

### General

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

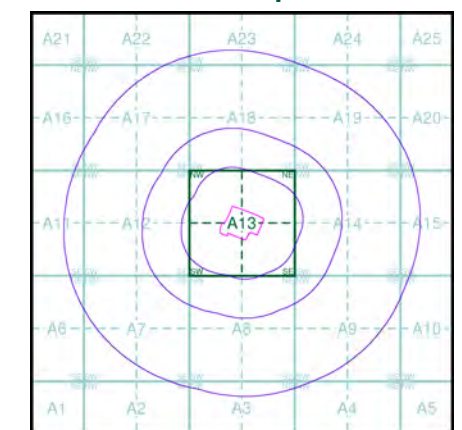
### OS Water Network Data

- |              |                         |
|--------------|-------------------------|
| Canal        | Drain                   |
| Reservoir    | Other                   |
| Foreshore    | Lake                    |
| Marsh        | Transfer                |
| Tidal River  | Lock Or Flight Of Locks |
| Inland River | Sea                     |

### Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

### OS Water Network Map - Slice A

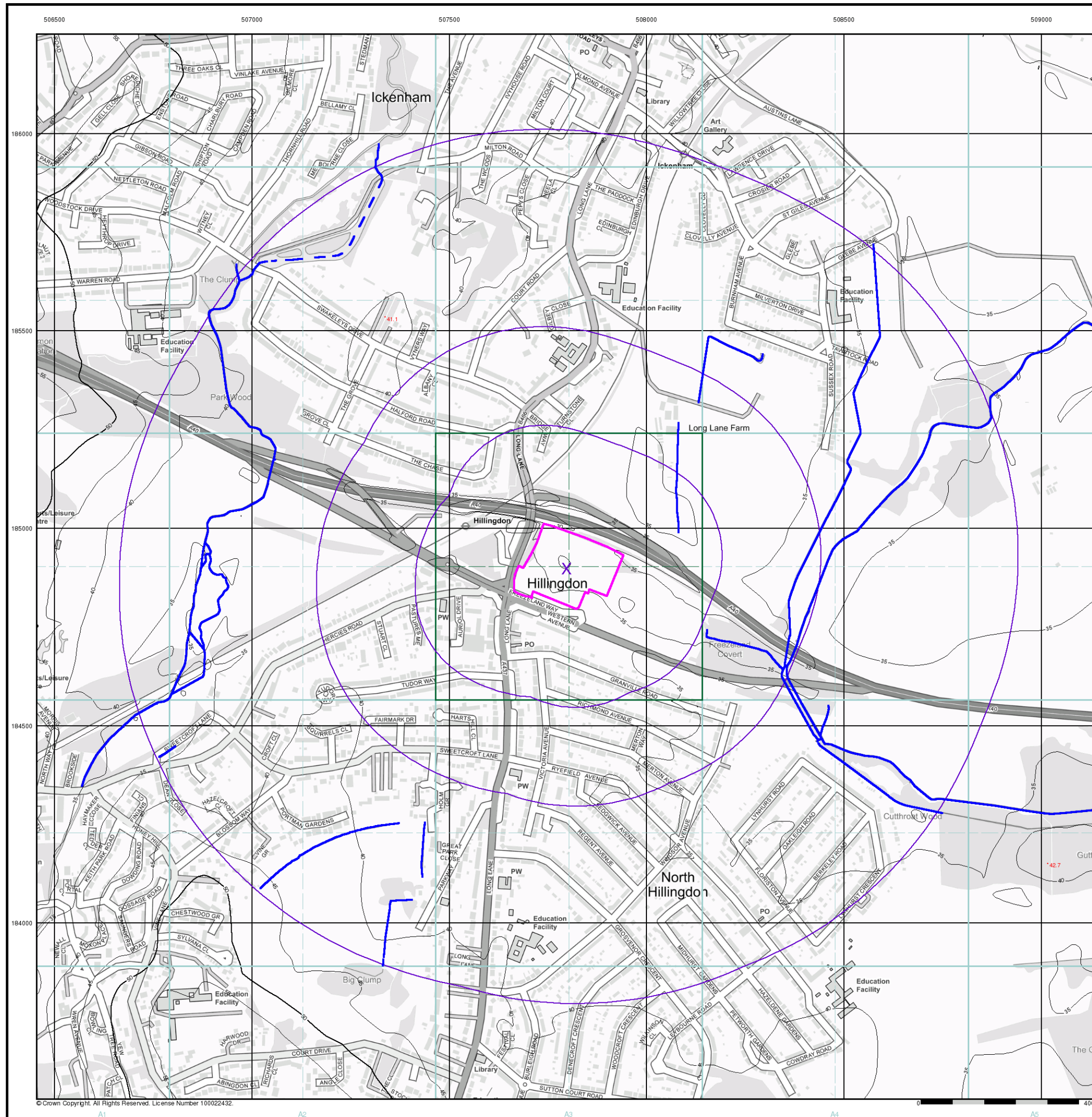


### Order Details

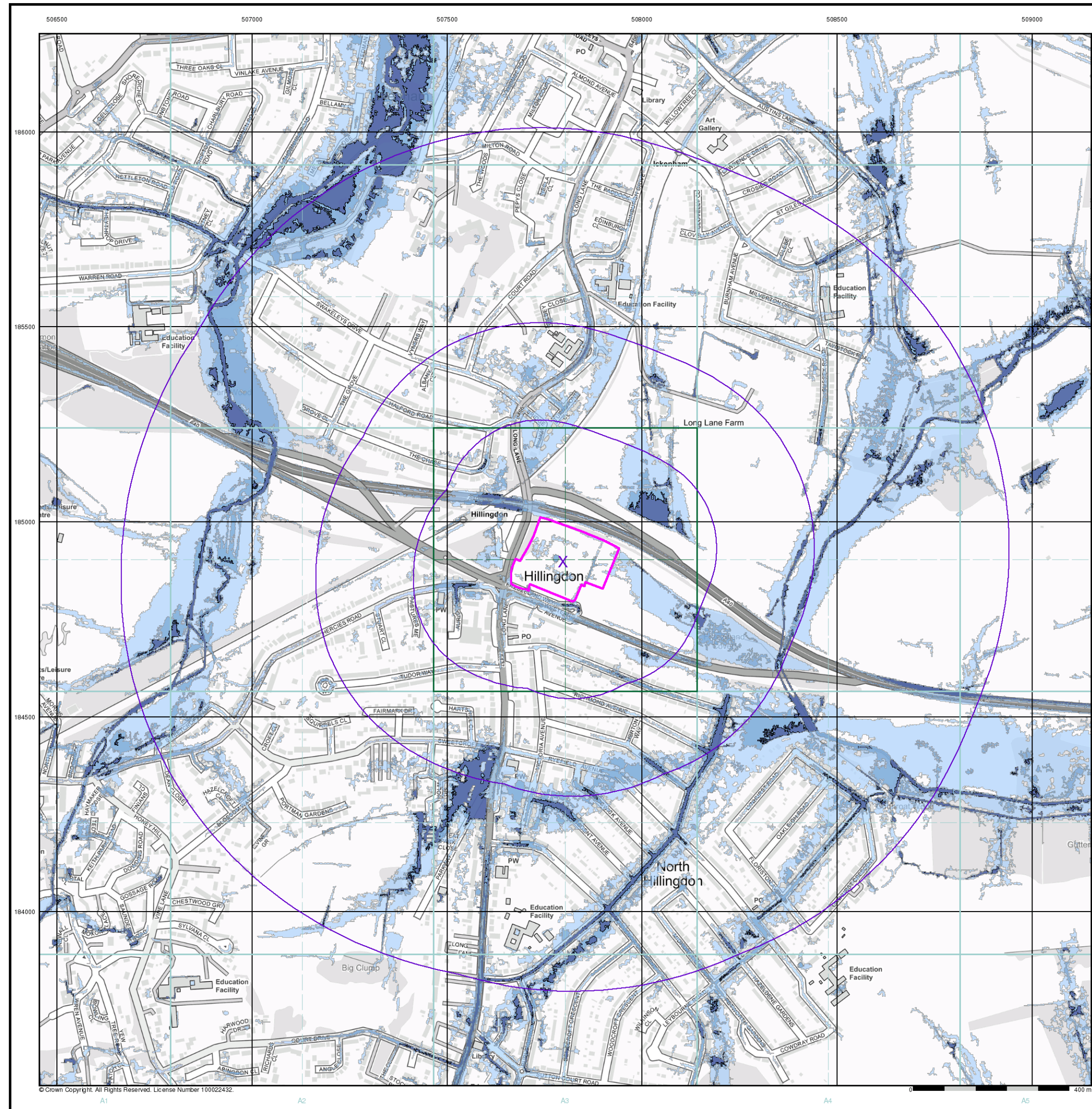
Order Number: 210572128\_1\_1  
 Customer Ref: 17-0420.03  
 National Grid Reference: 507800, 184900  
 Slice: A  
 Site Area (Ha): 3.65  
 Search Buffer (m): 1000

### Site Details

Gleeson Mcl Ltd, Long Lane, Hillingdon, UXBRIDGE, UB10 9NR







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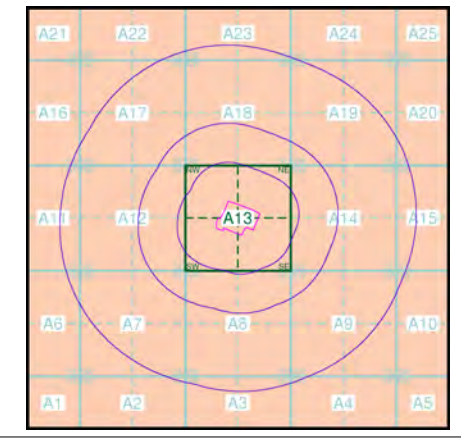
**Risk of Flooding from Surface Water**

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

**Suitability**

- See the suitability map below
- National to county
  - County to town
  - Town to street
  - Street to parcels of land
  - Property

