

## General

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





### Agency and Hydrological

- |   |  |   |  |
|---|--|---|--|
|  | Contaminated Land Register Entry or Notice (Location)        |  | BGS Recorded Landfill Site (Location)                  |
|  | Contaminated Land Register Entry or Notice                   |  | BGS Recorded Landfill Site                             |
|  | Discharge Consent  |  | EA Historic Landfill (Buffered Point)                  |
|  | Enforcement or Prohibition Notice                            |  | EA Historic Landfill (Polygon)                         |
|  | Integrated Pollution Control                                 |  | Integrated Pollution Control Registered Waste Site     |
|  | Integrated Pollution Prevention Control                      |  | Licensed Waste Management Facility (Landfill Boundary) |
|  | Local Authority Integrated Pollution Prevention and Control  |  | Licensed Waste Management Facility (Location)          |
|  | Local Authority Pollution Prevention and Control             |  | Local Authority Recorded Landfill Site (Location)      |
|  | Local Authority Pollution Prevention and Control Enforcement |  | Local Authority Recorded Landfill Site                 |
|  | Pollution Incident to Controlled Waters                      |  | Potentially Infilled Land (Non-water)                  |
|  | Prosecution Relating to Authorised Processes                 |  | Potentially Infilled Land (Non-water)                  |
|  | Prosecution Relating to Controlled Waters                    |  | Potentially Infilled Land (Non-water)                  |
|  | Registered Radioactive Substance                             |  | Potentially Infilled Land (Water)                      |
|  | River Network or Water Feature                               |  | Potentially Infilled Land (Water)                      |
|  | River Quality Sampling Point                                 |  | Potentially Infilled Land (Water)                      |
|  | Substantiated Pollution Incident Register                    |  | Registered Landfill Site                               |
|  | Water Abstraction  |  | Registered Landfill Site (Location)                    |
|  | Water Industry Act Referral                                  |  | Registered Landfill Site (Point Buffered to 100m)      |

## Waste

-  BGS Recorded Landfill Site (Location)
-  BGS Recorded Landfill Site
-  EA Historic Landfill (Buffered Point)
-  EA Historic Landfill (Polygon)
-  Integrated Pollution Control Registered Waste Site
-  Licensed Waste Management Facility (Landfill Boundary)
-  Licensed Waste Management Facility (Location)
-  Local Authority Recorded Landfill Site (Location)
-  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)
-  Registered Landfill Site
-  Registered Landfill Site (Location)
-  Registered Landfill Site (Point Buffered to 100m)
-  Registered Landfill Site (Point Buffered to 250m)
-  Registered Waste Transfer Site (Location)
-  Registered Waste Transfer Site
-  Registered Waste Treatment or Disposal Site (Location)
-  Registered Waste Treatment or Disposal Site

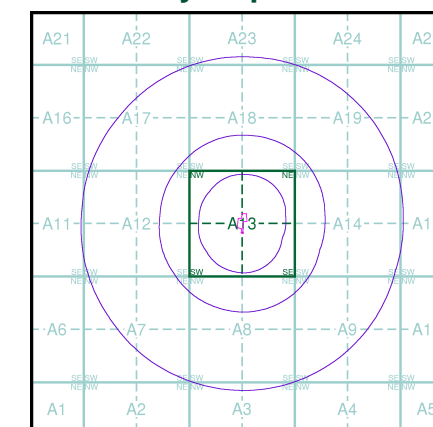
## Hazardous Substances

-  COMAH Site      Explosive Site  
 NIHS Site  
 Planning Hazardous Substance Consent  
 Planning Hazardous Substance Enforcement

## Geological

- ▼ BGS Recorded Mineral Site

### Site Sensitivity Map - Slice A



## Order Details

Order Number: 223644483\_1\_1  
Customer Ref: LKC 20 1065  
National Grid Reference: 344390, 423370  
Slice: A  
Site Area (Ha): 0.38  
Search Buffer (m): 1000

