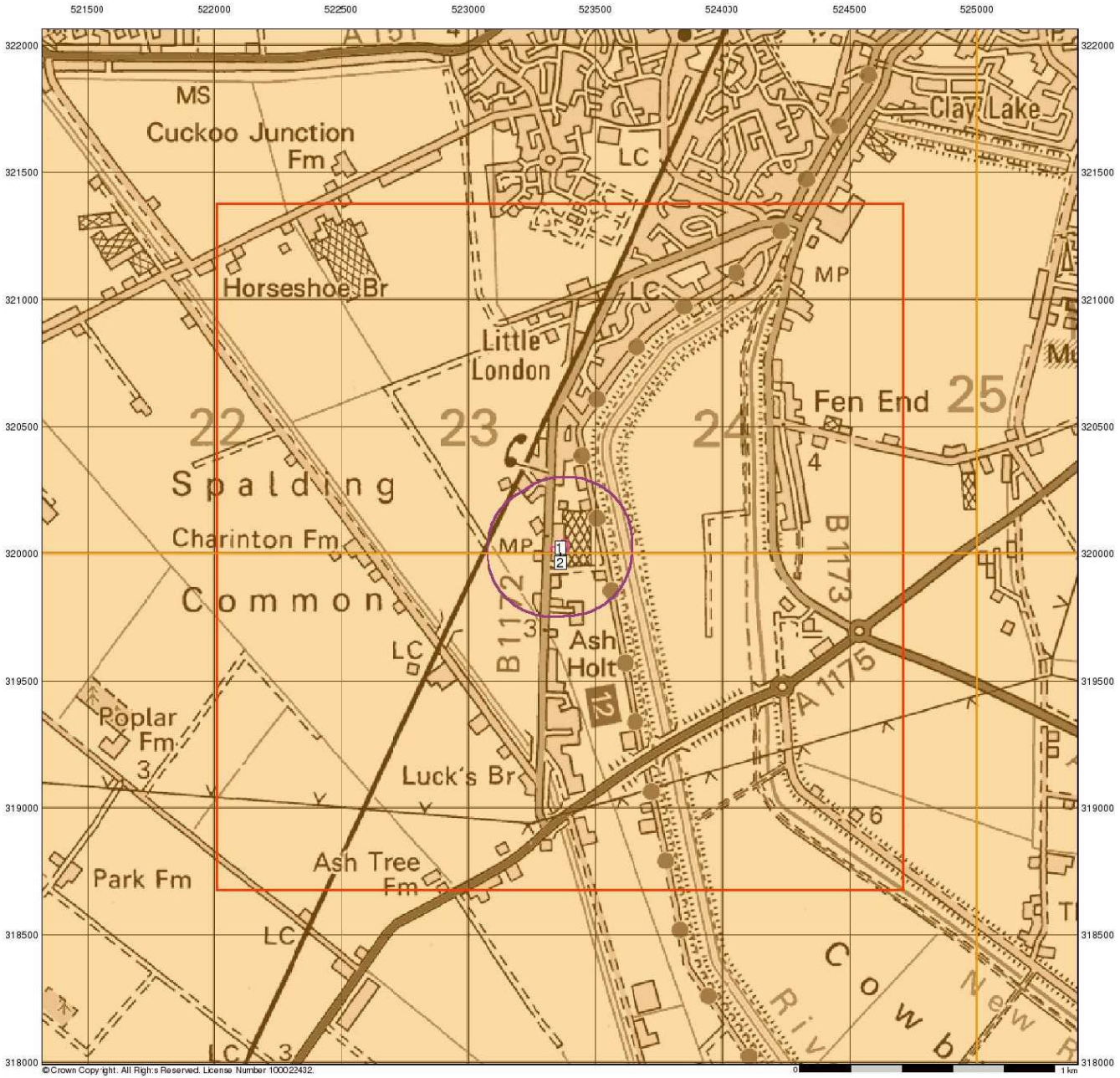
Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

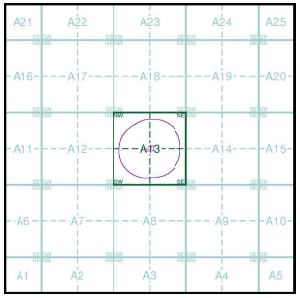
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