**E/NRW Suitability Map - Slice A**



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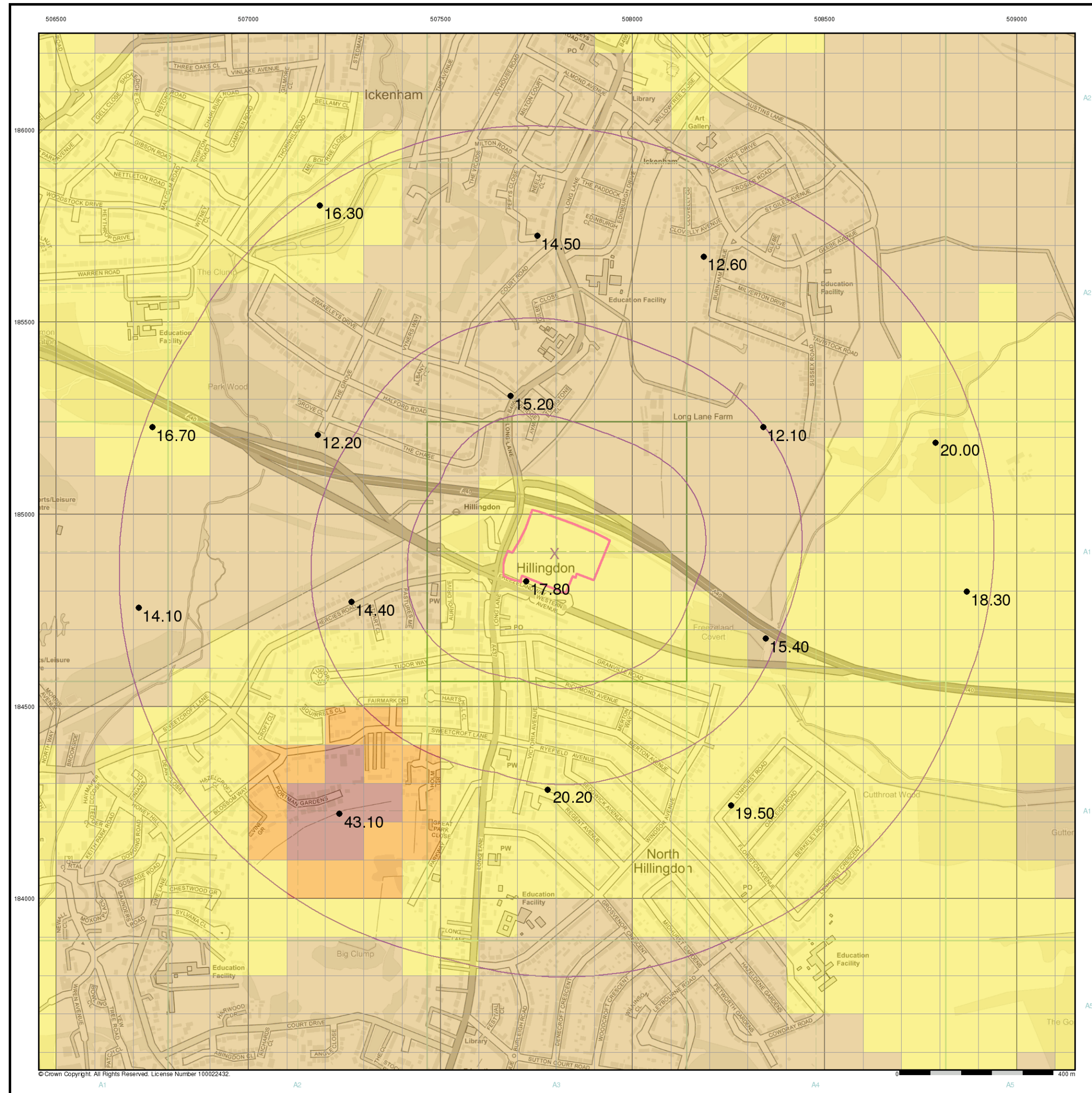
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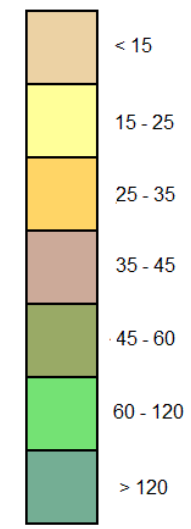
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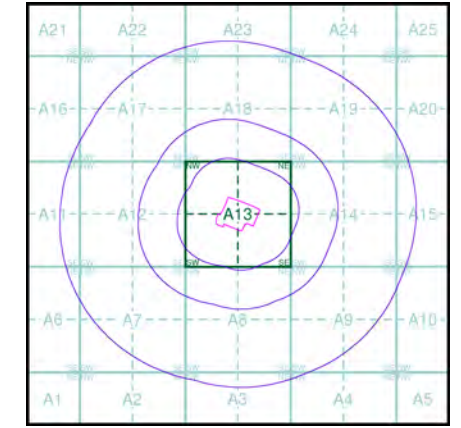
Urban Soil Chemistry Arsenic

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg



Urban Soil Chemistry Arsenic - Slice A



Order Details

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### General

Specified Site Specified Buffer(s) Bearing Reference Point

### Urban Soil Chemistry Cadmium

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

### Urban Soil Chemistry Cadmium - Slice A

### Order Details

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Customer Ref:	17-0420.03
National Grid Reference:	507800, 184900
Slice:	A
Site Area (Ha)	3.65
Search Buffer (m)	1000

### Site Details

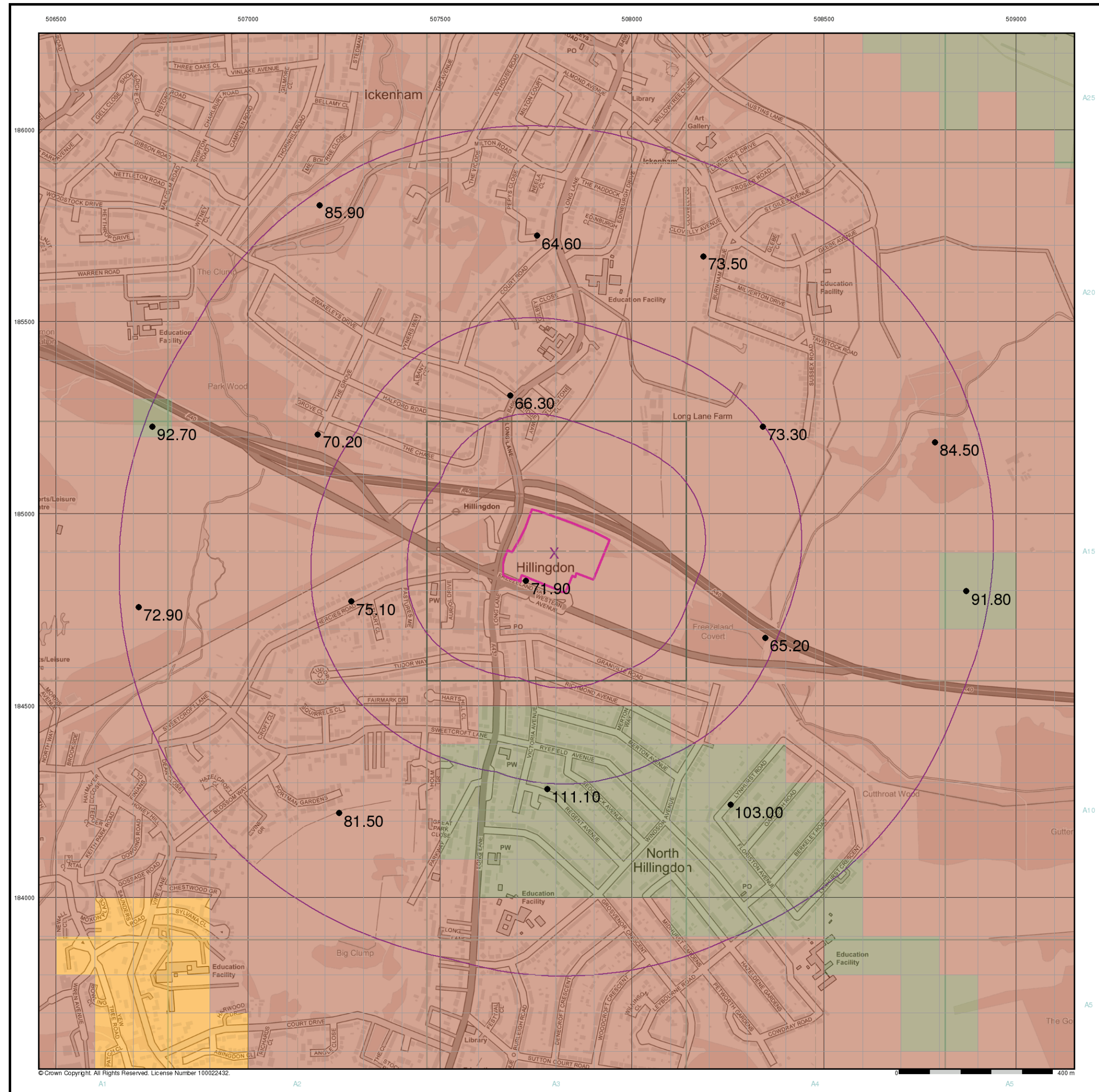
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### General

Specified Site      Specified Buffer(s)      Bearing Reference Point

### Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

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

### Urban Soil Chemistry Chromium - Slice A

### Order Details

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Slice:	A
Site Area (Ha)	3.65
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### Site Details

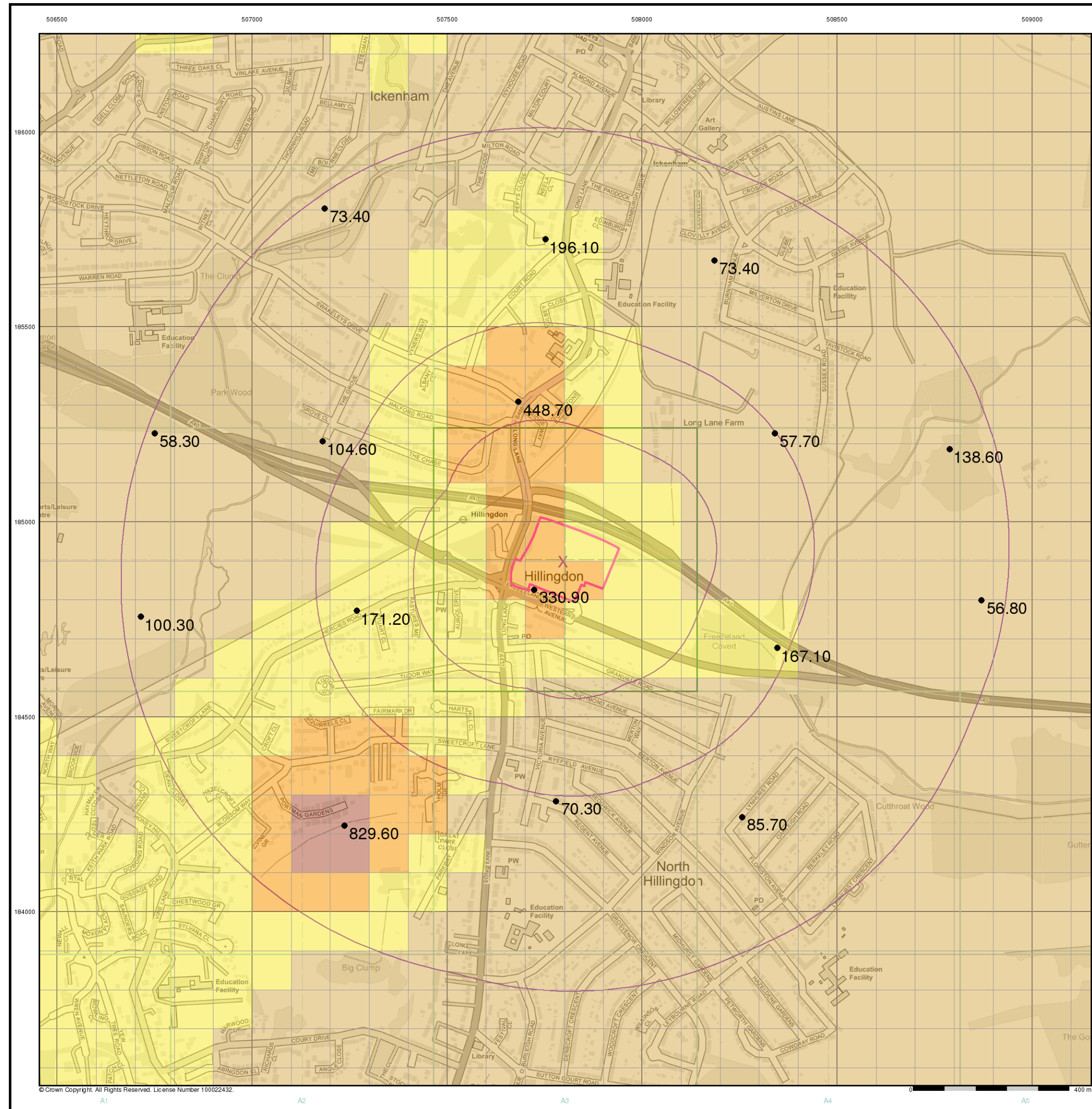
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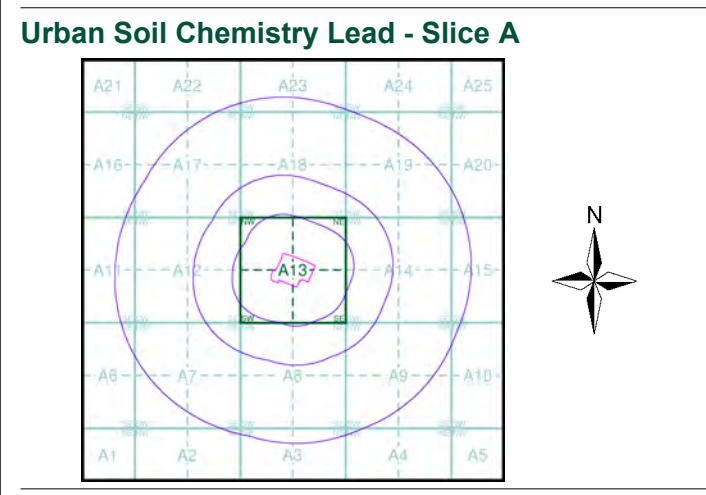
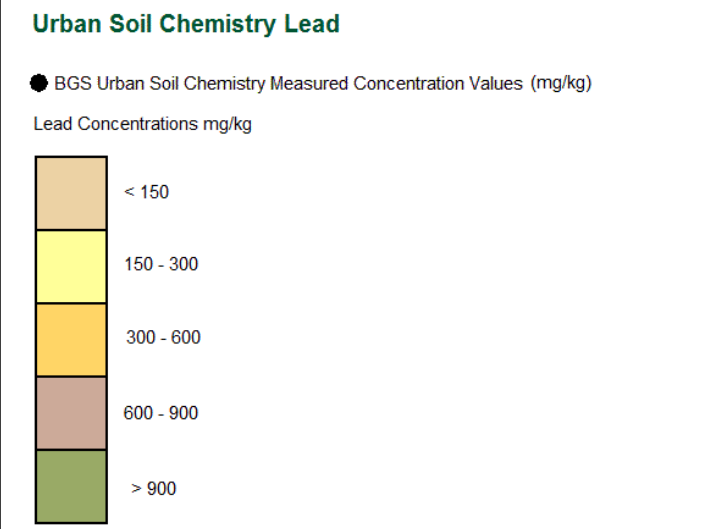
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**General**