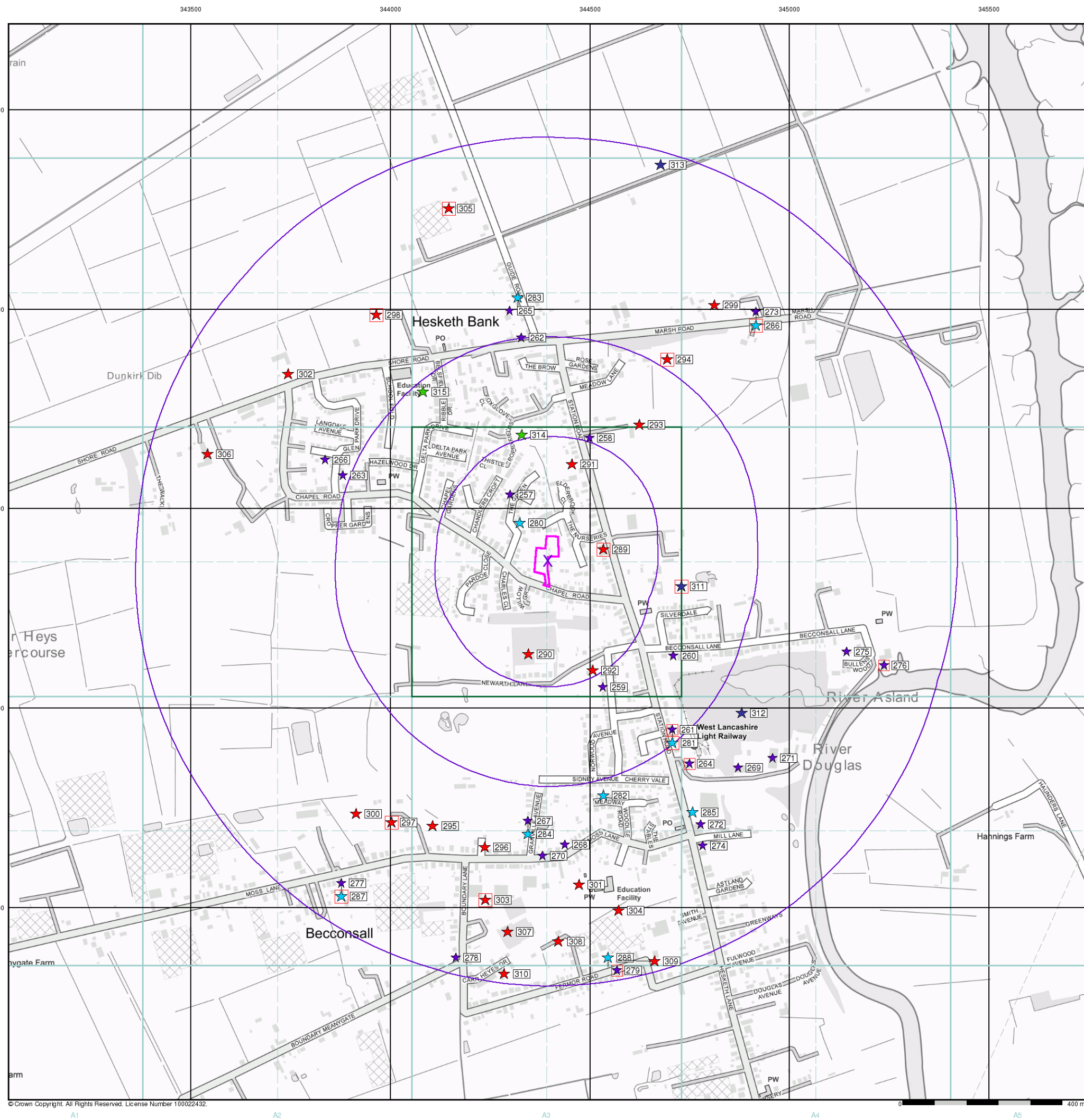
## Site Details

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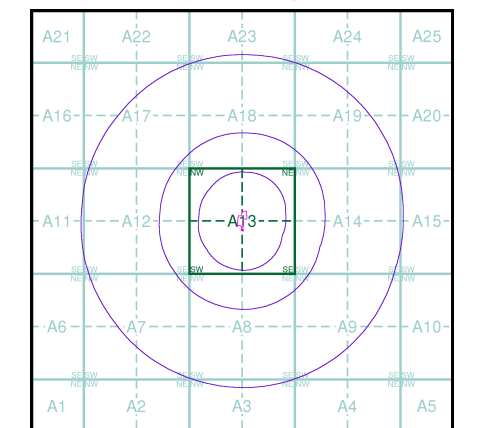


