

**MARSHALLS MONO LTD**

**PASTURE HOUSE QUARRY, SOUTHOWRAM**

**BESPOKE RECOVERY PERMIT APPLICATION**

**ENVIRONMENTAL SETTING & SITE DESIGN REPORT  
(ESSD)**

**SEPTEMBER 2021**

**Silkstone**  
Environmental Ltd

[www.silkstoneenvironmental.co.uk](http://www.silkstoneenvironmental.co.uk)

**DOCUMENT ISSUE RECORD**

<b>Contract No.</b>	20293
<b>Client</b>	Marshalls Mono Ltd
<b>Contract</b>	Pasture House Quarry – Waste recovery permit application
<b>Document Title</b>	Environmental Setting & Site Design Report (ESSD)

**REVISION RECORD**

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## **1.0 INTRODUCTION**

### **1.1 Report Context**

- 1.1.1 Silkstone Environmental Ltd (SEL) have been appointed by Marshalls Mono Ltd to complete this Environmental Setting & Site Design Report (ESSD) for a bespoke recovery permit application at Pasture House Quarry, Southowram.
- 1.1.2 The site is an operational sandstone quarry. The sandstone mineral is now almost fully exhausted and therefore there is now a need to import inert materials to enable the site to be restored back to original ground levels under a waste recovery operation as is permitted under the extant planning permission, Ref 14/00138/MCO.
- 1.1.3 This report has been completed in accordance with the Environment Agency (EA) template, '*Conceptual Site Model, Environmental Setting and Site Design Report*', Version 1, 14/10/2016.

### **1.2 Site Location**

- 1.2.1 Pasture House Quarry is an operational sandstone quarry and is located approximately 450 metres North East of Southowram Village, Grid Ref SE119239 (E 411900, N 423900). It is located to the north of Church Lane and accessed via a dedicated access, 250 metres in length. Please refer to site location plan Ref ESSD 1.
- 1.2.2 A small number of isolated residential properties are located to the east and south of the access road with the main residential areas of Southowram to the west. The properties in closest proximity are Cromwell Road and Fairfax Crescent, approximately 150 metres to the west.

### **1.3 Current Operations**

- 1.3.1 The operators have an existing permit, Ref EPR/AP3194EM at Cromwell Wood Quarry which is close to capacity and are therefore looking for a new site for continuation of tipping operations. Pasture House Quarry is approximately 700m North West from the Cromwell tip.
- 1.3.2 This permit is for disposal (under a waste recovery permit) of the inert residues from the stone cutting and sand manufacturing operations and is inert in nature. The material when tipped is a sludge with typically 25% moisture content and sets hard when fully dried out.
- 1.3.3 This material is currently mixed with shales to create a supporting buttress against an unstable quarry face and was considered a waste recovery application for this reason. The material required at Pasture House Quarry would be for restoration purposes only to enable the site to be restored back to original ground levels to make up the shortfall from mineral extraction.
- 1.3.4 This new permit application will transfer the operations from Cromwell Wood and therefore Pasture House Quarry will become the operational tip for the factory waste approximately the next 10 years.

## 2.0 SOURCE

### 2.1 Historical Land Use

2.1.1 Information relating to the historical uses of the site and surrounding area has been determined from a review of the following:

- The large scale (1:1250 and 1:2500) and small scale (1:10,560 and 1:10,000) historical Ordnance Survey (OS) maps dating from 1854 to 2021;
- Google Earth aerial imagery dated 2002 to 2020.

2.1.2 It is important to note that any date referred to in this section refers to the date a feature appears on the map, not necessarily the date the actual feature was first present. Additionally, the marked site boundary may appear to move with respect to successive editions. This is predominantly due to minor variations in the OS with time.

2.1.3 A summary of the features noted from the historical mapping is described below.

#### Within the Site

2.1.4 The earliest mapping (1854) shows the site to be farmland in the form of segregated fields with the adjoining farm buildings on the southern boundary (Pasture House Farm). The site area itself remains relatively unchanged up until the point of quarrying in or around 2001.

2.1.5 On the 1982 map extract, a field adjoining the northern boundary is now identified at Pasture House Quarry (Stone). Google Earth aerial imagery from 2002 appears to show this feature to have been backfilled with excavation now taking place within our site area of concern until the present day.

#### Surrounding Area

2.1.6 The earliest mapping (1854) shows the site to be located within a rural area with surrounding farmland with very few buildings within 500m.

2.1.7 Between 1905 and 1976 the village of Southowram (approximately 200m to the West) becomes more populated, with housing estates and associated commodities now present on map entries.

2.1.8 There is very little change to note at all close to the immediate boundaries of site throughout the timeline of the map entries (1854 to 2021) with only the presence of neighbouring Roads, Royds and Farms observed.

### 2.2 Relevant Historical Areas of Waste Activity

2.2.1 There are no known unpermitted areas of waste activity on site.

2.2.2 There is 1 permit for waste activities within a 500m radius of the site recorded by Envirocheck, which is operated by the applicant, Marshalls Mono Ltd:

Site Name, Address & Operator	Location	Waste Operation	Size	Status
Cromwell Wood Quarry Brookfoot Lane, Southowram Marshalls Mono Ltd EPR Ref. AP3194EM/A001	On site	Recovery	40,000 tpa	Issue date: 24/06/2009
Currently operational under varied permit no. AP3194EM/V002, issued 15/05/2020				

## 2.3 Proposed Development

- 2.3.1 The annual tonnage of material to be deposited is up to 20,000 tonnes per annum with a void space of approximately 200,000 tonnes. The area shown on plan 20293/100 is the area proposed for the new permit and is the current area for mineral extraction. This area is approximately 2.0 Hectares.
- 2.3.2 At a proposed importation rate of 20,000 tonnes per annum, it would take approximately 10 years to complete.
- 2.3.3 In the current operational waste tip at Cromwell Wood, the imported material consists of stone and sand sludge from the stone cutting operations. This material is currently mixed with as dug shales from the quarry and provides an inert restoration material replacing the sandstone mineral which has been previously extracted. The material is inert in nature and whilst is a sludge when tipped (with typically 25% moisture content) it sets hard and solid when allowed to dry out. This mixture of materials and processes is expected to continue in the new permit area at Pasture House Quarry if approved.
- 2.3.4 The waste will be imported by road lorries from Brookfoot Works and will be tipped directly into the waste recovery area being restored at each particular time. No additional plant is required for this facility additional to what is already permitted for mineral extraction. Only mobile plant is to be used on site which is already planning permitted as part of the quarrying operations.
- 2.3.5 The material to be used would comprise of uncontaminated inert material which provides the required engineering criteria. The table below outlines the ECW waste codes we intend to import.