Order Details

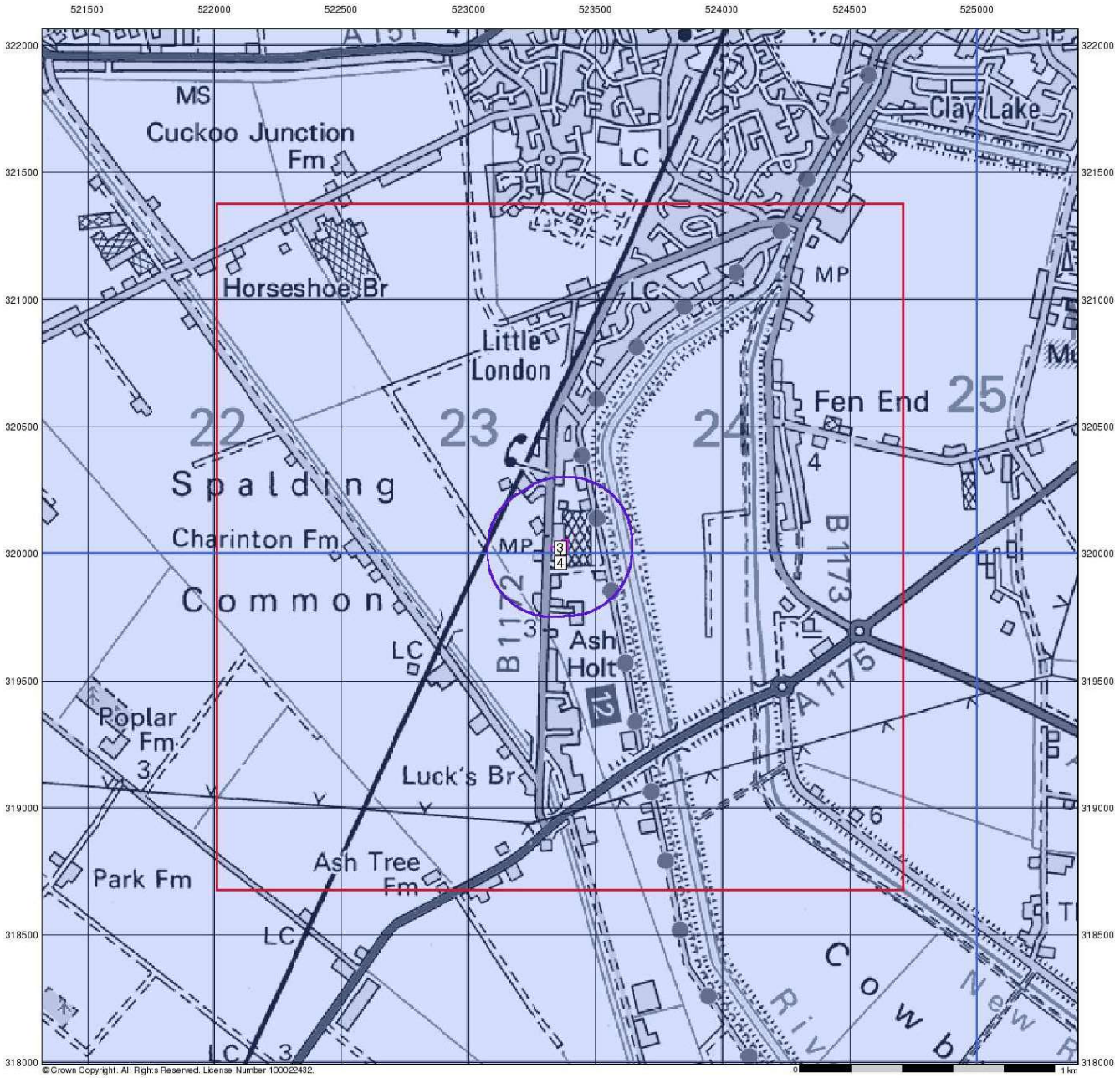
Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

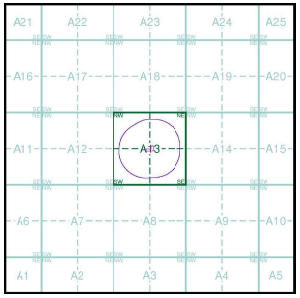
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