# LK GROUP

## Industrial Land Use Map

- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Slice
  - Map ID
- Industrial Land Use**
- Contemporary Trade Directory Entry
  - Fuel Station Entry
  - Gas Pipeline
  - Points of Interest - Commercial Services
  - Points of Interest - Education and Health
  - Points of Interest - Manufacturing and Production
  - Points of Interest - Public Infrastructure
  - Points of Interest - Recreational and Environmental
  - Underground Electrical Cables

### Industrial Land Use Map - Slice A



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Search Buffer (m): 1000

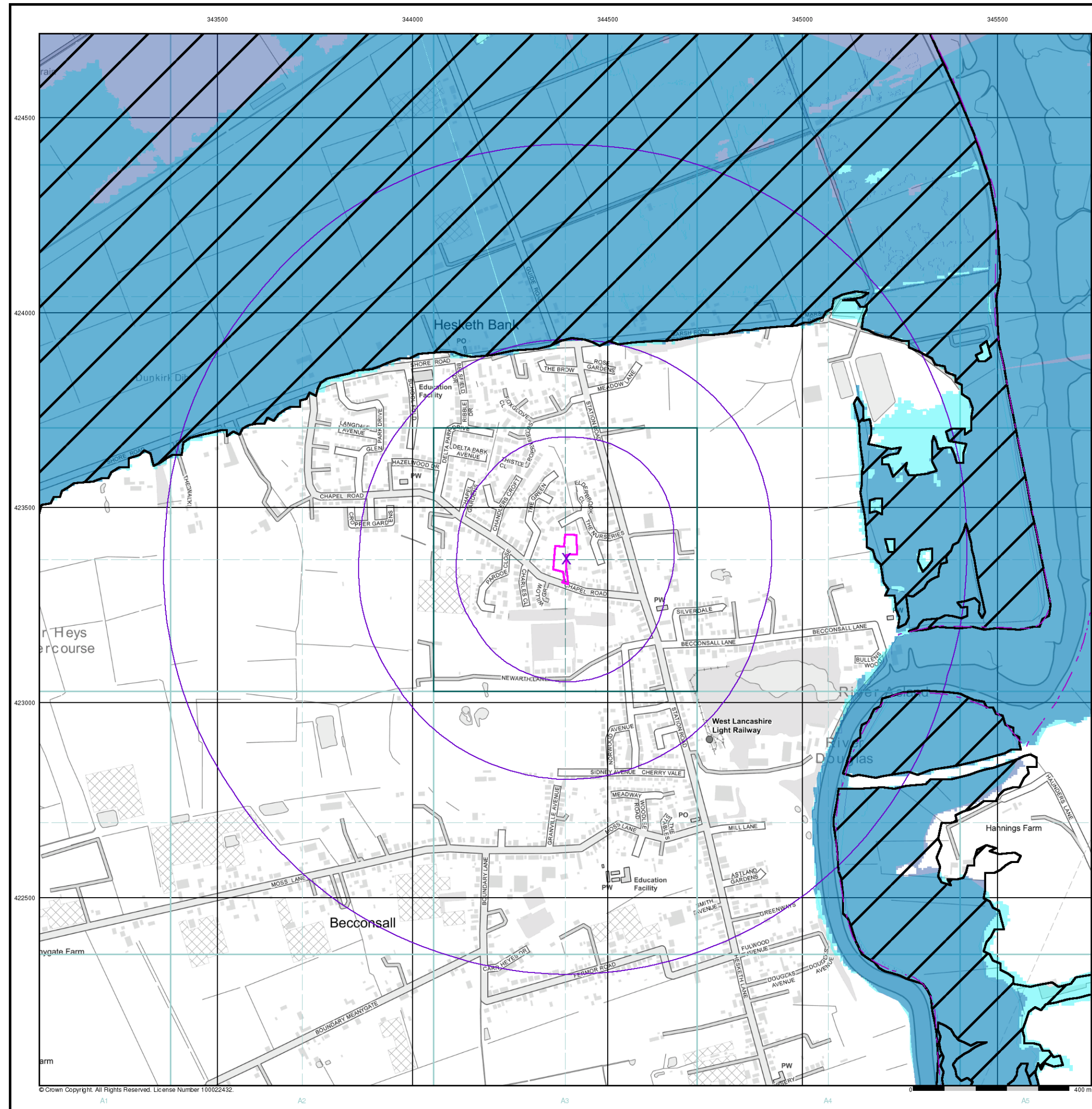
### Site Details

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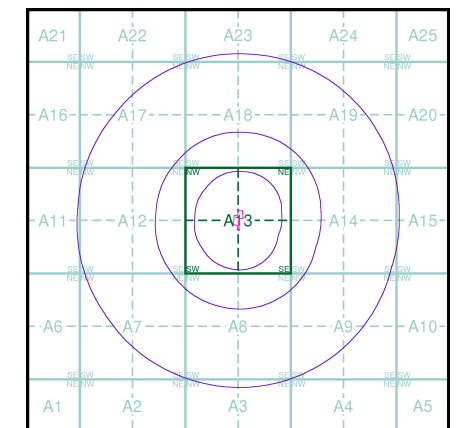
### General

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

### Agency and Hydrological (Flood)

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

### Flood Map - Slice A



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Order Number: 223644483\_1\_1  
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Slice: A  
Site Area (Ha): 0.38  
Search Buffer (m): 1000