Specified Site Specified Buffer(s) Bearing Reference Point



**Order Details**

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**Site Details**

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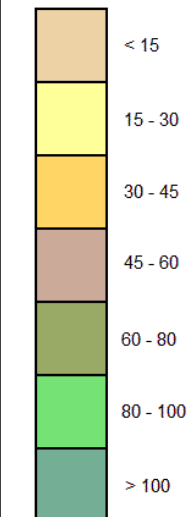
## General

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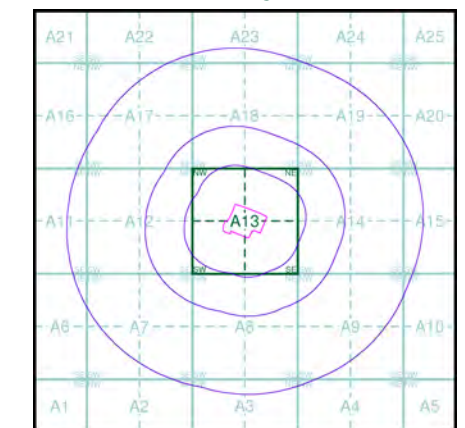
## Urban Soil Chemistry Nickel

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg



## Urban Soil Chemistry Nickel - Slice A



## Order Details

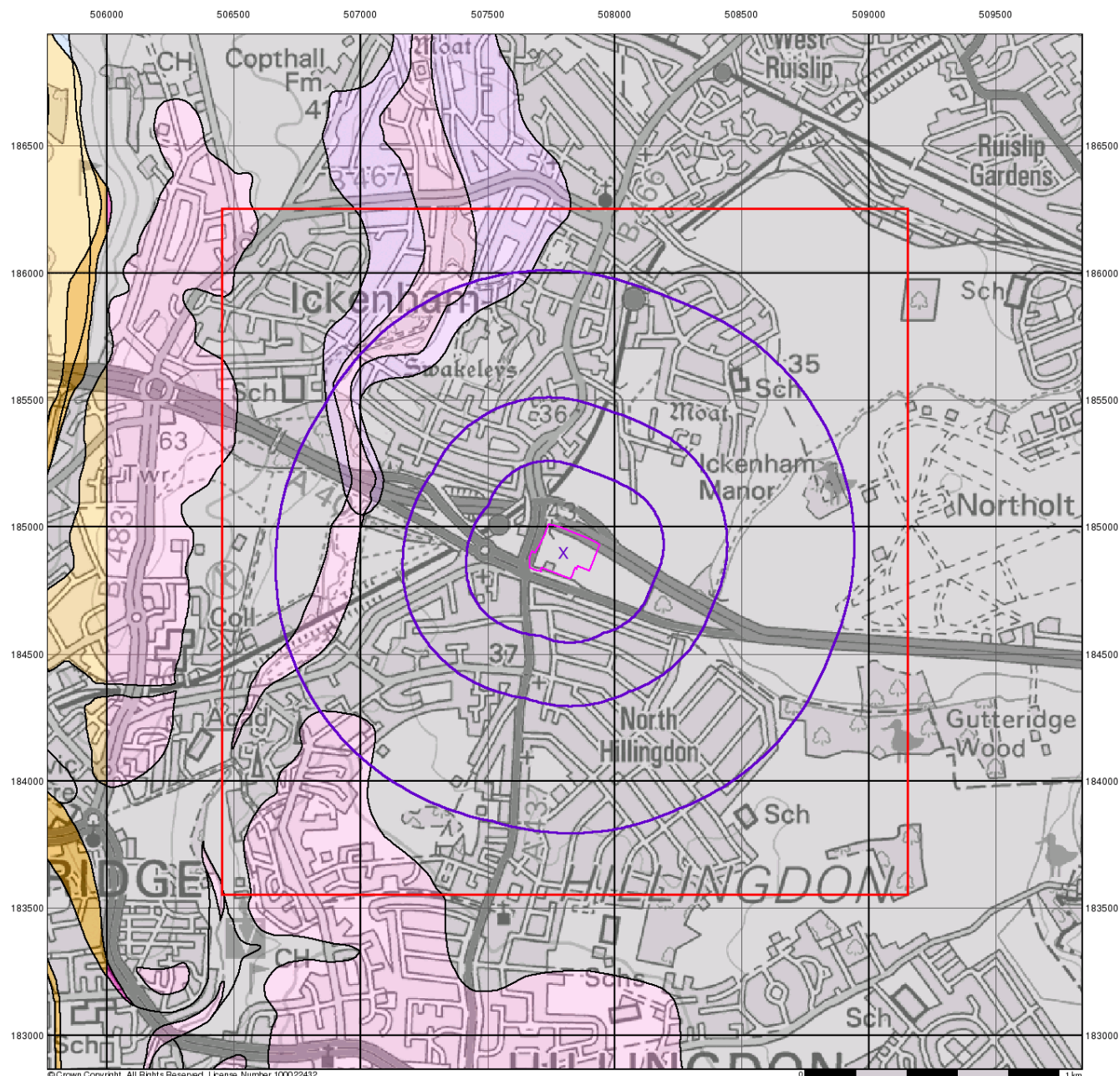
Order Details: 210572128\_1\_1  
Customer Ref: 17-0420.03  
National Grid Reference: 507800, 184900  
Slice: A  
Site Area (Ha): 3.65  
Search Buffer (m): 1000

## Site Details

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## Groundwater Vulnerability

### General

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

### Agency and Hydrological

#### Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

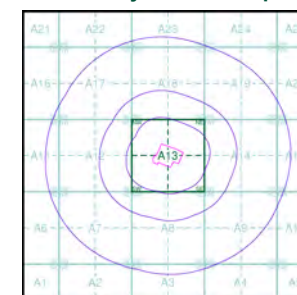
#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

### Site Sensitivity Context Map - Slice A



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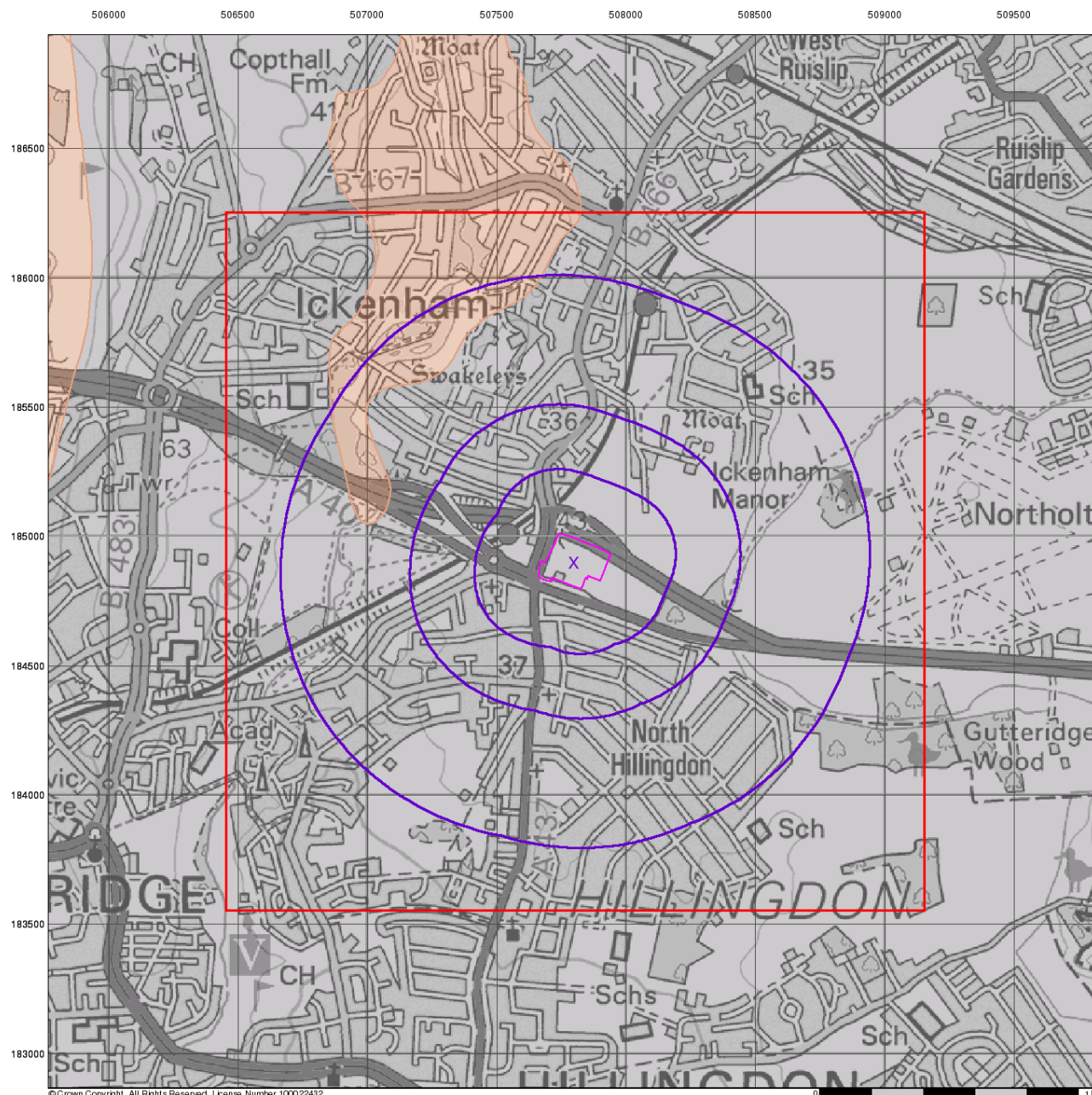
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## Bedrock Aquifer Designation

### General

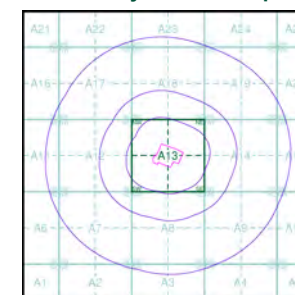
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