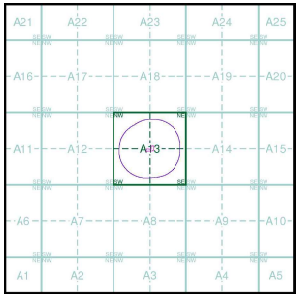
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



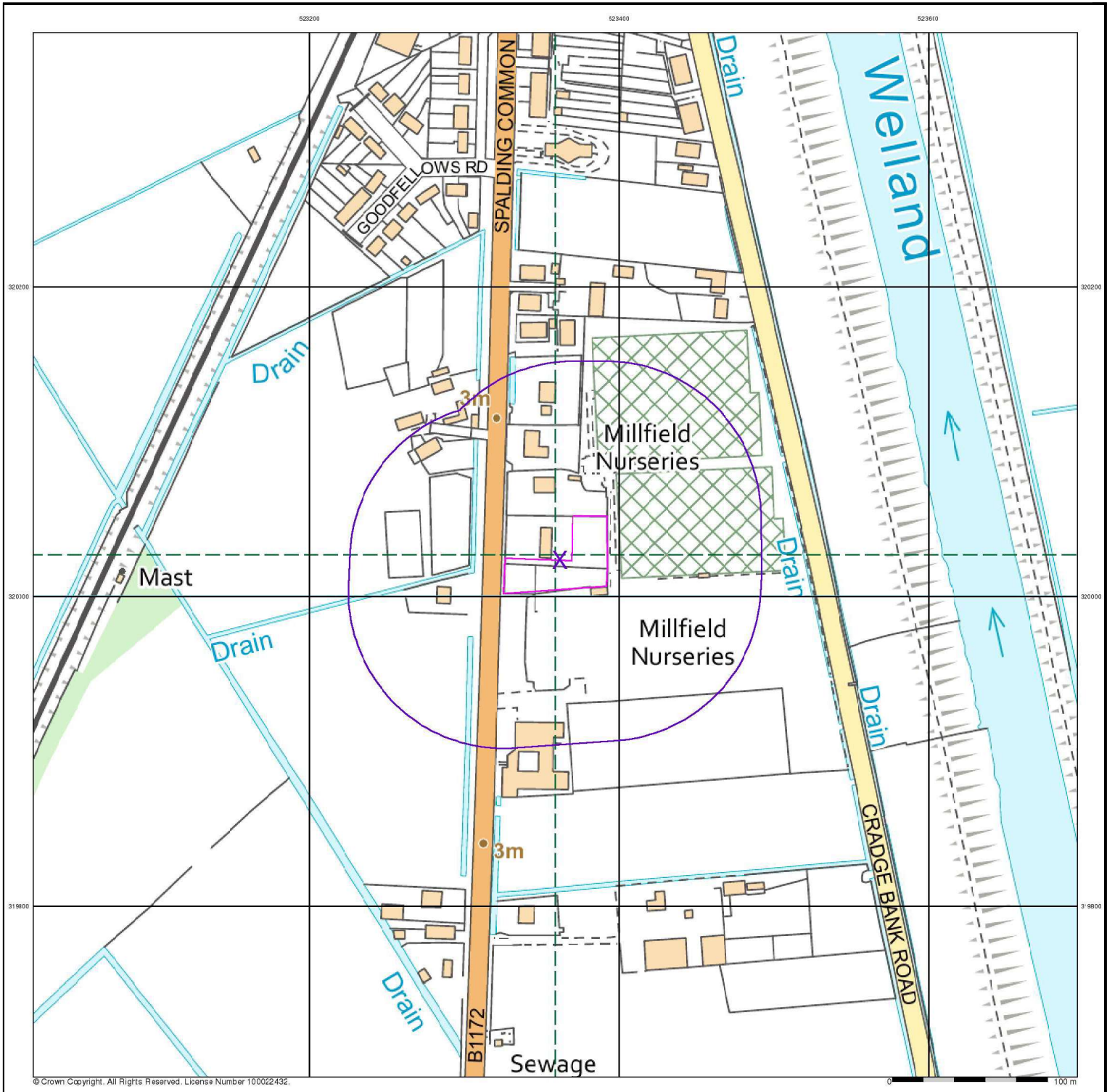
Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Search Buffer (m):	250