Waste Code	Description	Source
01 01 02	wastes from mineral non-metalliferous excavation	Factory
10 13 14	Waste concrete and concrete sludge	Factory
17 05 04	Soil and stones	Excavation sites
20 02 02	Soil and stones	Excavation sites

- 2.3.6 Soil and stones is included in case further soil is required for restoration to provide adequate cover to provide a suitable growing medium.
- 2.3.7 The operator will ensure that material imported to the site is inert and non-hazardous in nature.
- 2.3.8 Upon completion the surface profile with dip gently from west to east with surface elevations ranging from 198m AOD at the western end of the site to 188m AOD at the eastern end of the site. The approved restoration scheme is shown on Drawing No ESSD 5.
- 2.3.9 The approved restoration scheme upon completion provides for areas of open agricultural grassland, back to its original land use.
- 2.3.10 A Waste Recovery Plan has been approved for restoration back to original ground levels for an approximate volume of 200,000 tonnes of inert waste from the company's stone

processing facility. It is estimated there will be 20,000 tonnes per annum imported to give a lifespan of approximately 10 years.

## 3.0 PATHWAY AND RECEPTOR

### 3.1 Geology

- 3.1.1 British Geological Survey (BGS) mapping of the area indicates that the Site is underlain by Lower Coal Measures bedrock consisting of interbedded sandstone, siltstone and mudstone. Pasture House Quarry is established in the Elland Flags, a discrete sandstone unit within the Lower Coal Measures sequence. The Elland Flags consist of fine to medium-grained, flaggy to thickly bedded micaceous sandstone that occurs as a number of sandstone leaves interbedded with carbonaceous mudstone. There is no record of superficial deposits above the bedrock.
- 3.1.2 Lower Coal Measures strata in the area dip in an easterly direction at angle of 4-6° to the horizontal. No major faults have been identified within the proposed extension area but surrounding strata are relatively densely faulted with a combination of north west – south east faults and north east – south west faulting.
- 3.1.3 An extensive Site investigation programme was undertaken at Pasture House Quarry, in 2012. A total of 12 boreholes were drilled to the north and west of the existing quarry excavation area.
- 3.1.4 The 2012 investigation demonstrated that the Elland Flags consists of a series of variable thickness sandstones interbedded with siltstones and mudstones. The Elland Flags are underlain by a thick sequence of Lower Coal Measures Mudstone. The thickness of the Elland Flags sequence was found to range from 5.5m to 25.3m across the investigation area. This equates to a minimum elevation of 158.5mAOD and maximum elevation of 188.6mAOD with the base of bedrock rising from east to west which is consistent with the regional stratigraphic dip.
- 3.1.5 A detailed interpretation of local bedrock geology was undertaken during hydrogeological studies at the adjacent Cromwell Wood Quarry which is also established in the Elland Flags. Borehole investigations at Cromwell Wood established bedrock geology beneath the Elland Flags. The Elland Flags are underlain by approximately 10m-15m of coal measures mudstone, above a thin sandstone unit, referred to here as the 'Upper Sandstone'. The Upper Sandstone is underlain by approximately 20m of coal measures mudstone above the 80 Yard Rock sandstone which has nominal thickness of up to 5m.
- 3.1.6 Six new groundwater monitoring boreholes were constructed around the perimeter of Pasture House Quarry in 2021. The boreholes included three boreholes, one at each location, that extended to the 80 Yard Rock. A borehole location plan and summary details are included at Appendix B. The three deep boreholes proved the presence of a thickness of approximately 20m of mudstone beneath the Elland Flags, underlain by a 5m thick sandstone ('Upper Sandstone'), and a further 15m thickness of mudstone above the 80 Yard Rock which has an average thickness of 5m.

#### Mining and Ground Instability

- 3.1.7 A review of mine plans for the area has demonstrated the presence of abandoned deep coal mine workings to the north west and west of the Site. There is no evidence of recorded mine workings beneath the Site. It is probable that the presence of deep mine workings, all of which were worked by room & pillar techniques, has influenced groundwater drainage in the area through an increase in drainage capacity towards the Calder Valley in the south west.

## **3.2 Hydrology & Surface Water Management**

- 3.2.1 Pasture House Quarry is established on high ground that forms the western side of Red Beck Valley. Existing ground level at the proposed extension area falls from a maximum elevation of approximately 203mAOD at the north western corner to a minimum elevation of approximately 193mAOD at the north eastern boundary. In general, ground levels fall in an easterly direction, reducing rapidly towards Red Beck which flows at an elevation of approximately 70mAOD to 80mAOD approximately 1km to the east.
- 3.2.2 The proposed extension area is situated in the surface water catchment of Red Beck, a tributary of the River Calder which flows west to east approximately 1.5km to the south. Red Beck flows north west to south east approximately 1km east of the Site. There are no surface watercourses, or other surface water features, within the proposed extension area or the surrounding area. The existing Pasture House Quarry workings are free-draining with no offsite discharge of surface water. The nearest surface water features are a series of small streams that emerge from issues located approximately 500m to the east and north east of the proposed extension area.
- 3.2.3 At a distance of approximately 600m south of the proposed extension area, two small streams emerge from issues to the south of Southowram. The streams combine to form Cromwell Wood Stream which flows in an easterly direction along the base of Cromwell Wood before passing underground at sinks.
- 3.2.4 The absence of any surface water drainage features at the proposed extension area indicates low potential for surface water runoff and high potential for rainwater infiltration. This is consistent with the free-draining nature of existing quarry excavations.
- 3.2.5 The elevated location of the Site ensures that it is at low risk of fluvial flooding, as shown on the Environment Agency Flood Map for Planning and also at low risk of surface water flooding as indicated on the Environment Agency Long Term Flood Risk Map. Reference to Defra's Magic map application confirms that the Site is not within a source protection zone and is not subject to any surface water or groundwater quality designation.
- 3.2.6 There are no licensed groundwater abstractions within one kilometre radius of the Site. There are four licensed groundwater abstractions between 1.5km and 2km from the proposed development Site. The location of existing abstractions is considered in relation to potential pathways and receptors in this HIA. However, it is currently considered that all licensed groundwater abstractions are outside the area of potential influence of the proposed development.