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 National Grid Reference: 507800, 184900  
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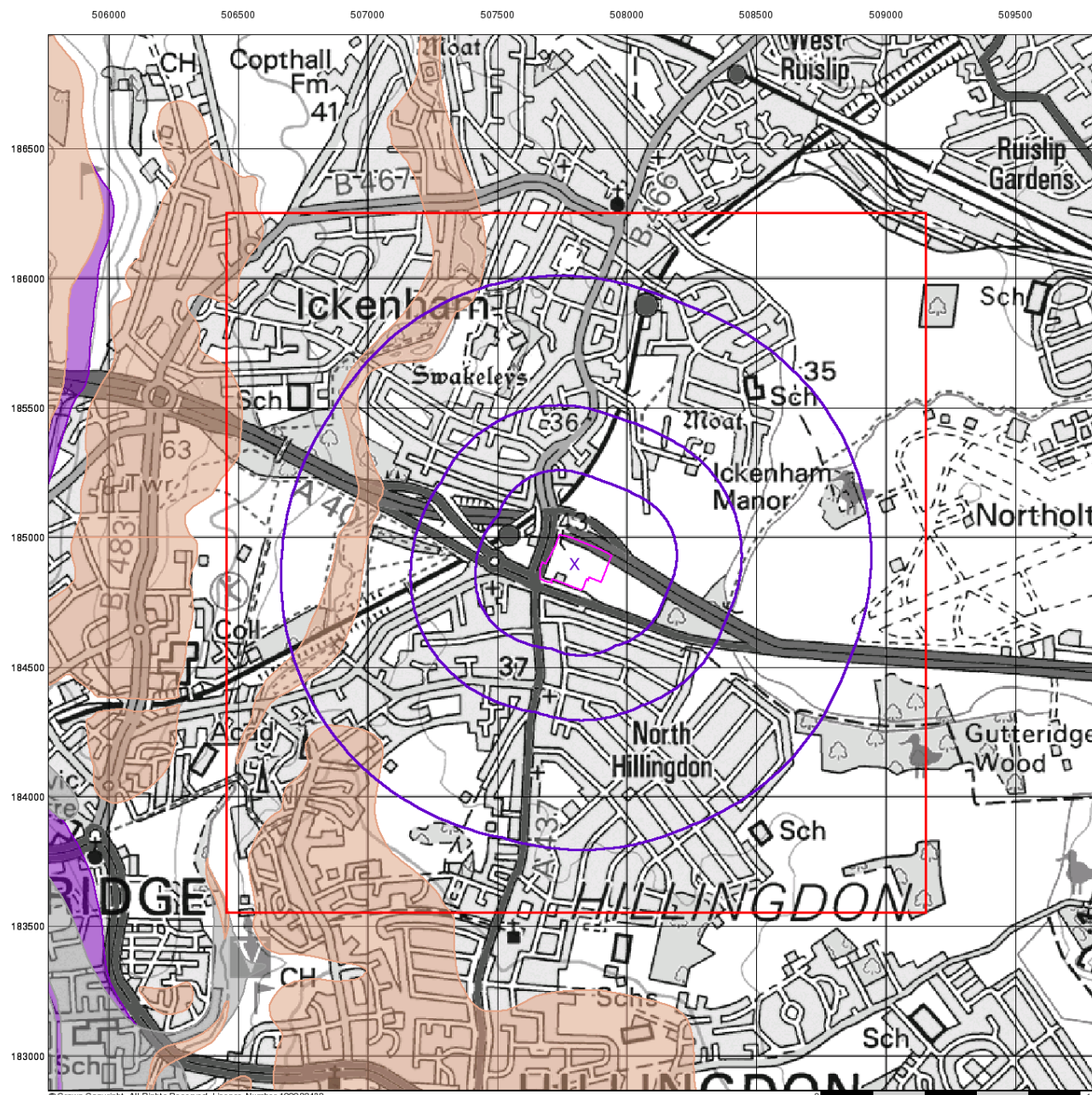
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## Superficial Aquifer Designation

### General

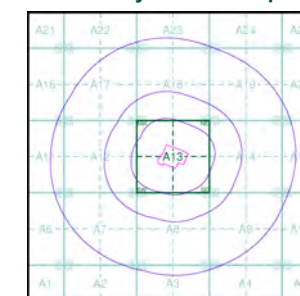
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

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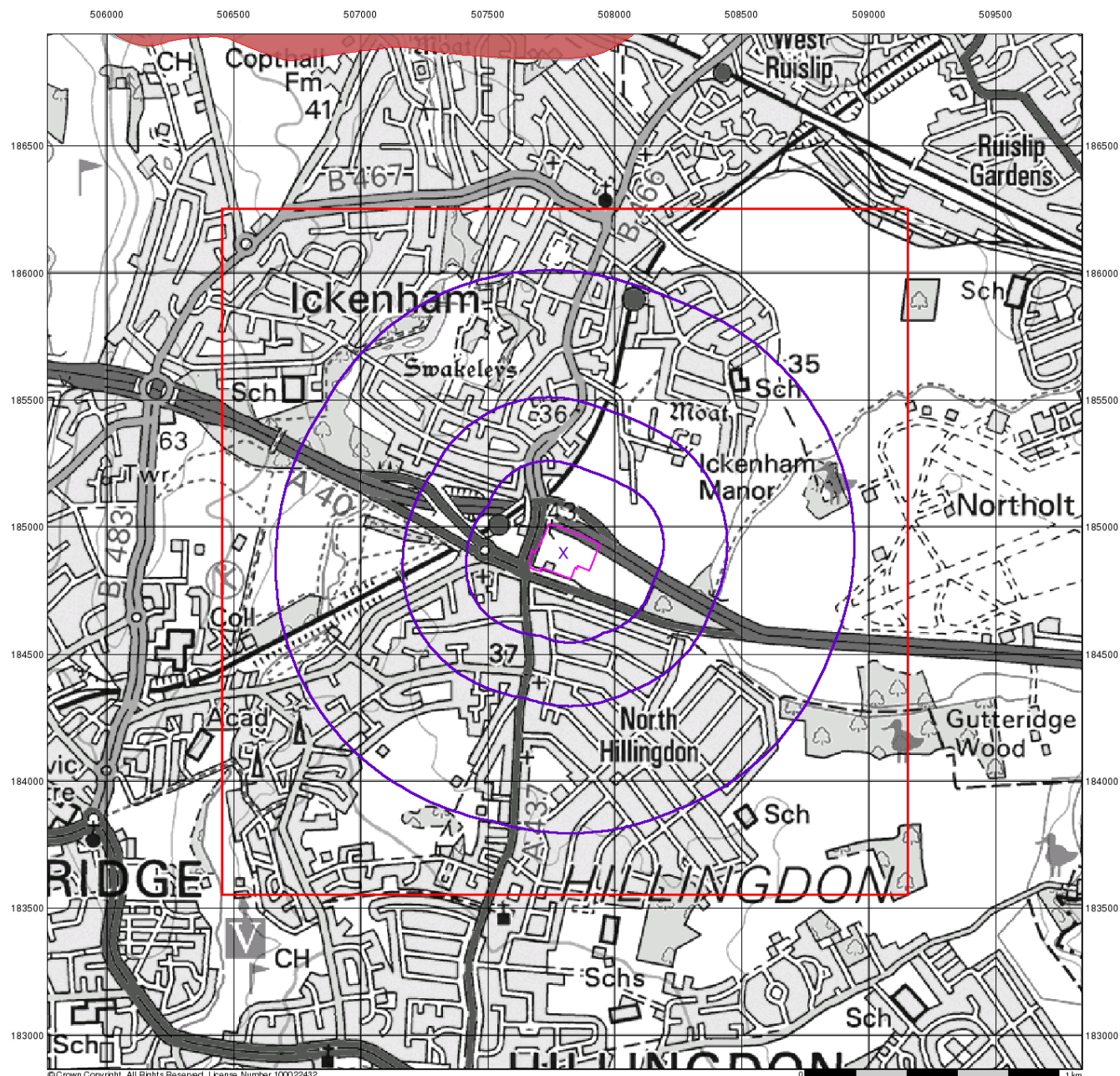
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## Source Protection Zones

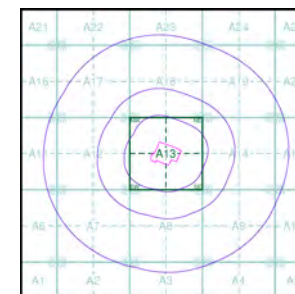
### General

- ◊ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point
- Slice    B 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



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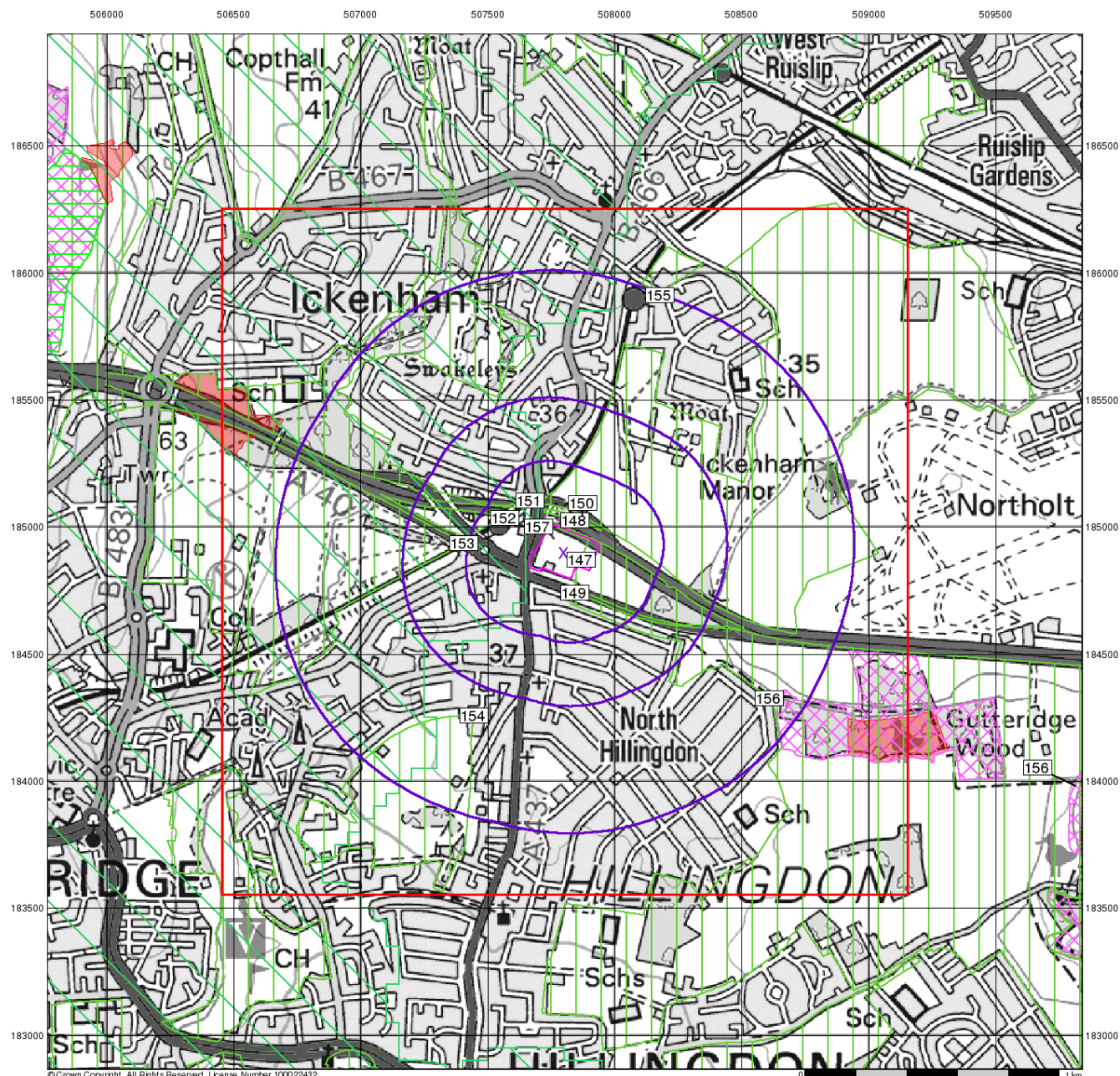
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## Sensitive Land Uses

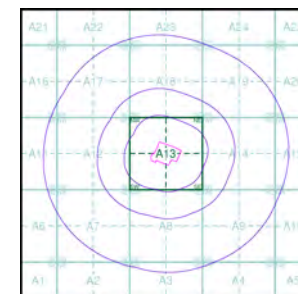
### General

- Specified Site
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- 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