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

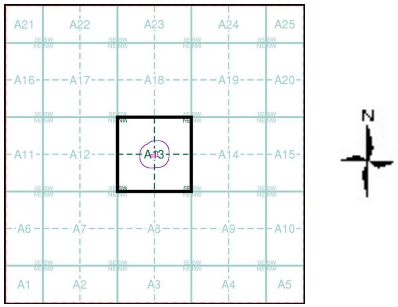
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▢
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▤
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▢

Mining and Ground Stability - Segment A13



Order Details

Order Number:	332430294_1_1
Customer Ref:	D44007
National Grid Reference:	523360, 320020
Slice:	A
Site Area (Ha):	0.2
Plot Buffer (m):	100

Site Details

Millfield House, Spalding Common, Spalding

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

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APPENDIX X

Exploratory Hole Location Plan
(Figure No. D44007/04)



- © This drawing and the details depicted are the copyright of *GeoDyne Limited* and may not be reproduced except by written permission.
- Based on drawing entitled 'Site Plan' by Seagate Homes Drawing No. MHS-SH-PD-SP-02-C Rev C Dated: 03/06/2023. Used, edited and reproduced with permission of the Client.

Project No.	D44007
Client	Seagate Homes
Project	Millfield House, Spalding Common, Spalding
Title	Exploratory Hole Location Plan
Drawn By	SJ
Checked By	DB
Approved By	PK
Scale	NTS
Date Drawn	16/02/2024
Revision	
Figure No.	D44007/04

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Nottingham 0115 962 0001
Derby 01332 290 798

info@geodyne.co.uk
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APPENDIX XI

Exploratory Hole Logs

GeoDyne
9 Brunel Parkway, Pride Park, Derby DE24 8HR
Tel: 01332 290798
email: info@geodyne.co.uk

TP1

Project No: D44007

Sheet 1 of 1

Description of Strata	Legend	Depth (m)	Sample Ref	Sample Type	Field Test Type	Field Test Result	Ground-water
Dark brown slightly sandy silty topsoil (MADE GROUND - TOPSOIL)		0.05 - 0.15	TJ	D/J			
		0.15					
Light brown slightly sandy slightly gravelly clayey silt containing fine to medium subangular flint (DISTURBED GROUND - REWORKED NATURAL STRATA) ...Natural strata encountered from 0.15m in the southern portion of the trial pit (as described below)		0.40 - 0.60	TJ	D/J			
...metal pipe encountered at 0.70m and possible land drain		0.75					▽
Firm light brown sandy SILT (TIDAL FLAT DEPOSITS)		0.90	TJ	D/J			
End of Trial Pit at 1.20m		1.20					▽

Remarks:

1.Metal pipe encountered at 0.70m. Trial pit moved to the south.
2.Sides generally stable.
3.Water encountered at 0.70m with a further seepage encountered at 1.20m.
4.Trial pit terminated at 1.20m within natural soils due to restricted access for the trial pit around building equipment, services and standing water.

Key: B = Bulk Sample D = Disturbed Sample W = Water Sample SV = Shear Vane (kN/m2) P = Penetrometer (kN/m2)
J = Jar Sample V = Vial Sample ▽ = Water Strike (m) ▼ = Steady Water Level (m)

Project: Millfield House, Spalding Common			**Client:** Seagate Homes	
Logged: DB	**Checked:** DB	**Field Book Ref:** DB23/02	**Plant:** JCB 3CX	**Drawing No.** TP1
Date: 02/02/2024	**Approved:** PK		**Scale:** 1:20	

GeoDyne
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Tel: 01332 290798
email: info@geodyne.co.uk

TP2

Project No: D44007

Sheet 1 of 1

Description of Strata	Legend	Depth (m)	Sample Ref	Sample Type	Field Test Type	Field Test Result	Ground-water
Light grey brown limestone gravel and orange brown fine to coarse sand (building materials) (MADE GROUND)		0.05					
		0.10 - 0.20	TJ	D/J			
Dark brown sandy silty clayey TOPSOIL (TOPSOIL)		0.20					
Soft to firm initially brown clayey sandy SILT becoming soft silty CLAY (TIDAL FLAT DEPOSITS)							
...tree roots upto 60mm diameter encountered to 0.60m depth							▽
		0.90 - 1.10	TJB	D/J/B			
End of Trial Pit at 2.80m		2.80					

Remarks:

1.Sides generally stable.
2.Water encountered at 0.80m.