## **3.3 Hydrogeology**

- 3.3.1 The Lower Coal Measures sequence at and in the vicinity of the Site is designated a 'Secondary A Aquifer' by the Environmental Agency. The absence of superficial cover results in a perceived high vulnerability to groundwater pollution, although this designation takes no account of groundwater depth or the presence of intervening strata.
- 3.3.2 Borehole evidence at the site and surrounding area has demonstrated the presence of groundwater in the 80yrd Rock sandstone unit beneath the Site. Small quantities of groundwater have also been identified in some of the overlying thin sandstone units at shallower depth.
- 3.3.3 All twelve boreholes drilled to the base of the Elland Flags during the 2012 site investigation were dry throughout. Borehole were all drilled with air flush which would have allowed identification of even minor seepages into any of the boreholes. Three of these boreholes,

including one borehole (BH2012(3)P) at the western boundary of the proposed extension area, were installed with standpipe piezometers. Although the boreholes were not sealed into any specific horizon, subsequent monitoring has provided general data on the variation in the elevation of water originating from shallow depth within the Elland Flags. It is unclear whether water accumulating in the three boreholes is inflow of perched groundwater from one of the shallow sandstones that were dry during borehole installation or whether it is simply accumulation of inflowing surface water. Groundwater level data from these boreholes is therefore considered to have limited reliability and is not therefore relied upon in this assessment.

3.3.4 The six recently constructed groundwater monitoring boreholes were drilled in pairs with one borehole to the base of the Elland Flags and one borehole to the base of the 80 Yard Rock at each location. Deep boreholes incorporate monitoring installations that are sealed below the base of the Upper Sandstone and therefore have a response zone that extends across the 80 Yard Rock and overlying mudstone. Borehole installation was completed in June 2021. A first round of monitoring provides data on groundwater levels in both aquifers at the Site as summarised in Table 1.

**Table 1: 2021 groundwater level data**

BH No.	Formation	BH Depth (mbgl)	Groundwater elevation (mAOD)
1A	Upper Sandstone	46.70	158.00
1B	80 Yard Rock	71.00	132.00
2A	Upper Sandstone	43.30	147.49
2B	80 Yard Rock	65.80	136.49 *
3A	Upper Sandstone	39.00	148.48
3B	80 Yard Rock	65.80	120.41

\*Level reliability subject to review following future monitoring

3.3.5 Hydrogeological interpretation and conceptual hydrogeological model development has been based on data derived from monitoring installations at both Pasture House Quarry and the neighbouring Cromwell Wood Quarry.

Local groundwater flow directions

3.3.6 Reference to new groundwater level data from monitoring boreholes at the site together with a detailed evaluation of local and regional hydrogeological characteristics has led to the development of a robust understanding of baseline hydrogeology at the Site. The following factors are relevant to hydrogeological interpretation.

- The geological structure of the area with stratigraphic dip to the south east tends to promote regional groundwater drainage to the south and east;
- Topographically, the Calder Valley and associated Red Beck Valley influence the direction of surface runoff and the location of groundwater discharge points;
- Investigation boreholes constructed to the 80 Yard Rock at a depth of approximately 60 mbgl have demonstrated the consistent presence of a 2m thick sandstone unit (Upper Sandstone) within the mudstone beneath the Elland Flags;
- Some boreholes have proven the presence of localised unrecorded mine working in the vicinity of the 80 Yard Rock to the south of the Site;
- Detailed analysis of borehole configuration, groundwater levels variation and knowledge of local groundwater drainage characteristics has led to the conclusion that the Upper Sandstone and the 80 Yard Rock act as separate and discrete aquifers separated by low hydraulic conductivity mudstone;

- 
- The presence of a spring line within the mudstone beneath the Elland Flags along the south western side of the Red Beck Valley. The elevation is consistent with the projected outcrop of the Sandstone Unit referred to above; and
  - The presence of springs and issues to the south of the Site, feeding the stream in Cromwell Wood.

3.3.7 Despite potential evidence of high level seepage in the three 2012 groundwater monitoring boreholes there is no conclusive evidence to indicate the presence of an active groundwater flow horizon within the Elland Flags. The existing quarry excavations are immediately adjacent to the proposed extension area and extend to the same stratigraphic depth without any evidence of groundwater inflow. Additionally, it is noted that around the southern and eastern (down-gradient) boundaries of the proposed extension area previous mineral workings have been backfilled and restored. As a consequence, any shallow groundwater flow horizon in the Elland Flags could not be continuous in a down-gradient direction.

3.3.8 Groundwater contours and groundwater flow directions for each of the two aquifer units are shown on Drawings ESID 7a and ESID 7b. It is apparent that the general groundwater flow direction through both the Sandstone unit within the mudstone and the underlying 80 Yard Rock is to the south and east towards Brookfoot and the Red Beck Valley. Potential groundwater receptors are also marked on both drawings.

3.3.9 The role of the mudstone units with regard to aquifer recharge requires further comment. It is considered that the mudstone unit immediately beneath the Elland Flags is likely to have enhanced hydraulic conductivity due to the stress relaxation effect of mineral extraction. A lack of water in the overlying Elland Flags tends to confirm the potential for infiltration through this upper mudstone unit across the site. It is therefore concluded that the primary source of recharge to the Upper Sandstone which occurs at approximately 10m below the top of the mudstone, is infiltration through fractures and fissures in the mudstone itself.

3.3.10 In contrast, the underlying mudstone which separates the Upper Sandstone from the 80 Yard Rock appears to have particularly low hydraulic conductivity and acts to confine groundwater within the 80 Yard Rock aquifer. Groundwater level monitoring data for this unit indicates a hydraulic gradient from the north west suggesting a greater component of lateral flow than the higher Upper Sandstone.

3.3.11 A review of mine plans for the area has demonstrated the presence of abandoned deep coal mine workings to the north west and west of the Site. There is no evidence of recorded mine workings beneath the Site. It is probable that the presence of deep mine workings, all of which were worked by room & pillar techniques, has influenced groundwater drainage in the area through an increase in drainage capacity towards the Calder Valley in the south west.

#### Groundwater Abstractions

3.3.12 A survey of licensed surface water and groundwater abstractions has been undertaken. Full details are presented in the Envirocheck Report at Appendix A. There are no licensed groundwater abstractions within one kilometre radius of the Site. There are four licensed groundwater abstractions between 1.5km and 2km from the proposed development Site. The location of existing abstractions is considered in relation to potential pathways and receptors in this HIA. However, it is currently considered that all licensed groundwater abstractions are outside the area of potential influence of the proposed development.