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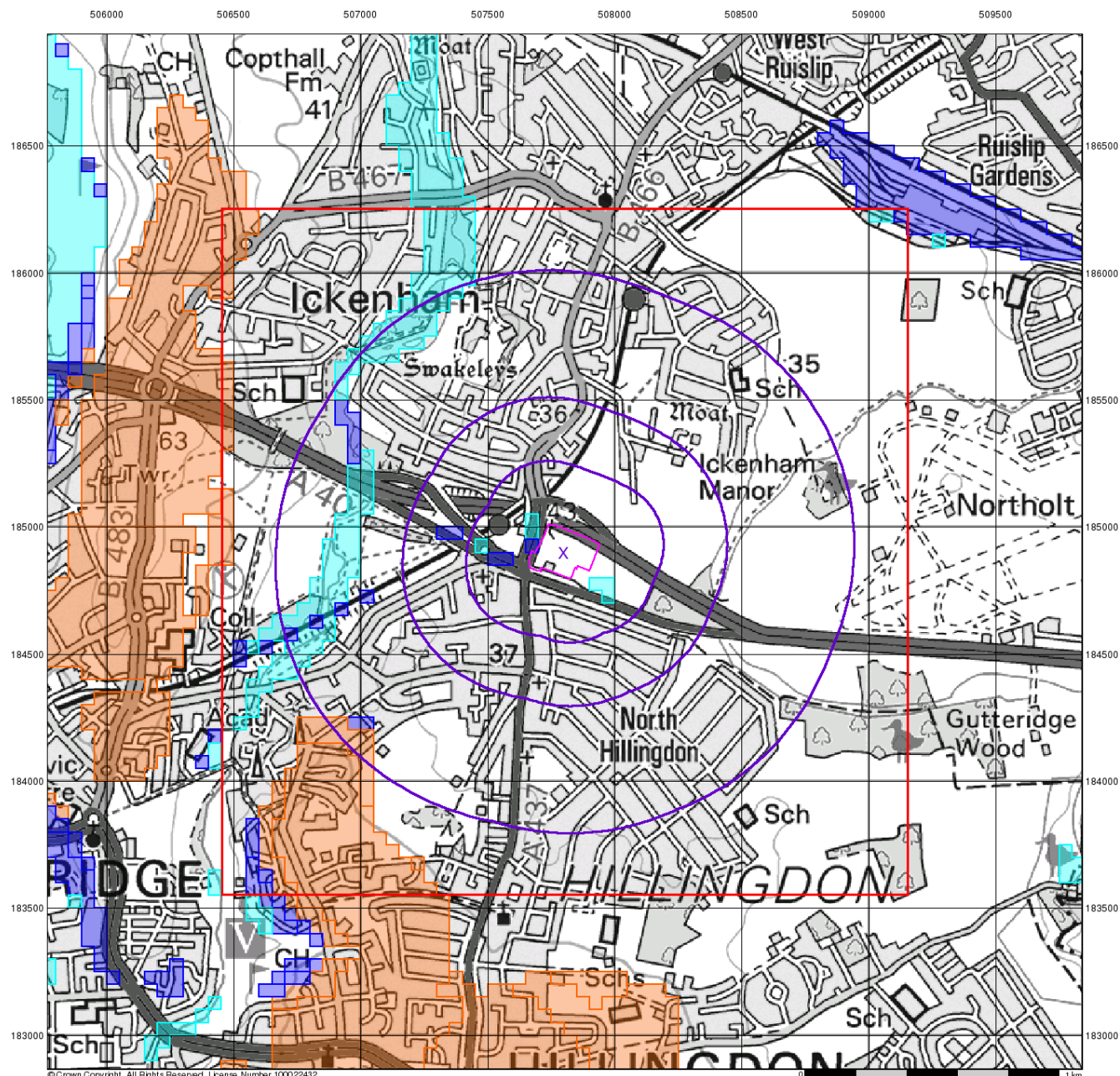
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## BGS Flood GFS Data

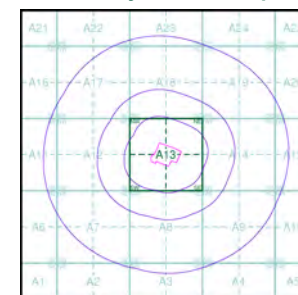
### General

- Specified Site
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- 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

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## Appendix G – Previous Reports



Phase I Initial Environmental Report, Master Brewer,  
Hillingdon, dated November 2014, by Delta Simons  
Environmental Consultants Limited (Reference: 14-0724.01).





**PRIVATE AND CONFIDENTIAL**  
**PHASE I INITIAL ENVIRONMENTAL REPORT**  
**MASTER BREWER, HILLINGDON**  
**Delta-Simons Project Number: 14-0724.01**  
**Dated: 4<sup>th</sup> November 2014**

<b>Context and Purpose</b>	<p>This Phase I Initial Environmental Report was completed as part of due diligence requirements for the Site, in the context of the Site being redeveloped for residential use, as part of a larger mixed-use redevelopment.</p> <p>The purpose of the Phase I Initial Environmental Report was to undertake a review of available environmental information (from desk-top information and a Site walkover), to provide conclusions and recommendations associated with the potential for ground contamination, assessing their significance in terms of risks to Site occupants and potential liabilities to the Client.</p>
<b>Current Site Status</b>	<p>The Site is located on Freezeland Way in Uxbridge, London, with the approximate Site centre located at National Grid Reference 507773, 184840. The west of the Site is understood to be occupied by a covered reservoir. The east of the Site is understood to be undeveloped land. The Site measures approximately 0.6 hectares in area.</p> <p>The Site is bounded to the north and west by a former motel, now demolished, which used to comprise a main accommodation building, a reception building, and a staff accommodation building, with surrounding hardstanding and landscaping. From Google Street View, the motel site appears to be overgrown with vegetation, potentially with piles of demolition rubble present on Site.</p> <p>Beyond the motel site to the north is the A40, and to the west is Long Lane, beyond which is a tube station.</p> <p>The Site is bounded to the south by Freezeland Way, beyond which is predominantly residential housing. To the east of the Site is undeveloped open land.</p>
<b>Published Geology</b>	<p>Made Ground is considered likely to be present given the Site development history. Beneath any Made Ground, the Site is indicated to be directly underlain by bedrock geology of the London Clay Formation, predominantly comprising blueish grey or greyish brown clay with varying amounts of silt and occasionally sand. Pockets of sand, shell and occasional layers including flint gravel may be encountered.</p> <p>Successively beneath the London Clay is the Woolwich and Reading Beds of the Lambeth Group, which outcrops approximately 0.8 km to the west of the Site, and the Seaford Chalk and Newhaven Chalk Formation (undifferentiated) (hereafter referred to as White Chalk).</p> <p>Records held by the BGS for existing boreholes indicate four boreholes to the north of the Site, recording geology consistent with London Clay up to a depth of 5.15 m, with the Woolwich and Reading Beds to approximately 20 m below ground level, overlying the White Chalk.</p>
<b>Hydrogeology</b>	<ul style="list-style-type: none"> <li>Δ The London Clay Formation is classified as Unproductive Strata;</li> <li>Δ The Lambeth Group is classified as a Secondary A Aquifer;</li> <li>Δ The White Chalk is classified as a Principal Aquifer;</li> <li>Δ The Site is not located within an EA Source Protection Zone (SPZ).</li> </ul>
<b>Hydrology</b>	<p>The nearest surface water to the Site is an unnamed pond, located approximately 320 m to the east, which feeds into the Yeading Brook, with the “west arm”.</p> <p>The next closest surface water features are the Yeading Brook “west arm”, located approximately 530 m to the east, and the River Pinn, located approximately 720 m to the west.</p>
<b>Flood Risk</b>	<p>The EA Risk of Flooding Maps do not indicate the Site to be at risk from fluvial or tidal</p>



	<p>flooding, however, the Risk Maps indicate that areas around the borders of the Site may be at risk from pluvial (surface water) flooding, where rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead. The chance of pluvial flooding is between 1 in 1000 and 1 in 100.</p>
<p><b>Key Historical Uses</b></p> <p><b>Site</b></p> <p><b>Surrounding Area</b></p>	<p>On the earliest map edition, 1868, the Site is used for agricultural land, with a hedgerow running down the centre of the Site, north to south, separating two fields. Between 1962 and 1980, the western end of the Site was developed as a covered reservoir with an aboveground tank. The Site remains unchanged until between 2002 and 2010, when the Site appears to be completely demolished.</p> <p>Between 1900 and 1914, a railway was built, approximately 200 m to the northwest. Surrounding land use had primarily consisted of agricultural until between circa 1932 and 1935 when the surrounding area was developed with a majority of residential housing with public amenities premises. Intermittently, from the earliest map edition, there was a pond present on the northern boundary of the Site.</p> <p>Between circa 1935 and 1962, there is a public house developed to the west of the Site, and between 1962 and 1980, the public house along with the area to the north and northwest of the Site is redeveloped as a motel with ancillary buildings and parking. The motel to the north is demolished between 2002 and 2010.</p> <p>Between 1992 and 1994, the A40 by-pass was built approximately 120 m north.</p>
<b>Regulatory Summary</b>	<p>There is a trade entry record for the Site, for the tank associated with the covered reservoir. The contents of the tank are not recorded, however it is considered likely that this is a water storage tank and does not represent a potential risk to the Site.</p> <p>Within 100 m of the Site, there are two trade entry records relating to new vehicle sales business and a printing related machinery manufacturers.</p> <p>There are no groundwater abstractions or sensitive ecological receptors within 500 m of the Site.</p> <p>Between 1992 and 1994, inert waste was landfilled at Long Lane Farm, located approximately 400 m to the northeast.</p>
<b>Previous Site Investigation</b>	<p>The information from a number of previous Phase I Assessments undertaken for the Site, as included with the larger motel site, has been reviewed as part of this report. The reports include the following:</p> <ul style="list-style-type: none"> <li>Δ Phase I Contamination Audit, Master Brewers Hotel, Ref: JAS3363, RPS Group Plc, September 2004;</li> <li>Δ Environmental Statement (Volume 1), Master Brewer, Hillingdon, London, Cushman &amp; Wakefield Inc, October 2005.</li> </ul> <p><u>2004 Report</u></p> <p>The RPS 2004 Phase I included a Site walkover, completed at a time when the Site buildings were still present and occupied, including interviews with the Site staff.</p> <p>Three buildings were noted on-Site, considered to be approximately 35 years old, of brick construction with some weather boarding and flat roofing. The Site was used for a hotel and conferencing centre.</p> <p>It was noted that all buildings were heated using gas-fired boilers and no oil tanks were identified. Asbestos was noted in the demolished shed and within the fabric of at least one of the buildings.</p> <p>The outside areas of hardstanding, used for car parking, drained into a three-stage interceptor on Site. External waste storage areas were noted to hold items such as obsolete fridges prior to collection, however, no visible signs of spillage or obvious contamination were noted.</p> <p>In the areas of paint storage, flecks of paint were noted on the flooring. The majority of the paint was stored within the Maintenance workshop in the Staff Quarters, totalling 40 – 60 litres of paint, stored in 1 – 5 litre cans.</p> <p>A battery storage area adjacent to the Main Reception building was noted to have signs of</p>