Key: B = Bulk Sample D = Disturbed Sample W = Water Sample SV = Shear Vane (kN/m2) P = Penetrometer (kN/m2)
J = Jar Sample V = Vial Sample ▽ = Water Strike (m) ▼ = Steady Water Level (m)

Project: Millfield House, Spalding Common			**Client:** Seagate Homes	
Logged: DB	**Checked:** DB	**Field Book Ref:** DB23/02	**Plant:** JCB 3CX	**Drawing No.** TP2
Date: 02/02/2024	**Approved:** PK		**Scale:** 1:20	

GeoDyne
9 Brunel Parkway, Pride Park, Derby DE24 8HR
Tel: 01332 290798
email: info@geodyne.co.uk

TP3

Project No: D44007

Sheet 1 of 1

Description of Strata	Legend	Depth (m)	Sample Ref	Sample Type	Field Test Type	Field Test Result	Ground-water
Brown to dark brown clayey silty TOPSOIL (TOPSOIL)		0.05 - 0.15	TJ	D/J			
Firm becoming soft to firm and soft brown sandy SILT (TIDAL FLAT DEPOSITS)		0.20					
...tree roots upto 18mm diameter encountered to a depth of 0.70m		0.70 - 0.80	TJB	D/J/B			▽
...becoming grey with a slightly organic odour at 2.30m							
End of Trial Pit at 2.70m		2.70					

Remarks:

1.Sides collapsed to 0.70m when pit reached a depth of 2.20m.
2.Water encountered at 0.75m.

Key: B = Bulk Sample D = Disturbed Sample W = Water Sample SV = Shear Vane (kN/m2) P = Penetrometer (kN/m2)
J = Jar Sample V = Vial Sample ▽ = Water Strike (m) ▼ = Steady Water Level (m)

Project: Millfield House, Spalding Common			**Client:** Seagate Homes	
Logged: DB	**Checked:** DB	**Field Book Ref:** DB23/02	**Plant:** JCB 3CX	**Drawing No.** TP3
Date: 02/02/2024	**Approved:** PK		**Scale:** 1:20	

GeoDyne
9 Brunel Parkway, Pride Park, Derby DE24 8HR
Tel: 01332 290798
email: info@geodyne.co.uk

TP4

Project No: D44007

Sheet 1 of 1

Description of Strata	Legend	Depth (m)	Sample Ref	Sample Type	Field Test Type	Field Test Result	Ground-water
Dark brown clayey silty TOPSOIL (TOPSOIL)		0.05 - 0.15	TJ	D/J			
		0.15					
Firm becoming soft to firm then soft sandy SILT (TIDAL FLAT DEPOSITS)		0.30 - 0.40	TJ	D/J			
							▽
...pocket of dark brown silty topsoil encountered to 1.10m in north side of pit		1.30 - 1.50	B	B			
...becoming dark grey brown at 2.00m		2.00 - 2.20	B	B			
End of Trial Pit at 2.40m		2.40					

Remarks:

1.Sides collapsed to 0.60m when pit reached a depth of 1.60m. Sides continued to collapse with further excavation.
2.Water encountered at 0.75m.

Key: B = Bulk Sample D = Disturbed Sample W = Water Sample SV = Shear Vane (kN/m2) P = Penetrometer (kN/m2)
J = Jar Sample V = Vial Sample ▽ = Water Strike (m) ▼ = Steady Water Level (m)

Project: Millfield House, Spalding Common			**Client:** Seagate Homes	
Logged: DB	**Checked:** DB	**Field Book Ref:** DB23/02	**Plant:** JCB 3CX	**Drawing No.** TP4
Date: 02/02/2024	**Approved:** PK		**Scale:** 1:20	

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APPENDIX XII

Plates



Project No.	D44007	Drawn	SJ
Client	Seagate Homes	Checked	DB
		Approved	PK
Project	Millfield House Spalding Common Spalding	Scale	NTS
		Date Drawn	05/02/2024
		Rev.	
Title	TP1 - completed excavation	**Plate No.**	**1**