### Groundwater quality

- 3.3.13 An indication of the quality of local groundwater has been derived from review of analysis undertaken at the adjacent Cromwell Wood Quarry in 2005. A programme of groundwater monitoring commenced shortly after the construction of new monitoring boreholes. Water samples were obtained from six deep monitoring boreholes on a monthly basis and subject to detailed analysis. The first set of samples was subject to full hazardous and non-hazardous substance screening analysis. For subsequent samples the range of determinands was reduced to reflect the finding of the initial analysis. Summary details aimed at groundwater quality characterisation are presented in Table 1. Borehole locations are shown on Drawing ESID 6 in Appendix A.
- 3.3.14 Groundwater in the area contains elevated concentrations of cadmium and toluene. Elevated concentrations of mercury are also present in some samples. Groundwater concentrations of lead and iron are elevated. TPH concentrations are particularly high. Lead and iron concentration in Borehole 1A, the closest historic borehole to Pasture House Quarry, were above UKDWS. However, groundwater from Boreholes 3 and 5 is significantly poorer in quality with elevated concentrations of cadmium, mercury, toluene, lead, iron and TPH. Groundwater quality improves downstream in Boreholes 7, 9 and 13 but lead and TPH concentrations remain high.
- 3.3.15 Hydrogeological assessment has confirmed the presence of extensive underground coal mine workings to the immediate north and west of the Site. With regard to groundwater flow, mine workings to the north are upstream of the Site. Some characteristics of local groundwater are more commonly found in regions where groundwater is influenced by passage through former mine workings. It is considered probable that groundwater is contaminated by the effects of drainage through mine workings. Borehole 3 in particular is known to have terminated in broken ground considered to be unrecorded shallow mine workings. The chemical character of Borehole 3 tends to reflect this.

## **4.0 Pollution Control Measures**

### **4.1 Site Engineering**

- 4.1.1 The attenuation capacity of the natural geology is approximately 200,000m<sup>3</sup>. The Elland Flags which are extracted for the quarrying operations are underlain by a thick sequence of Lower Coal Measures Mudstone which acts as a natural geological barrier.
- 4.1.2 No slope engineering is proposed and therefore no CQA works are required as part of this permit application.

### Capping

- 4.1.3 The material used in this permit application is concrete waste sludge from stone processing operations which when mixed with shale overburden on site sets hard and therefore provides an impermeable cap.

### Soils

- 4.1.4 On completion of the operations referred to above, topsoil will be evenly spread over the site to a minimum depth of 100mm, cultivated, fertilised and seeded with a grass mix and a grass sward established.
- 4.1.5 Subsoil will be loose tipped onto the formation landform and levelled with a tracked, low ground pressure dozer. Topsoil will be stripped and placed onto the subsoil layer using the same methodology used for the placement of the subsoil.

- 
- 4.1.6 Access to restored phases for soil spreading and/or cultivation operations will take place only via agreed haul routes in order to minimise compaction to restored profiles.
- 4.1.7 The restored agricultural areas will initially be seeded with a grass mix which will assist consolidation of the soil layers for several years prior to potential introduction of long term grazing swards. Any part of the seeded area where a sward is not established as a result of the initial sowing will be cultivated, fertilised and re-seeded in the next sowing season following correction of any nutritional deficiencies. Such works will be repeated if necessary until a sward is established.
- 4.1.8 Cultivation will take place as soon as possible following soil placement prior to establishment of weed growth, or alternatively in spring in which case significant advance weed growth will be sprayed off if necessary. Cultivated areas will not be traversed or trafficked when there is a risk of smearing or damage topsoil structure. Cultivation will create a fine firm seed bed by a combination of disc and/or tine harrows.

## **4.2 Aftercare**

- 4.2.1 The Aftercare Programme sets out the general steps to be carried out for restoration of areas to agricultural grassland. The timing of operations within an outline programme of a five year aftercare strategy is also considered.
- 4.2.2 During cultivation operations, any stones brought to the surface together with any other objects likely to obstruct future cultivation or grass cutting will be removed from the restored landform.
- 4.2.3 The short term ley will be initially managed by summer hay cutting. As and when areas of restoration can be fenced off the hay cut will be followed by aftermath grazing with sheep. Grazing will be restricted in autumn and winter to avoid poaching and over-grazing of recently reinstated land. Noxious weeds will be controlled during the interim short-term ley period if necessary, by applications of selective herbicide or by topping, prior to weeds setting seed, in areas managed by summer grazing.
- 4.2.4 Soils in the restored agricultural grassland areas will be sampled in spring of year 1 to ascertain baseline data, and in subsequent seasons if necessary, and analysed for pH, P, K and Mg status and % organic matter. Spring top dressings of 20-10-10 or similar compound fertiliser may be applied to the interim ryegrass sward depending on results of soil tests and anticipated cropping proposed for the coming season. Thereafter once the grassland is establishing, no fertiliser additions are anticipated unless gross nutrient deficiencies pose a threat to animal welfare.
- 4.2.5 The programme of aftercare will operate for a five year period for grassland and woodland restoration. In respect of grassland restoration the aftercare programme will commence on the date at which the final layer of topsoil has been spread on each phase of the site to be entered into aftercare or from a date mutually agreed with the Mineral Planning Authority. For proposed woodland areas the aftercare period will commence during the year following planting operations.
- 4.2.6 The proposed programme of aftercare is provided below.
- 4.2.7 The proposed programme of aftercare is provided below. The details are outline only and will change annually in response to site rehabilitation requirements.

### Grassland

4.2.8 Summer agreed/approved herbicide treatment of any noxious weed growth which has self seeded a minimum of two weeks prior to any cultivation seeding operations.

#### Year 1

- Autumn cultivation of soil profile to a minimum of 50mm.
- Autumn seeding of restoration landform with agreed/approved grass seed mix.
- Establishment cut in the following spring or when the sward reaches 100mm height.
- Spring/summer application of selective herbicide to treat weed species.
- Mow /strim in September as required and remove arisings.
- Possible stock grazing (sheep) from July to September inclusive.
- Fertiliser assessment and application.

#### Years 2 and 3

4.2.9 Spring assessment of remedial earthworks or physical cultivations including remedial seeding over areas which have failed.

- Spring/summer application of selective herbicide to treat weed species.
- Mow in May and September OR spring (late May) introduction of sheep at a low stocking rate to be determined for a period not exceeding four months (to end September) to avoid poaching.
- Fertiliser assessment and application.