	<p>leakage, evident by copper staining on the batteries and pitting in the concrete floor.</p> <p>Identified potential on-Site sources were noted to include the storage of solvents (paints); electricity supply cells, a LEB sub-station, and a demolished shed containing suspected asbestos containing materials. Identified contaminants associated with these sources are hydrochloric acid, oils, poly-chlorinated bi-phenyls (PCBs), solvents, and asbestos.</p> <p>A small pond was located in the centre of the Guest Accommodation.</p> <p>There are two large surface water tanks, located on the larger site which drain to the main surface water sewer in Freezeland Way.</p> <p><u>2005 Report</u></p> <p>The Environmental Statement notes that prior to the demolition of the Site, the sub-station and electricity power cells should have been removed from the Site. The recommendations also included an asbestos survey to be carried out prior to demolition. At this time, Delta-Simons has not been made aware of any of the details of the demolitions on the Site or the larger motel Site.</p>	
<b>Conclusions and Recommendations</b>	It is recommended that a limited environmental assessment be completed in conjunction with geotechnical investigation works, to include ground gas assessment.	
<b>Waste Splits</b>	<p>No analysis has been completed as part of the previous reports, therefore, exact volumes cannot be determined at this stage until after intrusive investigation works. However, it is considered unlikely that significant volumes of soils will be classified as hazardous and non-hazardous, and possibly as hazardous for disposal purposes.</p> <p>The majority of the service runs and shallow foundations will be within Made Ground or London Clay, which is anticipated to be non-hazardous and inert respectively. Excavations for any deep foundations or basements are likely to be within the London Clay, which is likely to be classified as inert. Overall, and based on the limited information available to date, the following waste splits are considered likely:</p> <ul style="list-style-type: none"><li>Δ Inert – 85%;</li><li>Δ Hazardous – 5%; and</li><li>Δ Non-Hazardous – 10%.</li></ul> <p>The following costs may be anticipated for the varying waste classifications.</p> <ul style="list-style-type: none"><li>Δ Inert – £20/m<sup>3</sup>;</li><li>Δ Hazardous – £150 to 300/m<sup>3</sup>; and</li><li>Δ Non-Hazardous – £80 to £140/m<sup>3</sup>.</li></ul>	
<b>Risk Statements</b>		
	<b>Regulatory Body Enforcement</b>	There is considered to be a <b>Negligible</b> risk of enforcement action in the near future whilst the Site remains in its current use.
	<b>Third Party Liability</b>	Potential for legal action by surrounding landowners based on the potential for contamination to migrate off-Site is considered to be <b>Negligible</b> .
	<b>Asset Impact</b>	There is considered to be a <b>Low</b> risk of impact of issues connected to significant contamination on the value of the Site assuming the Site is redeveloped for residential use.
<b>Overall Statement of Risk</b>	On the basis of available information, it is considered that with regard to potential soil and groundwater contamination and associated environmental liabilities, in its proposed future use, the Site represents a <b>Low</b> overall risk status.	



**Contact Details**

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Phase I Environmental Assessment, Master Brewer Site,  
Hillingdon, dated March 2015, by Delta Simons  
Environmental Consultants Limited (Reference: 14-0724.02);





**Phase I Environmental Assessment**

**Former Master Brewer Site, Hillingdon**

**For: Spen Hill Developments Ltd**

**Delta-Simons Project No. 14-0724.02**

**Issued: March 2015**



**PHASE I ENVIRONMENTAL ASSESSMENT**  
**FORMER MASTER BREWER SITE, HILLINGDON**  
**DELTA-SIMONS PROJECT NO. 14-0724.02**  
**EXECUTIVE SUMMARY**

<b>Current Site &amp; Surrounding Area</b>	<p>The Site is located approximately 2.3 km north-east of the centre of Uxbridge, to the north of Freezeland Way, and is currently vacant, following the demolition of former “Master Brewer” motel buildings. There is the potential for a ridge of demolition rubble to be present along the southern boundary of the Site, likely set to prevent unauthorised access onto the Site.</p> <p>Surrounding land uses comprise mixed residential and commercial use.</p>
<b>Proposed Development</b>	<p>The proposed development for the Site is to comprise residential use only. The current outline proposals are for the erection of approximately 125 no. residential units with associated parking, access and landscaped areas.</p>
<b>Environmental Setting</b>	<p>The environmental sensitivity of the Site setting is considered to be low to moderate, given underlying geology, which is classified as Unproductive Strata overlying a Secondary A Aquifer and a Principal Aquifer. The Site is not located within a groundwater source protection zone and no sensitive surface water receptors have been identified in the immediate vicinity of the Site.</p> <p>Current Environment Agency (EA) mapping indicates that the Site is not situated in an area associated with flood risk from fluvial or tidal sources, however, the Site is at risk from surface water flooding.</p> <p>Based upon the available information, the Site setting is considered to be of low to moderate environmental sensitivity.</p>
<b>Historical Land Use</b>	<p>The earliest available map of 1866 shows the whole Site to be undeveloped, and remains undeveloped until circa 1975 when a motel is built on the land to the north-west, extending across the western boundary of the Site. By circa 1979, a reservoir has been constructed on the western extreme of the Site. The Site remained unchanged until the demolition of the motel circa 2010. It is unclear whether the reservoir remained present after this.</p> <p>Limited potential off-Site sources of contamination include a railway line and sidings, coal yard, unspecified works, garage, depot, warehouse and dry cleaners.</p>
<b>Conceptual Site Model</b>	<p>Delta-Simons has completed a source-pathway-receptor risk assessment based upon the available information, which identifies possible pollutant linkages (PPLs) at the Site in the context of the current and proposed use of the Site.</p> <p>No current or historical land use associated with potentially significant contamination sources have been identified at the Site. Limited potential historical off-Site sources of contamination have been identified, however, due to the distance to these sources, they are not considered to represent a significant risk to the Site.</p> <p>Given the current use of the Site which is predominantly covered by the hardstanding, the potential risks to Human Health or controlled waters are considered to be low, however, the potential risks based for the proposed use are considered to be low to moderate.</p> <p>These risks associated with the proposed future use can readily be</p>

	addressed through the development process and will be low following appropriate investigation and remediation, where necessary.
Risk Statements	
Regulatory Body Enforcement	There is a <b>Low</b> risk of enforcement action at the Site, for its proposed use.
Third Party Liability	Potential for legal action by surrounding landowners based on the potential for contamination to migrate off-Site is considered to be <b>Low</b> .
Investment Impact	Delta-Simons considers there to be a <b>Low to Moderate</b> risk of impact on the value of the Site from significant contamination issues.
<b>Overall Statement of Risk</b>	On the basis of available information, Delta-Simons considers that with regard to potential soil and groundwater contamination issues and associated environmental liabilities, for its proposed use, the Site represents an investment opportunity with a <b>Low to Moderate</b> overall risk status.



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**PHASE I ENVIRONMENTAL ASSESSMENT  
FORMER MASTER BREWER SITE, HILLINGDON  
FOR  
SPEN HILL DEVELOPMENTS LTD  
DELTA-SIMONS PROJECT NO. 14-0724.02**

**1.0 INTRODUCTION**

**1.1 Authorisation**

Delta-Simons Environmental Consultants ('Delta-Simons') was instructed by Spen Hill Developments Ltd (the 'Client'), to undertake a Phase I Environmental Assessment of the site of land at the Former Master Brewer Site, Hillingdon (hereafter referred to as the 'Site').

**1.2 Context & Purpose**

The purpose of the Report is to provide an assessment of potential in-ground environmental risks and liabilities associated with the proposed investment purchase of the Site, in the context of a proposed development.

The principal aims of a Phase I Environmental Assessment, as stated in British Standard BS10175:2011, are to obtain information in order to:

- Δ Evaluate the environmental setting of the Site and to identify sensitive receptors;
- Δ Provide information from which possible contaminant-pathway-receptor relationships can be identified; and
- Δ Formulate a Conceptual Site Model (CSM) to consider the significance of the contaminant-pathway-receptor relationships and identify whether further investigation is required.

This Report adheres to these principal aims and has been undertaken in accordance with current relevant guidance and best practice as set out within Contaminated Land Report (CLR) 11.

**1.3 Information & Scope of Works**

In completing this Assessment, Delta-Simons has utilised and reviewed the following information:

- Δ Current and Historical Ordnance Survey (OS) maps;



- Δ British Geological Survey (BGS) data;
- Δ Environment Agency (EA) data;
- Δ Local Authority (LA) information;
- Δ A GroundSure Complete Insight Report® for the Site, dated November 2014;  
and
- Δ Information provided by the Client.

Based on the information above, the scope of works performed by Delta-Simons for this Phase I Environmental Assessment Report is presented in Table 1:

**Table 1: Scope of Works**

<b>Data Collection</b>	<ol style="list-style-type: none"><li>1. Review the environmental setting of the Site, including:<ol style="list-style-type: none"><li>a. Review of current use/status of Site and adjacent areas, including consultation with the Client's legal advisors and design team; and</li><li>b. Review of the geology, hydrogeology, hydrology and environmental sensitivity of the Site.</li></ol></li><li>2. Review the history of the Site using historical OS maps;</li><li>3. Undertake a Site walkover;</li><li>4. Review regulatory information relating to the Site as detailed within a commercially available regulatory database, and from the legal searches;</li><li>5. Review previous Site investigation and remediation monitoring and validation reports relating to the Site, where available;</li><li>6. Contact the Local Authority's Environmental Department, or review information from the Client's legal searches;</li><li>7. Review the planning history of the Site from online information;</li></ol>
<b>Interpretation &amp; Reporting</b>	<ol style="list-style-type: none"><li>8. Formulate an initial CSM by identifying potential contamination sources, pathways and receptors, in the context of the proposed use of the Site;</li><li>9. Undertake a qualitative risk assessment;</li><li>10. Provide liability and asset impact risk statements; and</li><li>11. Prepare final Report.</li></ol>

#### **1.4 Limitations**

This Report provides an assessment of the potential contamination status of the ground below the Site based upon the available information. It does not provide a geotechnical assessment/interpretation of the ground conditions and, as such, any comments relating to such matters are for information only.

This Assessment has been produced in accordance with the principles of BS10175:2011 in relation to a Preliminary Investigation. Although reference may be made to archaeological and ecological issues, or the potential presence of asbestos containing materials (ACM), this Report does not constitute an archaeological or ecological assessment, nor does it constitute an asbestos inspection.

Delta-Simons obtained, reviewed and evaluated information in preparing this Report from the Client, GroundSure Limited and others. Delta-Simons conclusions, opinions and recommendations are based upon this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions which Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.



## **2.0 REVIEW OF SITE SETTING, HISTORY & REGULATORY INFORMATION**

<b>Current Site &amp; Surrounding Area</b>	<p>The Site is located approximately 2.3 km north-east of the centre of Uxbridge, to the north of Freezeland Way, approximately centred at National Grid Reference (NGR) 507815, 184846. The Site is situated in a mixed commercial and residential setting. A Site Location Map is provided as Figure 1.</p> <p>The Site is currently vacant, following the demolition of former “Master Brewer” motel buildings. There is the potential for a ridge of demolition rubble to be present along the southern boundary of the Site, likely set to prevent unauthorised access onto the Site. A Site Layout Plan is provided in Figure 2.</p> <p>Due to the nature of the Site, and the absence of recent Site investigation works, Delta-Simons conducted a Site inspection on the 16<sup>th</sup> December 2014, detailed later.</p>
<b>Geology</b>	<p>From the current BGS online geology data, the Site is shown to be directly underlain by the London Clay Formation, then successively the Lambeth Group and White Chalk (Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated)).</p> <p>Information from BGS borehole viewer, an existing borehole drilled on Site (ref: TQ08NE39) indicates that Topsoil is encountered to 0.15 m below ground level (bgl), underlain by weathered London Clay comprising light brown silty clay to 1.40 m bgl, underlain by London Clay comprising light brown and grey silty clay to 2.45 m bgl, and firm to stiff light grey silty clay with intermittent layers of sand identified as the Woolwich and Reading Beds (Lambeth Group), to 20.1 m bgl. Rubbly chalk with occasional flints was retrieved from 20.1 m bgl to 20.5 m bgl.</p>
<b>Hydrogeology</b>	<p>The Environment Agency classifies the London Clay Formation as Unproductive Strata. The underlying Lambeth Group is classified as a Secondary A Aquifer and the White Chalk is classified as a Principal Aquifer.</p> <p>Information from the BGS borehole nearby (TQ08NE39) indicated groundwater was encountered at approximately 5.8 m bgl within the Lambeth Group.</p> <p>The Site is not located within or close to a Groundwater Source Protection Zone (SPZ).</p> <p>Reference to the GroundSure EnviroInsight® Report (included as Appendix I) indicates that there are no groundwater abstractions located within 1 km of the Site.</p>
<b>Surface Water Features</b>	<p>The nearest surface water feature is a pond, located approximately 450 m to the west of the Site. Beyond this, the nearest flowing surface water features are the Yeading Brook “west arm” located approximately 530 m to the east and the River Pinn, located approximately 720 m to the west of the Site.</p> <p>Reference to the GroundSure EnviroInsight® Report indicates that there are no surface water abstractions within 1km of the Site.</p>
<b>Flood Risk</b>	<p>Current EA mapping indicates that the Site is not situated in an area associated with flood risk from fluvial or tidal sources, however, the Site may be at risk from surface water flooding.</p>
<b>Coal</b>	<p>The GroundSure GeoInsight® Report indicates that the Site is not located within an area that is likely to be affected by coal mining activity.</p>
<b>Radon</b>	<p>The GroundSure GeoInsight® Report indicates that the Site is not</p>