GeoDyne



Project No.	D44007	Drawn	SJ
Client	Seagate Homes	Checked	DB
		Approved	PK
Project	Millfield House Spalding Common Spalding	Scale	NTS
		Date Drawn	05/02/2024
		Rev.	
Title	TP2 - completed excavation	**Plate No.**	**2**

GeoDyne



Project No.	D44007	Drawn	SJ
Client	Seagate Homes	Checked	DB
		Approved	PK
Project	Millfield House Spalding Common Spalding	Scale	NTS
		Date Drawn	05/02/2024
		Rev.	
Title	TP3 - completed excavation	**Plate No.**	**3**

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Project No.	D44007	Drawn	SJ
Client	Seagate Homes	Checked	DB
		Approved	PK
Project	Millfield House Spalding Common Spalding	Scale	NTS
		Date Drawn	05/02/2024
		Rev.	
Title	TP4 - completed excavation	**Plate No.**	**4**

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APPENDIX XIII

Laboratory Soil Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/01145
Issue Number: 1 **Date:** 12 February, 2024

Client:
GeoDyne (Derby)
9 Brunel Parkway
Pride Park
Derby
Derbyshire
UK
DE24 8HR

Project Manager: Daniel Brunt
Project Name: Millfield House, Spalding Common, Spalding
Project Ref: D44007
Order No: D44007
Date Samples Received: 06/02/24
Date Instructions Received: 06/02/24
Date Analysis Completed: 12/02/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/01145

Client Project Name: Millfield House, Spalding Common, Spalding

Client Project Ref: D44007

Lab Sample ID	24/01145/1	24/01145/2	24/01145/4	24/01145/8				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP4						
Depth to Top	0.05	0.40	0.10	0.05						
Depth To Bottom	0.15	0.60	0.20	0.15						
Date Sampled	02-Feb-24	02-Feb-24	02-Feb-24	02-Feb-24						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	3	3	3	3						
% Stones >10mm$_A$	<0.1	<0.1	<0.1	<0.1				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.82	8.20	8.48	8.30				pH	0.01	A-T-031s
Total Organic Carbon$_D$$^{M\#}$	3.25	1.35	2.07	1.60				% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	5	8	4	6				mg/kg	1	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5				mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	16	23	16	15				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	15	19	22	15				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Chromium (trivalent)	15	19	22	15				mg/kg	1	Calc
Lead$_D$$^{M\#}$	28	30	49	31				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	14	14	13				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	65	51	60	55				mg/kg	5	A-T-024s

Envirolab Job Number: 24/01145

Client Project Name: Millfield House, Spalding Common, Spalding

Client Project Ref: D44007

Lab Sample ID	24/01145/1	24/01145/2	24/01145/4	24/01145/8				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP4						
Depth to Top	0.05	0.40	0.10	0.05						
Depth To Bottom	0.15	0.60	0.20	0.15						
Date Sampled	02-Feb-24	02-Feb-24	02-Feb-24	02-Feb-24						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	3	3	3	3						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	-	NAD	-						A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-						A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-						A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	-	N/A	-						A-T-045

Envirolab Job Number: 24/01145

Client Project Name: Millfield House, Spalding Common, Spalding

Client Project Ref: D44007

Lab Sample ID	24/01145/1	24/01145/2	24/01145/4	24/01145/8				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP2	TP4						
Depth to Top	0.05	0.40	0.10	0.05						
Depth To Bottom	0.15	0.60	0.20	0.15						
Date Sampled	02-Feb-24	02-Feb-24	02-Feb-24	02-Feb-24						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	3	3	3	3						
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Anthracene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Chrysene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Fluoranthene$_A^{M\#}$	<0.10	<0.10	0.15	<0.10				mg/kg	0.1	A-T-019s
Fluorene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Naphthalene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Phenanthrene$_A^{M\#}$	<0.10	<0.10	<0.10	<0.10				mg/kg	0.1	A-T-019s
Pyrene$_A^{M\#}$	<0.10	<0.10	0.12	<0.10				mg/kg	0.1	A-T-019s
Total PAH-16MS$_A$	<0.10	<0.10	0.27	<0.10				mg/kg	0.1	A-T-019s

Report Notes

General
This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and Interpretations expressed are outside our scope of accreditation.
The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing, and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25ºC / 11550µS/cm @ 20ºC fall outside the accreditation range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Analysis Dates