#### Years 4 and 5

- Spring assessment of remedial earthworks or physical cultivations including remedial seeding over areas which have failed.
- Spring/summer application of selective herbicide to treat weed species.
- May introduction of cattle at a low stocking rate to be determined for a period to end September to avoid poaching

#### Post Restoration Settlement

4.2.10 Due to the material used in this permit application is concrete waste sludge from stone processing operations which when mixed with shale overburden on site sets hard, no post completion settlement will occur and this has been demonstrated on their current facility at Cromwell Wood Quarry

## **5.0 Environmental Monitoring**

### Dust

5.1 Please refer to the Fugitive Emissions Plan document submitted with this permit application.

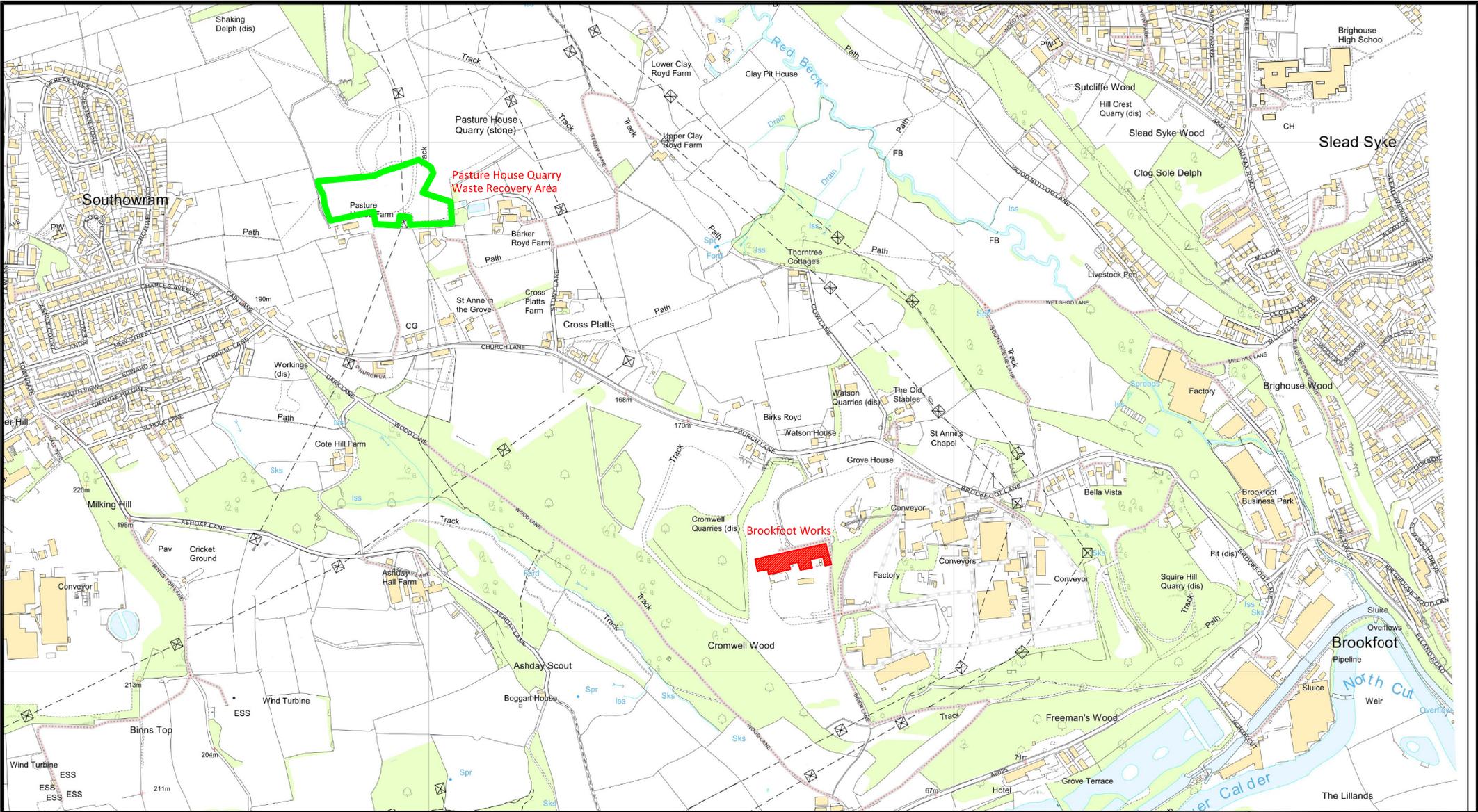
### Gas Monitoring

5.2 Please refer to the Environmental Monitoring Plan submitted with this permit application.

Silkstone Environmental  
October 2021