	located within an area where radon protection measures are necessary in the construction of new buildings.
<b>Environmental Sensitivity</b>	Based on the above, the environmental sensitivity of the Site's setting is considered to be low to moderate.
<b>Historical Map Review</b>	Historical maps of the Site, obtained from GroundSure Limited as part of the GroundSure <sup>®</sup> Report, have been reviewed and are included as Appendix II. A summary of the key information is provided below:
<b>Site</b>	<p>The earliest available map of 1866 shows the whole Site to be undeveloped, and remains undeveloped until circa 1975 when a motel is built on the land to the north-west, extending across the western boundary of the Site.</p> <p>By circa 1979, a reservoir has been constructed on the western extreme of the Site.</p> <p>The Site remained unchanged until the demolition of the motel circa 2010. It is unclear whether the reservoir remained present after this.</p>
<b>Surrounding Area</b>	<p>The Site is shown to be in an agricultural setting from the earliest available maps until circa 1935. Key historical developments and potential sources of contamination in the close vicinity (250 m) of the Site include:</p> <ul style="list-style-type: none"> <li>△ A railway is present, approximately 170 m north-west, from circa 1896 until;</li> <li>△ Railway sidings are present, approximately 150 m north-west from circa 1935 until 1979;</li> <li>△ A coal yard is present, approximately 150 m north-west, associated with the railway sidings, from circa 1962 until 1979;</li> <li>△ A works is present, approximately 75 m west of the Site, from circa 1962 until circa 2002;</li> <li>△ A garage is present, located approximately 100 m to the south-west, from circa 1962 until present day;</li> <li>△ A builders yard is present, located approximately 150 m south-west, from circa 1962 until 1992;</li> <li>△ A depot is present from circa 1962 until present day, located approximately 200 m to the south-west; and</li> <li>△ A warehouse is present from circa 1962 until 1979, located approximately 200 m to the south-west, adjacent to the depot.</li> </ul>
<b>GroundSure<sup>®</sup> Report</b>	<p>From regulatory information listed in the GroundSure<sup>®</sup> Report, there is one relevant record located on-Site, relating to "tanks (generic)", which is considered likely to relate to water tanks associated with the reservoir on-Site.</p> <p>Pertinent records within 250 m of the Site are entries that include:</p> <ul style="list-style-type: none"> <li>△ A Part A(2) of Part B activity is located approximately 90 m south-west of the Site, relating to a dry cleaners; and</li> <li>△ Current industrial entries in the vicinity of the Site include: two car dealerships, a printing machinery supplier, a construction plant supplier, four electricity substations, an Underground station and a depot.</li> </ul> <p>Given the nature and/or distance to the Site, these facilities are not considered to represent significant potential off-Site sources of contamination to the Site.</p>
<b>Site Inspection Information</b>	The Site is an unoccupied area of land which is surrounded by a chain link fence. Access was not available at the time of the inspection, but a good view of the Site is available from the adjacent elevated highway and flyover. The Site is heavily vegetated, with well-established trees. Some hardstanding and small piles of brick rubble are evident, indicating



	<p>the presence of previous structures, but demolition is likely to have been some time ago, given the established nature of the vegetation.</p> <p>The Site is surrounded by undeveloped rough pasture land to the east, with highways on all other sides of the Site. Residential and retail properties or undeveloped land are present beyond the highways. No potential sources of contamination were identified on the Site or in the immediate surrounding area at the time of the inspection.</p> <p>Photographs taken at the time of the Site inspection are included in Appendix III.</p>
<p><b>Third Party Reports</b></p>	<p>Delta-Simons has reviewed the following reports pertaining to the Site:</p> <ul style="list-style-type: none"> <li>Δ Phase I Contamination Audit – Master Brewers Hotel, Freezeland Way, Hillingdon, dated September 2004, by RPS Planning Transport and Environment Limited (RPS), (Reference: JAS3363);</li> <li>Δ Environmental Statement (Volume 1) – Master Brewer, Hillingdon, London, dated October 2005, by Cushman &amp; Wakefield Inc;</li> <li>Δ Phase 1 – Environmental Risk Assessment – Former Master Brewer site, London Borough of Hillingdon, UB10 9PQ, dated May 2012, by RPS Group (Reference: HLEL22002/001R); and</li> <li>Δ Phase I Initial Environmental Report – Master Brewer, Hillingdon, dated November 2014, by Delta-Simons Environmental Consultants Limited (Reference: 14-0724.01).</li> </ul> <p><u>2004 Phase I report.</u></p> <p>A Phase I report was undertaken by RPS in 2004 on the larger site area, including the former motel. The following pertinent points relate to the Site:</p> <ul style="list-style-type: none"> <li>Δ A Site inspection was undertaken as part of the Phase I works, and was completed at a time when the Site buildings were still present and occupied;</li> <li>Δ The boilers present at the Site were noted to be gas-fired, and no fuel storage was noted to be present;</li> <li>Δ Asbestos was noted in a demolished shed and within the fabric of at least one of the buildings;</li> <li>Δ A battery storage area adjacent to the Main Reception building was noted to have signs of leakage, evident by copper staining on the batteries and pitting in the concrete floor;</li> <li>Δ A small pond was noted to be present in the centre of the Guest Accommodation, located approximately 50 m to the west of the Site; and</li> <li>Δ The report also noted the presence of two large surface water tanks, located on the larger site, which drain to the main surface water sewer in Freezeland Way.</li> </ul> <p><u>2005 Environmental Statement</u></p> <p>An Environmental Statement was completed by Cushman and Wakefield Inc on the larger site area in 2005. The following pertinent points relate to the Site:</p> <ul style="list-style-type: none"> <li>Δ The Environmental Statement notes that prior to the demolition of the Site, the sub-station and electricity power cells should have been removed from the Site; and</li> <li>Δ The recommendations also included an asbestos survey to be carried out prior to demolition.</li> </ul> <p>At this time, Delta-Simons has not been made aware of any of the details of the demolition on the Site or the larger motel Site, and the location of the electricity substation on-site is not known, as such it is</p>

	<p>unclear whether this was present on-Site prior to demolition.</p> <p><u>2012 Phase 1 Environmental Risk Assessment</u></p> <p>A Phase 1 Risk Assessment was undertaken by RPS Group in 2012. The following points are pertinent to the Site:</p> <ul style="list-style-type: none"> <li>Δ The risk assessment was completed for the Site and the adjacent land, also included in the Master Brewer site;</li> <li>Δ At the time of the associated site inspection, large stockpiles of demolition rubble were noted to be present;</li> <li>Δ The reservoir was noted to be constructed of concrete, with an associated water tank, considered likely to be glass-fibre in construction. These were noted to be disused at the time of the inspection;</li> <li>Δ The report notes a previous inspection identified a three-stage interceptor system present next to a former boiler house, however the location of this is not known, and may be present off-Site;</li> <li>Δ The two large tanks, noted by a previous report, were considered likely associated with the drainage system of the covered reservoir;</li> <li>Δ The demolished shed, noted by a previous report, was present in the northern area of the Site, remaining in demolished condition at the time of the inspection. This places the shed off-Site; and</li> <li>Δ Information provided to RPS by the Environmental Protection Office at London Borough of Hillingdon Council in April 2011 indicated that whilst the Site was not of interest to the Council under their Contaminated Land Strategy, the Council was likely to impose Contaminated Land conditions due to the absence of information regarding ground conditions at the Site.</li> </ul>
<b>Local Authority Information - Environmental</b>	<p>Berwin Leighton Paisner LLP contacted London Borough of Hillingdon Council to determine whether the Site is on the Local Authority's list of sites identified as requiring inspection/assessment as part of its Contaminated Land Inspection Strategy under Part 2A of the Environmental Protection Act (EPA) 1990.</p> <p>A response to the enquiry has been received confirming that the Site is not considered to be a potential concern for contamination and, therefore, has not been included on the priority list for inspection under the Council's Contaminated Land Inspection Strategy. The Council also states it does not believe there is any reason for the Site to be of interest under Part 2A in the future.</p>
<b>Local Authority Information - Planning</b>	<p>A search of London Borough of Hillingdon Council's online planning database has been undertaken to obtain details of the planning history of the Site.</p> <p>Between 1976 and 2014, there are 28 no. planning applications, relating to the Site, usually as part of the larger Master Brewer site area. The majority of the planning applications relate to minor additions to the Site's motel. In 1984, a 40-bedroom extension was planned for the motel, which is confirmed as having occurred on the historical maps. After 1993, planning applications related to the redevelopment of the Site, involving the demolition of the motel.</p> <p>The most recent planning application for the Site (Reference: 4266/APP/2014/519) was an outline application for the erection of approximately 125 no. residential units with associated parking, access and landscaped areas. This application is as yet undecided. As such, it is not known whether contaminated land conditions would be applied.</p>



### **3.0 CONCEPTUAL SITE MODEL**

#### **3.1 Introduction**

A CSM represents the relationships between contaminant sources, pathways and receptors, to support the identification and assessment of possible pollutant linkages (PPL) – and an assessment of known pollutant linkages, where identified from existing information.

Where PPLs are identified, a preliminary risk assessment is carried out to assess the likelihood that each possible linkage exists and to decide whether these pose potentially unacceptable risks to identified receptors and require further assessment. Where this linkage is of a form that subsequently leads to land being identified as ‘contaminated land’ under the terms of Part 2A of the EPA 1990, the linkage is termed a significant pollutant linkage.

At the preliminary risk assessment stage, which is usually based upon desk top information, the decision on whether a PPL poses a potentially unacceptable risk is based upon professional judgement. The significance of the PPL will also be determined dependent on the context of the land use and the purpose of the assessment.

Assessing risks from land contamination underpins the “suitable for use” approach adopted for Part 2A of the EPA 1990 regulatory regime.

#### **3.2 CSM Summary & Risk Assessment**

The Site is located approximately 2.3 km north-east of the centre of Uxbridge, to the north of Freezeland Way, and is currently vacant, following the demolition of former “Master Brewer” motel buildings. There is the potential for a ridge of demolition rubble to be present along the southern boundary of the Site, likely set to prevent unauthorised access onto the Site.

From the earliest available map of 1866 until circa 1975 the Site remains undeveloped. By circa 1975, a motel is built on the land to the north-west, extending across the western boundary of the Site. By circa 1979, a reservoir has been constructed on the western extreme of the Site. The Site remained unchanged until the demolition of the motel circa 2010. It is unclear whether the reservoir remains present currently.

The environmental sensitivity of the Site setting is considered to be low to moderate, given underlying geology, which is classified as Unproductive Strata, however, this is underlain by a Secondary A Aquifer and a Principal Aquifer. The Site is not located within a groundwater source protection zone and no sensitive surface water receptors have been identified in the immediate vicinity of the Site.

Based on the information reviewed, a preliminary risk assessment using the source-pathway-receptor approach has been formulated, which identifies PPLs at the Site in the context of the current and proposed use of the Site.