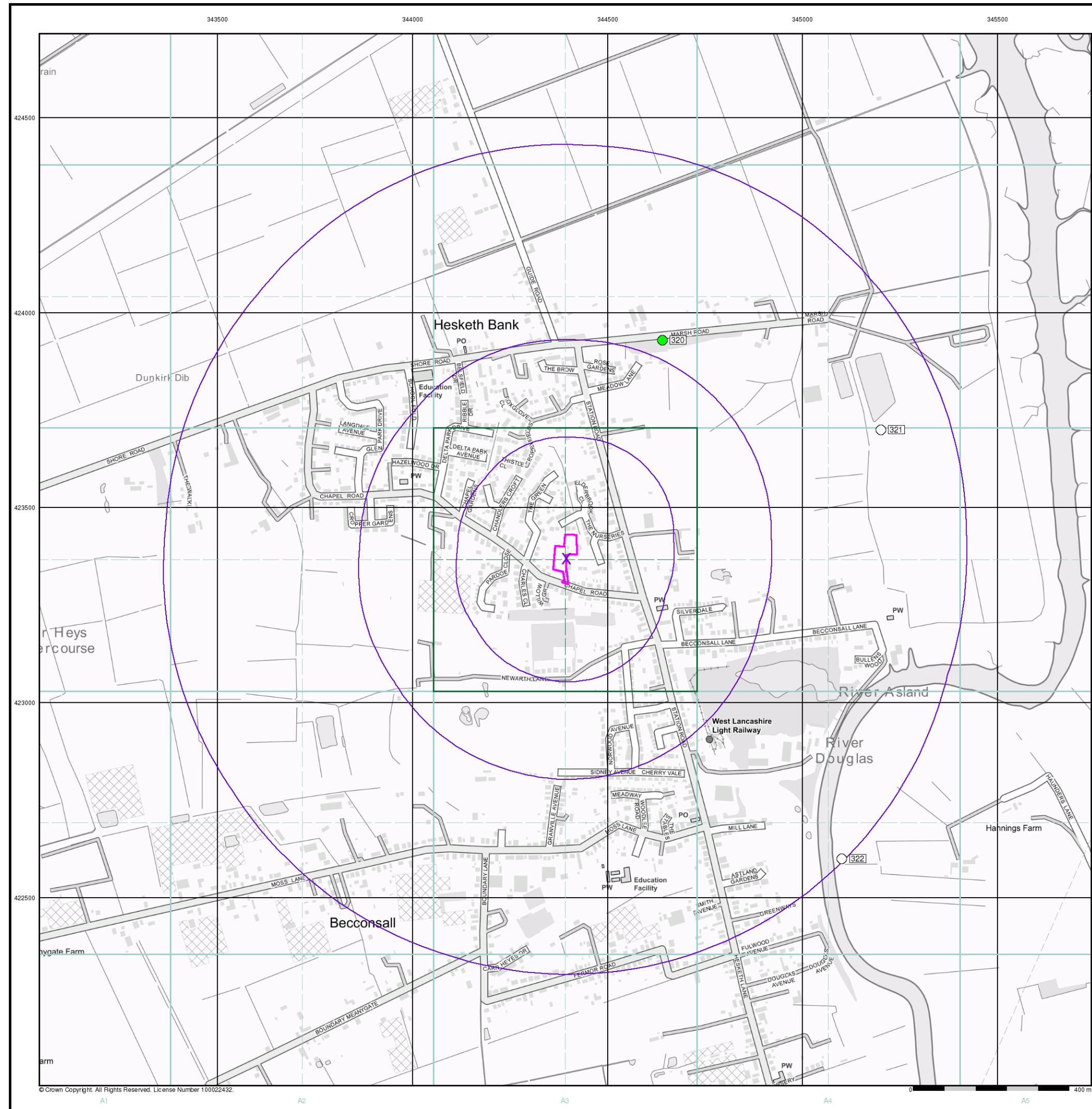
### Site Details

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**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

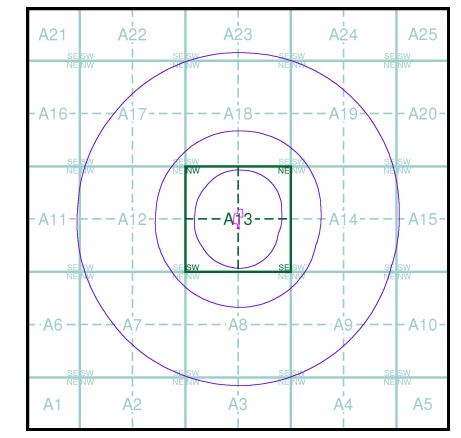
**Agency and Hydrological (Boreholes)**

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- 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](http://www.envirocheck.co.uk).

**Borehole Map - Slice A**



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National Grid Reference: 344390, 423370  
Slice: A  
Site Area (Ha): 0.38  
Search Buffer (m): 1000