## Appendix A

### ESSD Drawings



**Silkstone**  
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 Waste Recovery Permit Boundary

Client: **Marshalls** 

Project: PASTURE HOUSE QUARRY  
BESPOKE RECOVERY PERMIT  
APPLICATION

Plan Title: LOCATION PLAN

Drawing No.  
ESSD1

Rev

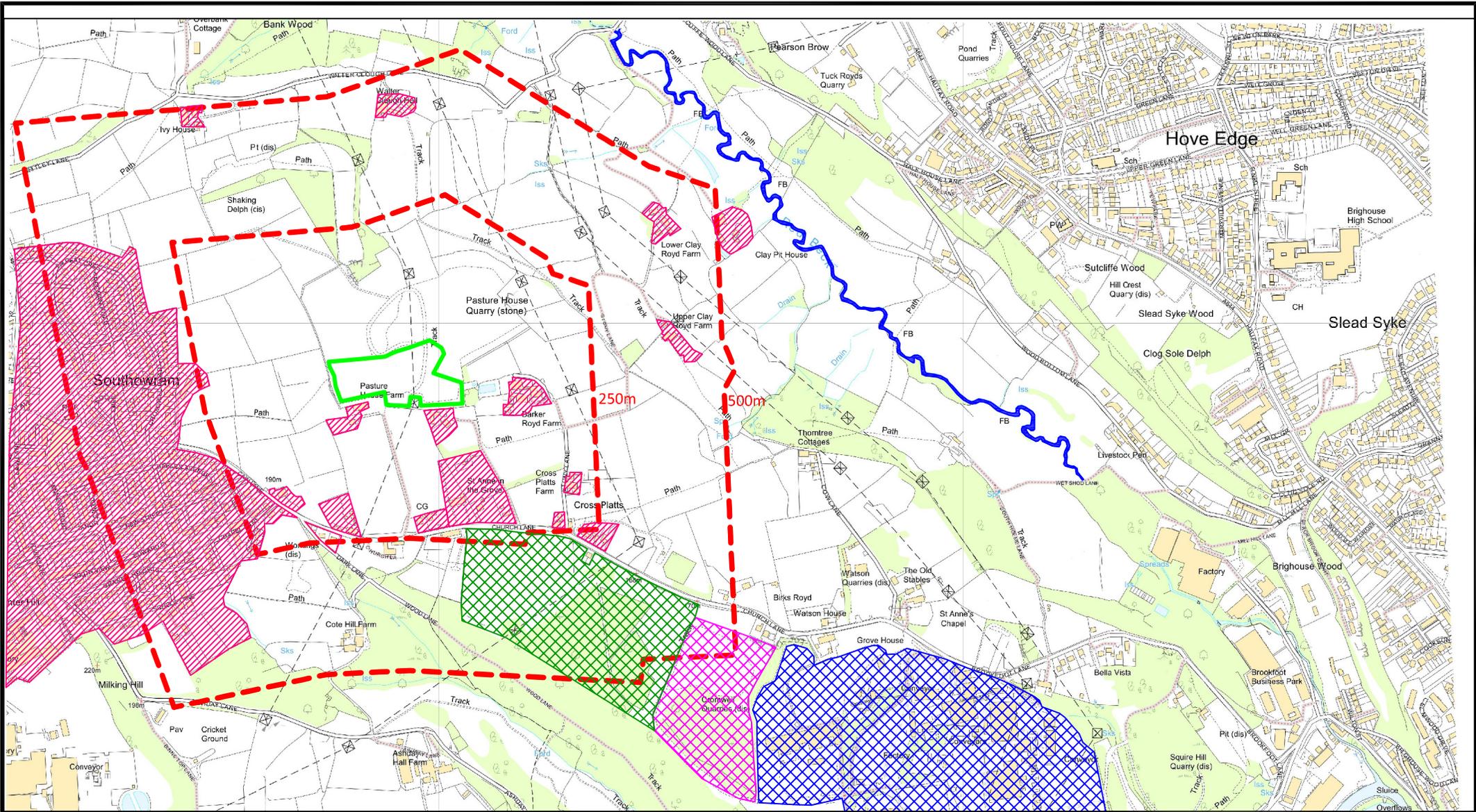
Project No. 20293

Date: Sept 2021

Scale: 1:10000 @ A4

Drawn: PS

Chkd:



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-  Installation Boundary
-  Domestic Dwellings & Gardens
-  Closed Landfill Area
-  Active Landfill Area
-  Industrial Areas
-  Surface Water Bodies

Client:

**Marshalls**

Project:

PASTURE HOUSE QUARRY  
WASTE RECOVERY PERMIT APPLICATION

Plan Title:

ENVIRONMENTAL SITE SETTING

Drawing No.

ESSD 2

Rev

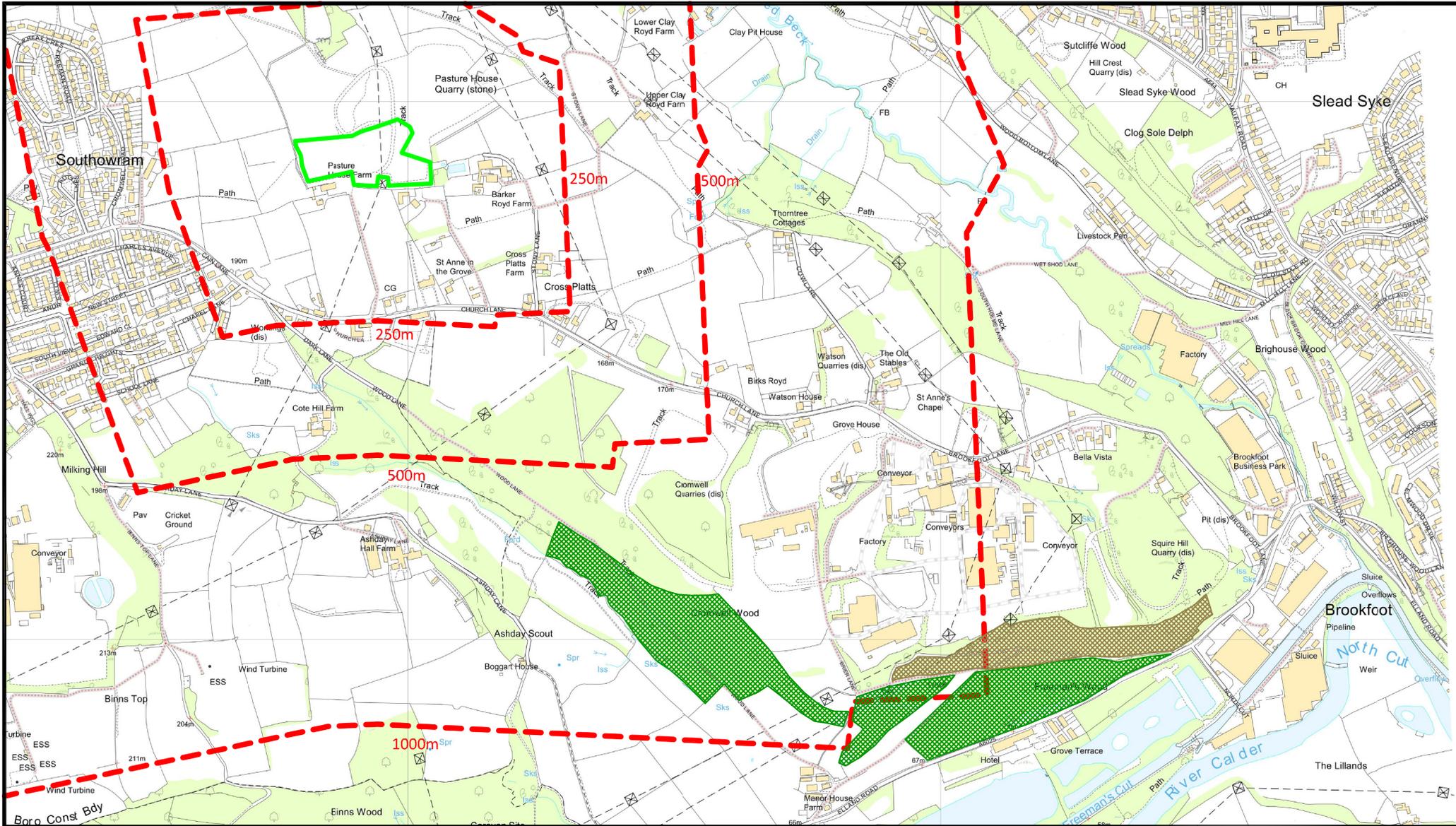
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Drawn: PS

Chkd:



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 Tel (0114) 2573487 Fax (0114) 2573459

-  Installation Boundary
-  Ancient & Semi-Natural Woodland
-  Ancient Replanted Woodland