Lab Sample ID	24/01145/1	24/01145/2	24/01145/4	24/01145/8
Client Sample No				
Client Sample ID/Depth	TP1 0.05-0.15m	TP1 0.40-0.60m	TP2 0.10-0.20m	TP4 0.05-0.15m
Date Sampled	02/02/24	02/02/24	02/02/24	02/02/24
A-T-019s	09/02/2024	09/02/2024	09/02/2024	09/02/2024
A-T-024s	12/02/2024	12/02/2024	12/02/2024	12/02/2024
A-T-031s	12/02/2024	12/02/2024	12/02/2024	12/02/2024
A-T-032s	09/02/2024	09/02/2024	09/02/2024	09/02/2024
A-T-040s	12/02/2024	12/02/2024	12/02/2024	12/02/2024
A-T-044	08/02/2024	08/02/2024	08/02/2024	08/02/2024
A-T-045	07/02/2024		07/02/2024	
Calc	12/02/2024	12/02/2024	12/02/2024	12/02/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

GeoDyne

APPENDIX XIV

Conditions & Limitations

Conditions & Limitations

Phase I Desk Studies

1. Works undertaken to provide the basis of the Phase I Desk Study report comprise a review of information available from a number of sources/parties (potentially also including the Client) together with a walk over of the site (where applicable and included within the quotation). The opinions given in the Phase I Desk Study are based on the information available from third parties/sources that has been obtained within the available timeframe. GeoDyne Limited assumes all third party information to be true and correct and therefore cannot accept liability for the accuracy of such information supplied.

2. Should additional information become available that may affect the comments and opinions made within the Phase I Desk Study, GeoDyne Limited reserves the right to review such information and make modifications to comments/opinions as appropriate.

3. It should be borne in mind that a Phase I Desk Study collates available information to generate a conceptual model of the site. The actual geotechnical and environmental considerations can only be fully quantified by intrusive investigation works to confirm the accuracy of the conceptual site model.

Phase II Intrusive Investigations

1. Our quotation assumes that access to the site will be arranged by others at no cost to ourselves.

2. We have assumed that free access is available throughout to the entire site and that works can be undertaken during a single mobilisation. Where restricted access is encountered, or where additional unscheduled mobilisations are required, additional costs may be incurred to the client.

3. We have assumed that all available information relating to buried services will be supplied by the Client at no cost to ourselves. No responsibility will be accepted for damage to underground services that have not been brought to our prior attention by the Client.

4. All excavations/boreholes will be backfilled with compacted arisings upon completion, with any excess arisings left proud of ground levels. Excess arisings will not be removed from the site unless specifically requested by the Client. Where we are requested to remove excess arisings, all associated costs will be passed to the Client.

5. We will attempt to leave the site in a clean and tidy state, however, it must be understood that some disturbance of the site is unavoidable during intrusive works.

6. Exploratory holes are positioned approximately on site by GeoDyne Limited. Should the client require precise locations of all exploratory points, additional fees will be incurred. It must be borne in mind that backfilled trial pits can create 'soft spots', therefore, should the Client wish to designate 'no dig' zones, for example under the footprint of proposed structures, these must be brought to our attention prior to commencement of works.

7. Groundwater observations relate to conditions encountered at the time of investigation. It must be understood that groundwater levels may vary as a result of recent climatic conditions or seasonal variation.

8. Trial pits and boreholes examine only a small proportion of the total site area. No liability can be accepted for conditions not revealed in exploratory holes, particularly between positions. All extrapolations of available data are given in good faith.

Payment

1 Payment terms are strictly 28 days from the invoice date.

2 Prior to commencement of works, we require receipt of formal written instruction from the party accepting full financial responsibility for the work. In the absence of such an instruction, we would expect the instructing Consulting Engineers/Architects to accept full financial responsibility for the works.

3 Receipt of instruction to commence work shall be taken as acceptance and compliance of the foregoing conditions.

Liability

1. GeoDyne Limited offer £5,000,000.00 Professional Indemnity Insurance (in aggregate over the year). This shall be the limit of our liability for works undertaken. No individual liability shall be implied to, or accepted by, any employee for works undertaken for and on the behalf of GeoDyne Limited.