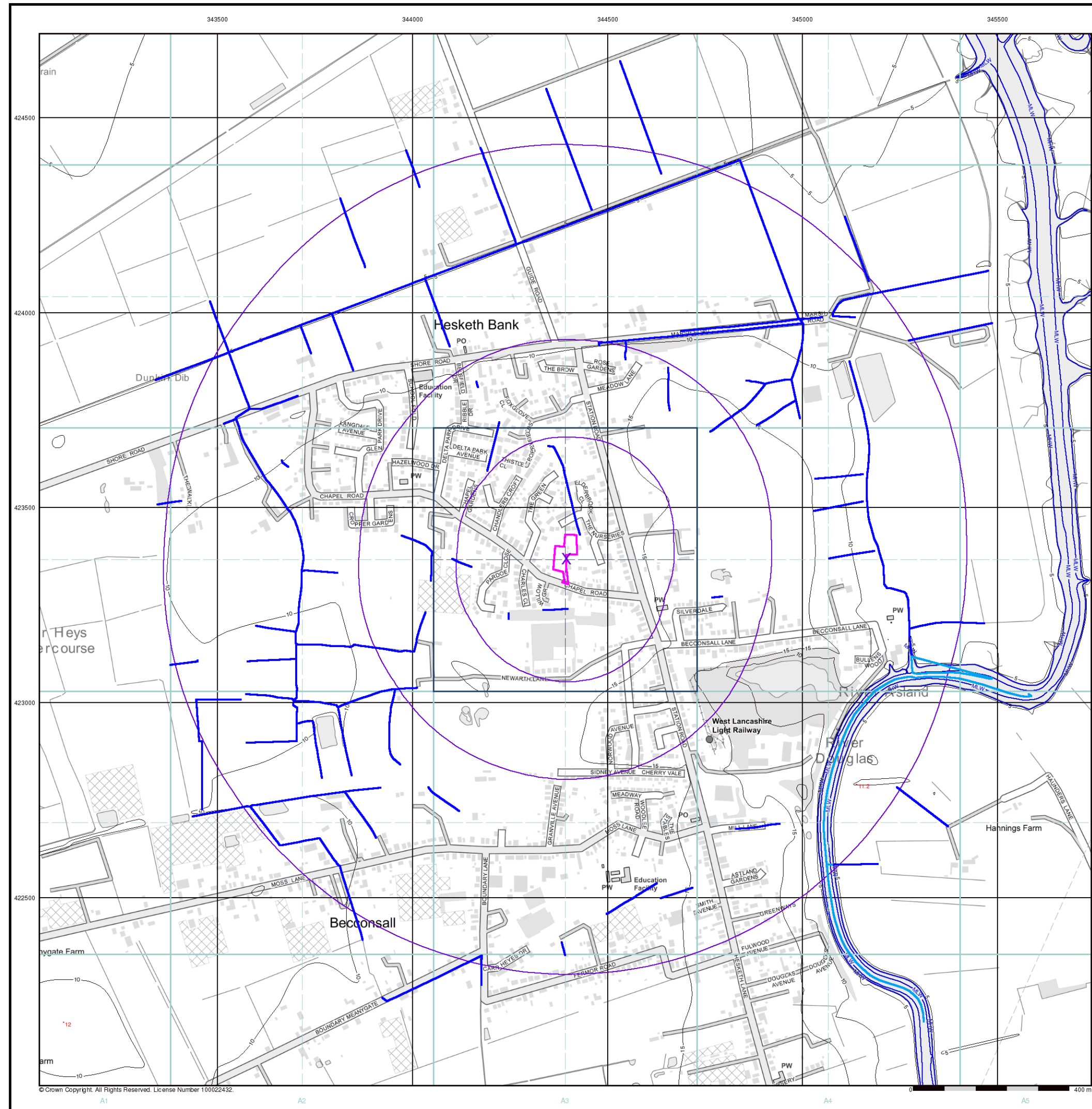
**Site Details**

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### General

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- Bearing Reference Point

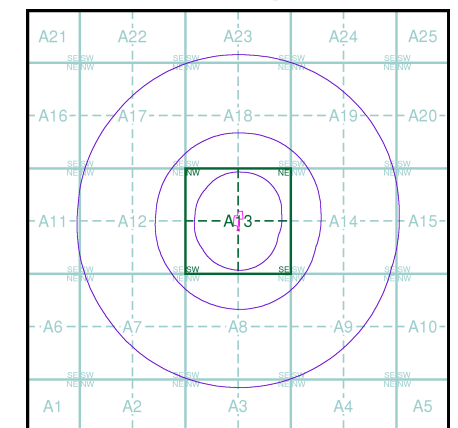
### OS Water Network Data

- |              |                         |
|--------------|-------------------------|
| 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