**Table 2: Conceptual Site Model**

Source	Pathway	Receptor	Risk	Justification and Further Action/Mitigation Required
Any contaminants in soils and/or shallow groundwater beneath the Site	Direct contact/ingestion and inhalation of dust and vapours	Site users/visitors	<b>Low to Moderate Risk</b>	No significant sources of contamination are considered to be associated with the current or historical land use of the Site. In addition, the Site is covered hardstanding, therefore, breaking the majority of PPLs associated with any potential contaminants in the ground.  Given the Site's proposed residential, it is recommended that an environmental investigation be undertaken to determine the current condition of the Site. Where landscaping or garden areas are proposed, a clean soil capping system may be required to mitigate any risks.
	Direct contact/ingestion and inhalation of dust and vapours	Construction/ maintenance groundworkers	<b>Low to Moderate Risk</b>	As with any developed Site, there is the potential for construction/maintenance groundworkers to become exposed to any localised contaminated soils or shallow groundwater during any intrusive groundworks undertaken at the Site. Safe working practices should be implemented and appropriate personal protective equipment (PPE) should be used to mitigate any potential risk from contact with soils and shallow/perched groundwater.
	Leaching and migration through any shallow groundwater present beneath the Site	Controlled Waters	<b>Low Risk</b>	The current and historical land uses of the Site are not considered a significant potential source of contamination. The Site is underlain by Unproductive Strata, successively underlain by a Secondary A Aquifer, the Site is not located within a groundwater SPZ and no sensitive water abstractions or surface water features are located within the vicinity of the Site.
	Direct contact and permeation	Service conduits	<b>Low Risk</b>	Hydrocarbons, especially aromatics and chlorinated solvents, are known to permeate plastic pipes, especially when encountered in high concentrations. However, it is considered unlikely that significant hydrocarbon contamination is present in the soils at the Site.
Ground gases from the Made Ground and/or natural deposits beneath the Site	Vertical and lateral migration and accumulation of gas in enclosed spaces and sub-floor voids	Site users & the building	<b>Low Risk</b>	Given the development history of the Site, it is considered that a significant depth of Made Ground is unlikely and the underlying soils and bedrock are not considered to be a potential source of ground gas. Given the current use of the Site, the risk to Site users is considered to be low.
Contaminated groundwater from potential off-Site sources	Lateral migration via any shallow groundwater beneath the Site and volatilisation	Site users	<b>Low Risk</b>	Potential and current off-Site sources of contamination are considered to be limited. In addition, given the Site is situated in a predominantly built-up area with large amounts of hardstanding, resulting in restricted infiltration of rainwater and limited leaching of contaminants, if present, the risk from any significant off-Site sources is considered to be low.



## **4.0 CONCLUSIONS & RECOMMENDATIONS**

### **4.1 Summary, Conclusions and Recommendations**

<b>Site Summary</b>	<p>The Site is located approximately 2.3 km north-east of the centre of Uxbridge, to the north of Freezeland Way, and is currently vacant, following the demolition of former “Master Brewer” motel buildings. There is the potential for a ridge of demolition rubble to be present along the southern boundary of the Site, likely set to prevent unauthorised access onto the Site.</p> <p>The earliest available map of 1866 shows the whole Site to be undeveloped, and remains undeveloped until circa 1975 when a motel is built on the land to the north-west, extending across the western boundary of the Site. By circa 1979, a reservoir has been constructed on the western extreme of the Site. The Site remained unchanged until the demolition of the motel circa 2010. It is unclear whether the reservoir remained present after this.</p> <p>The environmental sensitivity of the Site setting is considered to be low to moderate, given underlying geology, which is classified as Unproductive Strata overlying a Secondary A Aquifer and a Principal Aquifer. The Site is not located within a groundwater source protection zone and no sensitive surface water receptors have been identified in the immediate vicinity of the Site.</p>
<b>Conceptual Site Model</b>	<p>Delta-Simons has completed a source-pathway-receptor risk assessment based upon the available information, which identifies PPLs at the Site in the context of the current and proposed use of the Site.</p> <p>No current or historical land use associated with potentially significant contamination sources have been identified at the Site. Limited potential historical off-Site sources of contamination have been identified, however, due to the distance to these sources, they are not considered to represent a significant risk to the Site.</p> <p>Given the current use of the Site which is predominantly covered by the hardstanding, the potential risks to Human Health or controlled waters are considered to be low, however, the potential risks based on the proposed use are considered to be low to moderate.</p> <p>These risks associated with the proposed future use can readily be addressed through the development process and will be low following appropriate investigation and remediation, where necessary.</p>
<b>Conclusions &amp; Recommendations</b>	<p>Based on available information, Delta-Simons considers that intrusive investigation is required at the Site, prior to investment, in the context of the Site’s proposed use.</p> <p>Therefore, it is recommended that a limited environmental Site investigation be undertaken in conjunction with a geotechnical investigation to assist with foundation design.</p> <p>The buildings on Site were demolished in 2010, (although the presence of the covered reservoir remains uncertain), therefore, the risk associated with any ACMs being present on Site is considered to be low.</p>

	Though contamination risks are considered to be low to moderate; in accordance with good practice, any groundworkers who perform sub surface work at the Site should be aware of the possibility of encountering contamination and wear appropriate PPE.
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## 4.2 Risk Statements

This Assessment considers both perceived and actual risks using the Source, Pathway, Receptor concept, with the principal measure of risk being whether significant harm (to people, animals, property (including buildings, cattle etc.), or ecosystems) or pollution of controlled waters (surface water bodies, aquifers, coastal waters, or territorial waters) is being caused, or whether there is a significant possibility of such harm being caused.

The overall risk classification, based on the source-pathway-receptor principle, adopted for this preliminary assessment, is defined as follows:

- Δ Low risk – issue unlikely to present a liability or cost;
- Δ Moderate risk – issue may present a liability or cost, but these may be limited; and
- Δ High risk – likely that significant liabilities and/or costs exist.

Following the collection and review of desk study data, Delta-Simons has formulated a CSM. On the basis of the CSM, Delta-Simons considers that in the context of the Site's proposed use, the following risk and liability statements can be made:

**Table 3: Liability Assessment**

Regulatory Body Enforcement	There is a <b>Low</b> risk of enforcement action at the Site, for its proposed use.
Third Party Liability	Potential for legal action by surrounding landowners based on the potential for contamination to migrate off-Site is considered to be <b>Low</b> .
Investment Impact	Delta-Simons considers there to be a <b>Low to Moderate</b> risk of impact on the value of the Site from significant contamination issues.
<b>Overall Statement of Risk</b>	On the basis of available information, Delta-Simons considers that with regard to potential soil and groundwater contamination issues and associated environmental liabilities, for its proposed use, the Site represents an investment opportunity with a <b>Low to Moderate</b> overall risk status.

## **5.0 LIMITATIONS TO ENVIRONMENTAL ASSESSMENTS**

The recommendations contained in this Report represent Delta-Simons professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Environmental Consultant. Delta-Simons does not warrant or guarantee that the Site is free of hazardous or potentially hazardous materials or conditions.

Delta-Simons obtained, reviewed and evaluated information in preparing this Report from the Client and others. Delta-Simons conclusions, opinions and recommendations has been determined using this information. Delta-Simons does not warrant the accuracy of the information provided to it and will not be responsible for any opinions which Delta-Simons has expressed, or conclusions which it has reached in reliance upon information which is subsequently proven to be inaccurate.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.1 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.



This Report was prepared by:



Kirsten Mills

**Geoenvironmental Engineer**



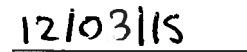
Date

This Report was reviewed by:



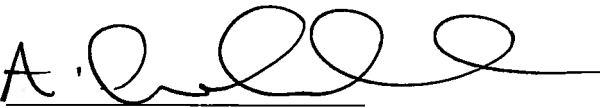
Cerys Baldwin

**Graduate Geoenvironmental Engineer**



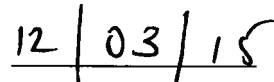
Date

This Report was authorised by:

  
PP

Alex Ferguson

**Operations Director**



Date







# LEGEND

Site Boundary



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TITLE:  
Site Location Map  
Freeland Way  
Hillingdon

DRAWN BY: DP  
CHECKED BY: KM  
DATE: 05 January 2015

SCALE:  
To Scale@A4  
REVISION: 1

PROJECT NO:  
14-0724.02  
FIGURE NO:  
1





Base map provided by Bing Maps, Microsoft Corporation (c)



TITLE:  
Site Layout Plan  
Freezeland Way  
Hillingdon

DRAWN BY: DP	SCALE: Not to Scale	PROJECT NO: 14-0724.02
CHECKED BY: KM	REVISION: 1	FIGURE NO: 2
DATE: 05 January 2015		



Delta-Simons  
UNIT 3 DELTA SIMONS LTD, HENLEY WAY,  
LINCOLN, LN6 3QR

GroundSure Reference: GS-1745868

Your Reference: 14-0724.01

Report Date 3 Nov 2014

Report Delivery Method: Email - pdf

## GroundSure EnviroInsight

Address: FORMER MASTER BREWER SITE FREEZELAND WAY UXBRIDGE, UB10 9QE

Dear Sir/ Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure Enviroinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,



Managing Director  
Groundsure Limited

Enc.  
GroundSure EnviroInsight





# GroundSure EnvirolInsight

Address: FORMER MASTER BREWER SITE FREEZELAND WAY UXBRIDGE, UB10 9QE  
Date: 3 Nov 2014  
Reference: GS-1745868  
Client: Delta-Simons

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 20-Apr-2013  
Grid Reference: 507768,184904  
Site Size: 3.38ha

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# Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Environmental Permits, Incidents and Registers		On-site	0-50m	51-250	251-500		
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations							
1.1.1	Records of historic IPC Authorisations	0	0	0	0		
1.1.2	Records of Part A(1) and IPPC Authorised Activities	0	0	0	0		
1.1.3	Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0		
1.1.4	Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0		
1.1.5	Records of List 1 Dangerous Substances Inventory sites	0	0	0	0		
1.1.6	Records of List 2 Dangerous Substances Inventory sites	0	0	0	0		
1.1.7	Records of Part A(2) and Part B Activities and Enforcements	0	0	1	0		
1.1.8	Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0		
1.1.9	Records of Licensed Discharge Consents	0	0	2	0		
1.1.10	Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0		
1.2	Records of COMAH and NIHHS sites	0	0	0	0		
1.3 Environment Agency Recorded Pollution Incidents							
1.3.1	National Incidents Recording System, List 2	0	0	0	0		
1.3.2	National Incidents Recording System, List 1	0	0	0	0		
1.4	Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0		
Section 2: Landfill and Other Waste Sites		On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.1 Landfill Sites							
2.1.1	Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
2.1.2	Environment Agency Historic Landfill Sites	0	0	0	1	0	0
2.1.3	BGS/DoE Landfill Site Survey	0	0	0	0	0	0
2.1.4	GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0
2.2 Landfill and Other Waste Sites Findings							
2.2.1	Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
2.2.2	Environment Agency Licensed Waste Sites	0	0	0	0	0	0

Section 3: Current Land Use	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	1	0	12	Not searched
3.2 Records of Petrol and Fuel Sites	0	0	0	0
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0

Section 4: Geology	
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	Yes
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
4.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 5: Hydrogeology and Hydrology	0-500m					
5.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	No					
5.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
5.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	0
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
5.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
5.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	0	0	0	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
5.10 Detailed River Network entries within 500m of the site	0	0	0	2	Not searched	Not searched
5.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

## Section 6: Flooding

6.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?	No
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Moderate

## Section 7: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
7.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.5 Records of Ramsar sites	0	0	0	0	0	0
7.6 Records of Ancient Woodlands	0	0	0	0	0	1
7.7 Records of Local Nature Reserves (LNR)	0	0	0	0	1	0
7.8 Records of World Heritage Sites	0	0	0	0	0	0
7.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.11 Records of National Parks	0	0	0	0	0	0
7.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.13 Records of Nitrate Vulnerable Zones	0	0	0	1	0	0



## Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	Low
8.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Low
8.1.2 What is the maximum Landslides hazard rating identified on the study site?	Moderate
8.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
8.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Very Low
8.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
8.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low

## Section 9: Mining

9.1 Are there any coal mining areas within 75m of the study site?	No
9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?	Low
9.3 Are there any brine affected areas within 75m of the study site?	No

# Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

## 1. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

## 2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

## 3. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

## 4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

## 5. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

## 6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

## 7. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

## 8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

## 9. Mining

Provides information on areas of coal and shallow mining.

## 10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (08444 159000) for further information and guidance.

## Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.