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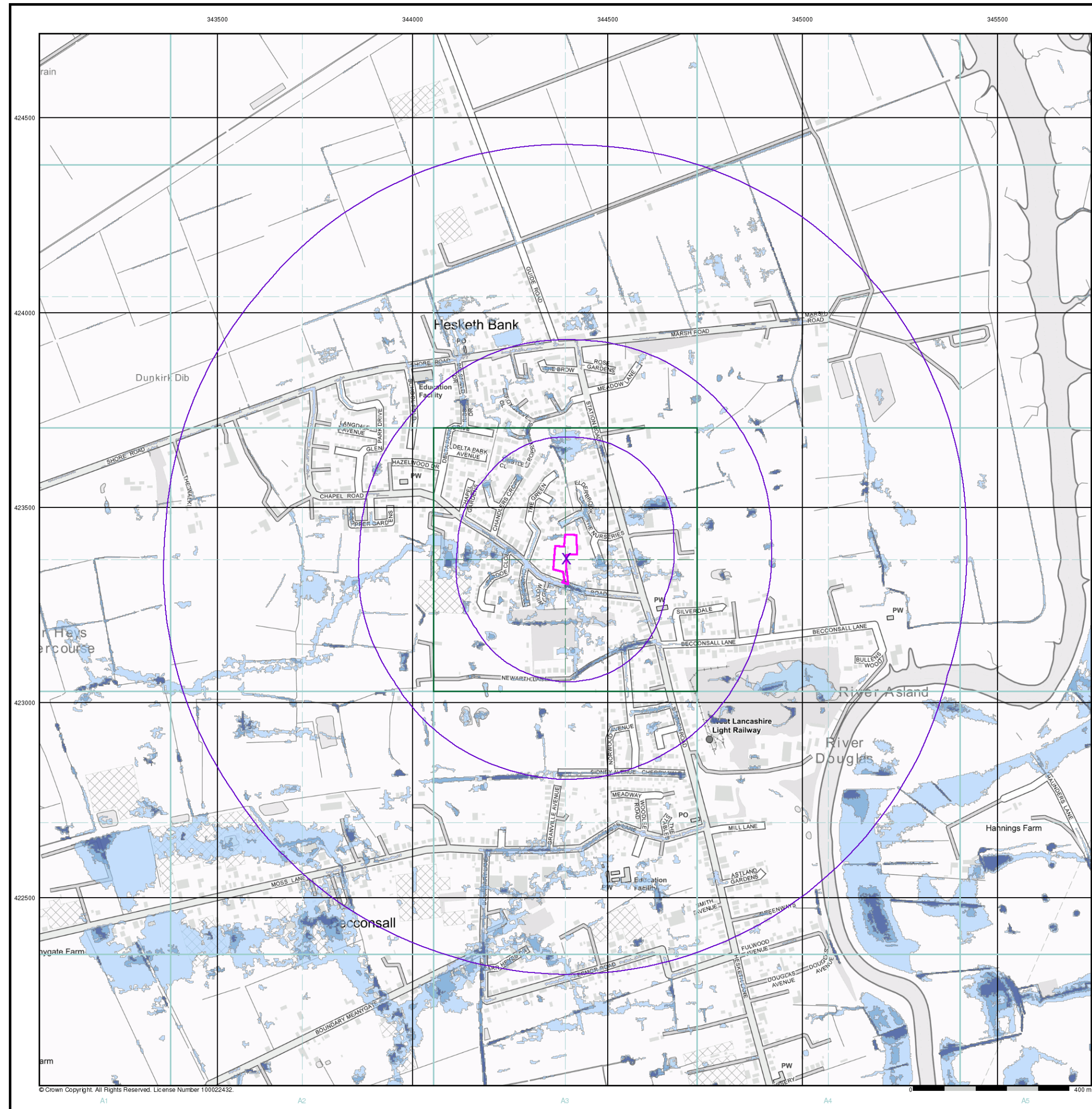
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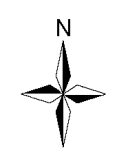
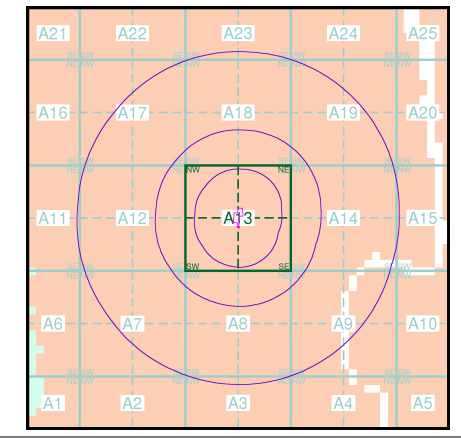
**Risk of Flooding from Surface Water**

- 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

**EANRW Suitability Map - Slice A**



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## **Appendix C**

### **Zetica UXO Unexploded Bomb Risk Map**

# UNEXPLODED BOMB RISK MAP



## SITE LOCATION

Map Centre: 344409,423362



## 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.

- military**
- industry**
- UXO find**
- transport**
- dock**
- Luftwaffe targets**
- utilities**
- other**

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

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

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

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

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

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

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

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

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

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

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

### If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

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

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

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

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



## **Appendix D**

### **Risk Evaluation**

## Risk Evaluation

The method for risk evaluation is a qualitative method of interpreting the output from the risk estimation stage of the assessment, based on CIRIA 552<sup>13</sup>. It involves the classification of the:

- Magnitude of the potential consequence (severity) of the risk occurring (Table A).
- Magnitude of the probability (likelihood) of the risk occurring (Table B).

Consequence (Severity)		
Classification	Definition	Example
<b>Severe</b>	<ul style="list-style-type: none"> <li>- Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA.</li> <li>- Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.</li> <li>- Catastrophic damage to buildings/properties.</li> <li>- A short term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definition of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).</li> </ul>	<ul style="list-style-type: none"> <li>- High concentrations of cyanide on the surface of an informal recreation area.</li> <li>- Major spillage of contaminants from site into controlled waters.</li> <li>- Explosion, causing building collapse (can also equate to short term human health risk if buildings are occupied).</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>- Chronic damage to Human Health ('significant harm' as defined in DETR, 2000).</li> <li>- Pollution of sensitive water resources (note Water Resources Act contains no scope for considering significance of pollution).</li> <li>- A significant change in a particular ecosystem, or organism forming part of such ecosystem.</li> </ul>	<ul style="list-style-type: none"> <li>- Concentrations of a contaminant from site exceed generic, or site specific assessment criteria.</li> <li>- Leaching of contaminants from a site to a major or minor aquifer (Principal and Secondary).</li> <li>- Death of a species within a designated nature reserve.</li> </ul>
<b>Mild</b>	<ul style="list-style-type: none"> <li>- Pollution of non-sensitive water resources.</li> <li>- Significant damage to crops, buildings, structures and services ('significant harm' as defined in DETR, 2000).</li> <li>- Damage to sensitive buildings / structures / services or the environment.</li> </ul>	<ul style="list-style-type: none"> <li>- Pollution of non-classified groundwater.</li> <li>- Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).</li> </ul>
<b>Minor</b>	<ul style="list-style-type: none"> <li>- Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve.</li> <li>- Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.).</li> <li>- Easily repairable damage to buildings, structures and services.</li> </ul>	<ul style="list-style-type: none"> <li>- The presence of contaminants at such concentrations that protective equipment is required during site works.</li> <li>- The loss of plants in a landscaping scheme.</li> <li>- Discoloration of concrete.</li> </ul>

Table A: Classification of consequence.

Probability (Likelihood)	
Classification	Definition
<b>High likelihood</b>	- There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
<b>Likely</b>	<ul style="list-style-type: none"> <li>- There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur.</li> <li>- Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.</li> </ul>
<b>Low likelihood</b>	<ul style="list-style-type: none"> <li>- There is a pollutant linkage and circumstances are possible under which an event could occur.</li> <li>- However it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.</li> </ul>
<b>Unlikely</b>	- There is a pollutant linkage but circumstances are such that it is improbable that an event would occur in the very long term.

Table B: Classification of probability.

<sup>13</sup> CIRIA (2001). "Contaminated Land Risk Assessment: A Guide to Good Practice". C552.



These classifications are then compared to indicate the risk presented by each pollutant linkage (Table C). It is important that this classification is only applied where there is a possibility (which can range from high likelihood to unlikely) of a pollutant linkage existing.

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Table C: Comparison of consequence against probability.

Once the risk has been determined the corresponding action can be assessed (Table D).

Risk	Action Required
<b>Very High Risk</b>	<ul style="list-style-type: none"> <li>- There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening.</li> <li>- This risk, if realised, is likely to result in a substantial liability.</li> <li>- Urgent investigation (if not already undertaken) and remediation are likely to be required.</li> </ul>
<b>High Risk</b>	<ul style="list-style-type: none"> <li>- Harm is likely to arise to a designated receptor from an identified hazard.</li> <li>- Realisation of the risk is likely to present a substantial liability.</li> <li>- 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.</li> </ul>
<b>Moderate Risk</b>	<ul style="list-style-type: none"> <li>- It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.</li> <li>- 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.</li> </ul>
<b>Low Risk</b>	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
<b>Very Low Risk</b>	<ul style="list-style-type: none"> <li>- There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.</li> </ul>

Table D: Description of the classification and likely action required.

Where LKC identified a low to very low risk either limited intrusive investigation work, a watching brief (during construction work) or no investigation work will be recommended. This will be dependent on the nature of the site and the proposed development.

Where the risk falls into the moderate/low risk, LKC will undertake an assessment to establish what category the pollutant linkage will fall into (i.e. moderate or low risk will be chosen).

Where LKC identifies a moderate or higher risk intrusive work or precautionary remedial measures will be recommended.

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- » Contaminated Land
- » Flood Risk and Drainage
- » Asbestos
- » Invasive Species
- » Land Remediation
- » Project Management
- » Land Drilling