Client: **Marshalls** 

Project: PASTURE HOUSE QUARRY  
 WASTE RECOVERY PERMIT APPLICATION

Plan Title: CULTURAL & NATURAL HERITAGE

Drawing No.  
 ESSD 3

Rev

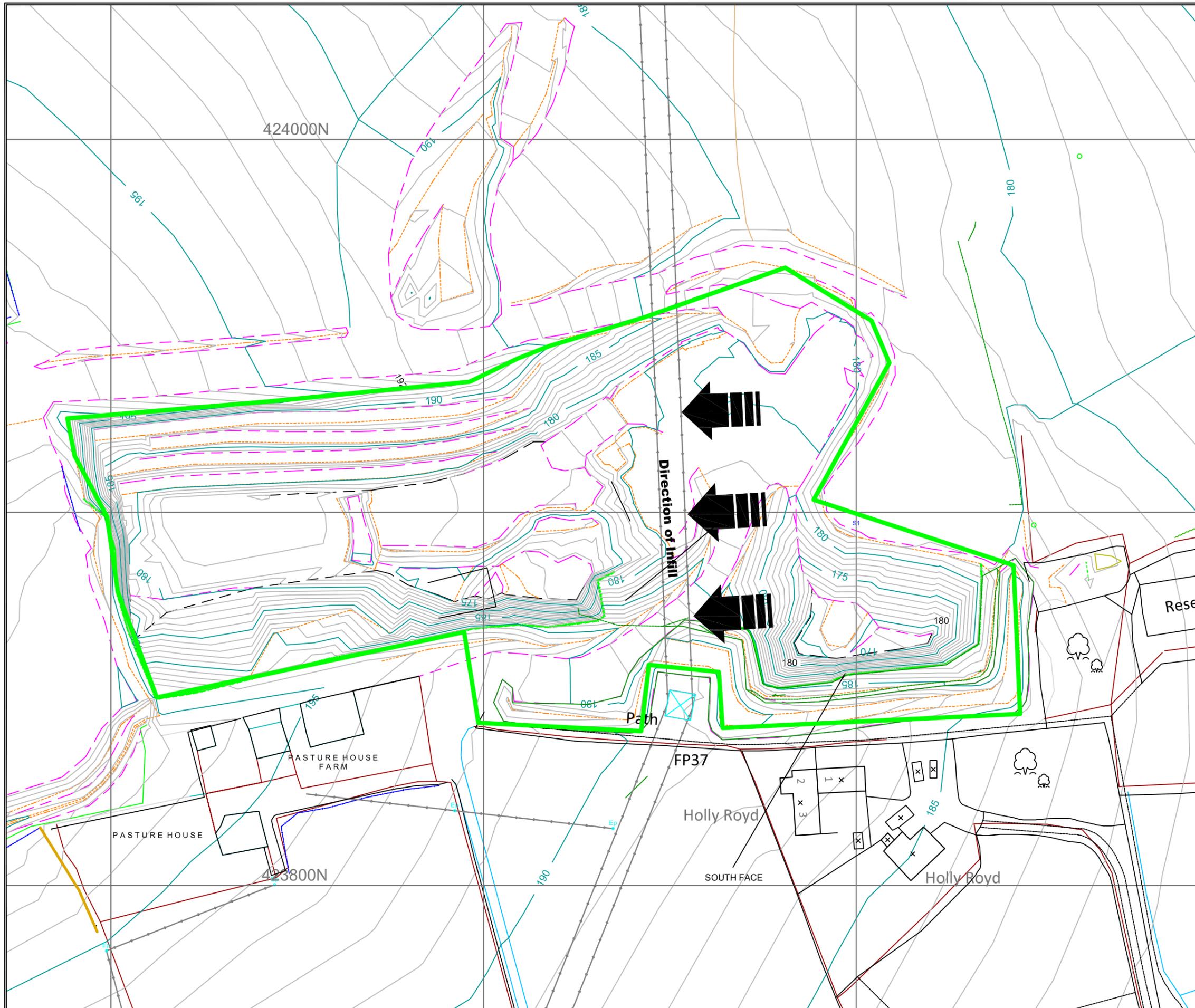
Project No. 20293

Date: Sept 2021

Scale: 1:10000 @ A4

Drawn: PS

Chkd:



Proposed Waste Recovery Area

Rev	Description	Date	Drawn	Chkd
-----	-------------	------	-------	------

Client:

**Marshalls**

Project:

PASTURE HOUSE QUARRY  
BESPOKE RECOVERY PERMIT  
APPLICATION

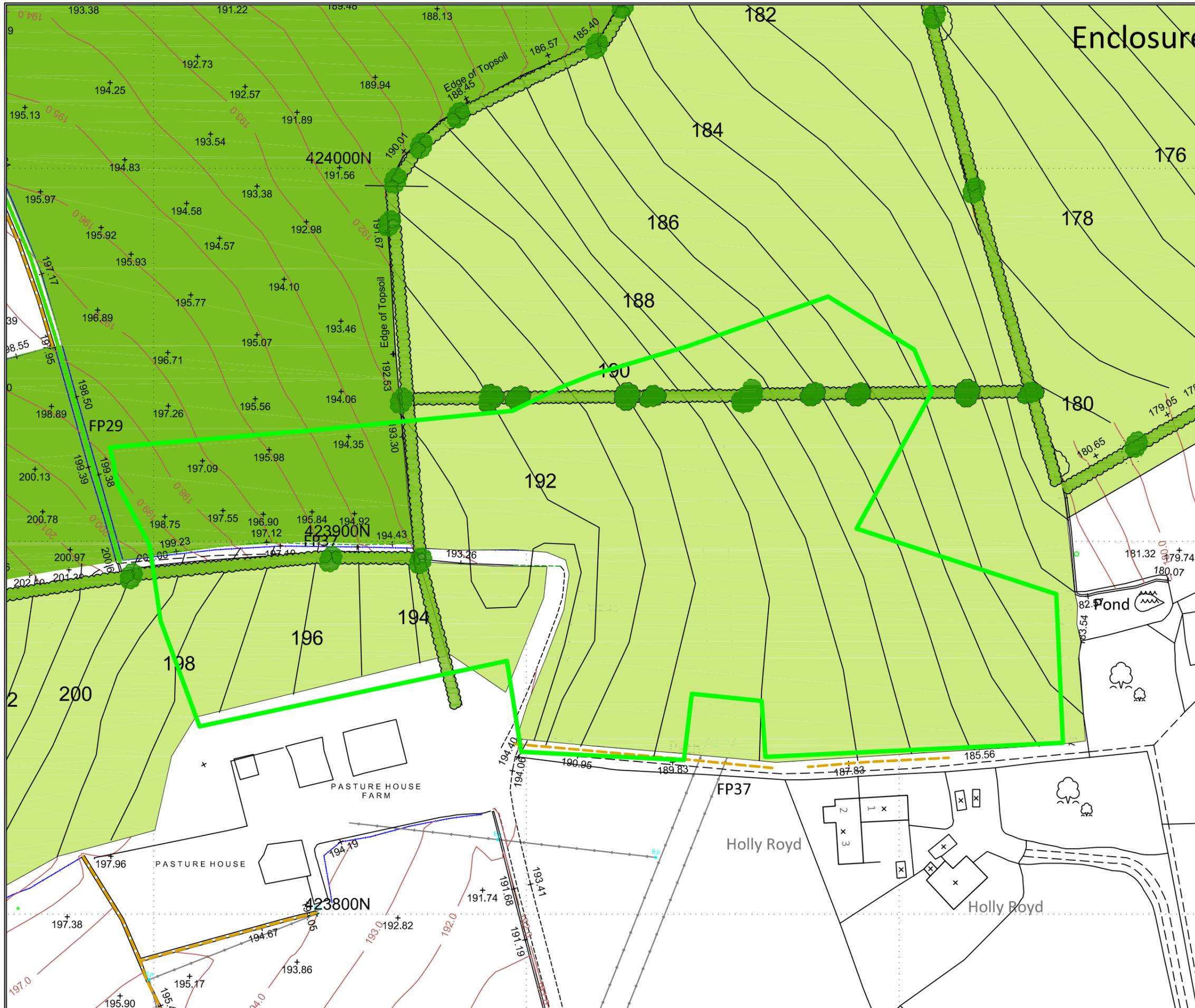
Plan Title:

SITE LAYOUT & WASTE

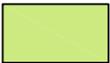
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Environmental Ltd  
www.silkstoneenvironmental.co.uk  
7, Hall Annex, Thorncliffe Park, Chapeltown, Sheffield, S35 2PH  
Tel (0114) 2573487 Fax (0114) 2573459

Project No. 20293	Dwg No. ESSD 4	Rev
Date: SEP 21	Drawn: PS	Chkd: Scale: 1:1000 @ A3

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Enclosure

-  Waste Recovery Area
-  Native Species Hedgerows
-  Hedgerow trees
-  Restored Pastureland in Eastern Extension
-  Native Woodland Planting
-  Previously Restored Areas
-  170 Restoration contours (m AOD)

Rev	Description	Date	Drawn	Chkd
-----	-------------	------	-------	------

Client:

**Marshalls** 

Project:

**PASTURE HOUSE QUARRY**

Plan Title:

Approved Restoration Plan

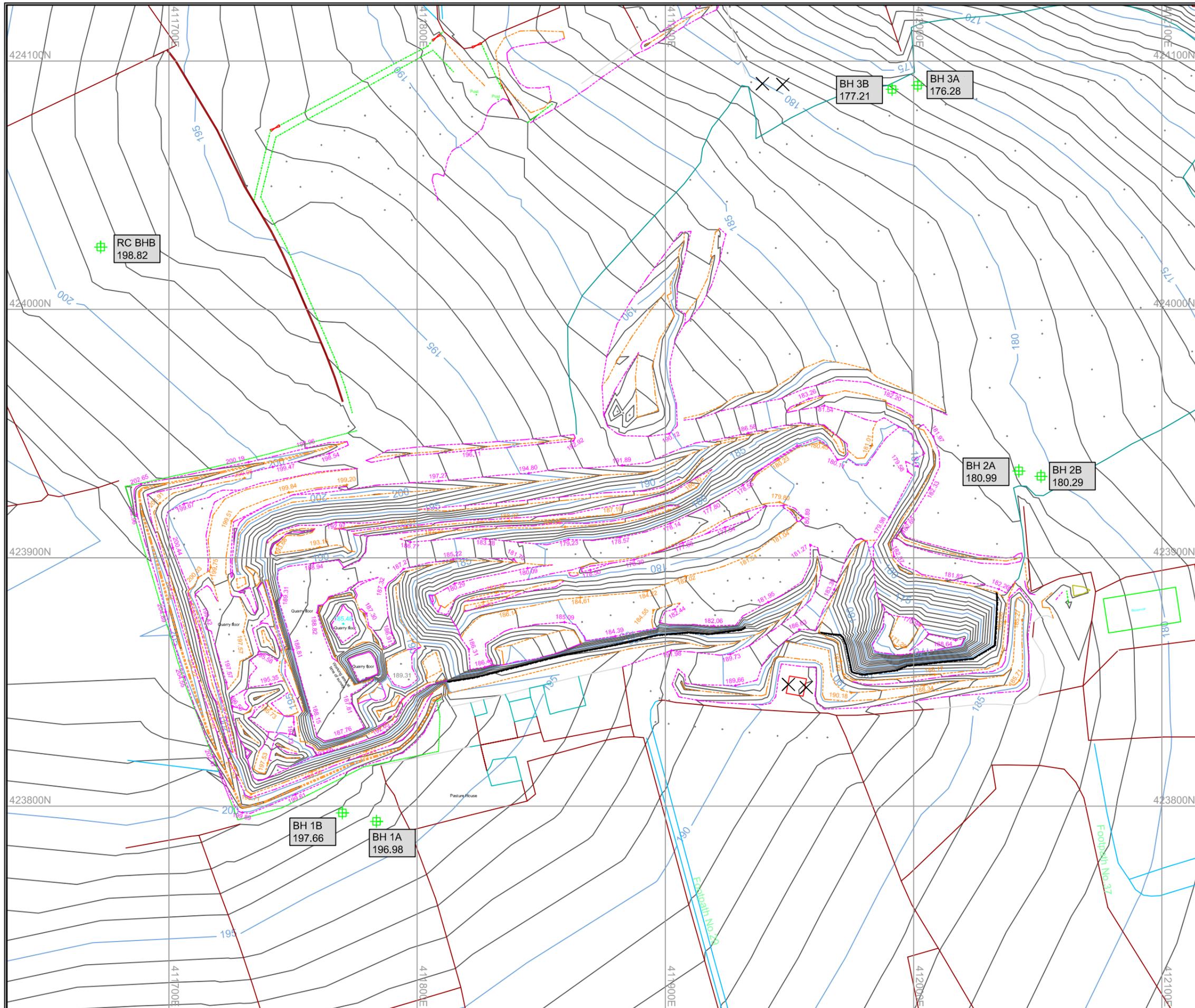
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Environmental Ltd

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Tel (0114) 2573487 Fax (0114) 2573459

Project No. 20293	Dwg No. ESSD 5	Rev
Date: Sept 21	Drawn: PS	Chkd:
Scale: 1:1000 @ A3		

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**LEGEND**

- Bottom of Bank
- Top of Bank
- Fence
- Building
- Wall
- Quarry Face
- 1m Contours
- 5m Contours
- Levels
- + Borehole ID & ground level

Rev	Description	Date	Drawn	Chkd

Client:

Project:

PASTURE HOUSE QUARRY  
WASTE RECOVERY PERMIT

Plan Title:

BOREHOLE LOCATIONS

# Silkstone

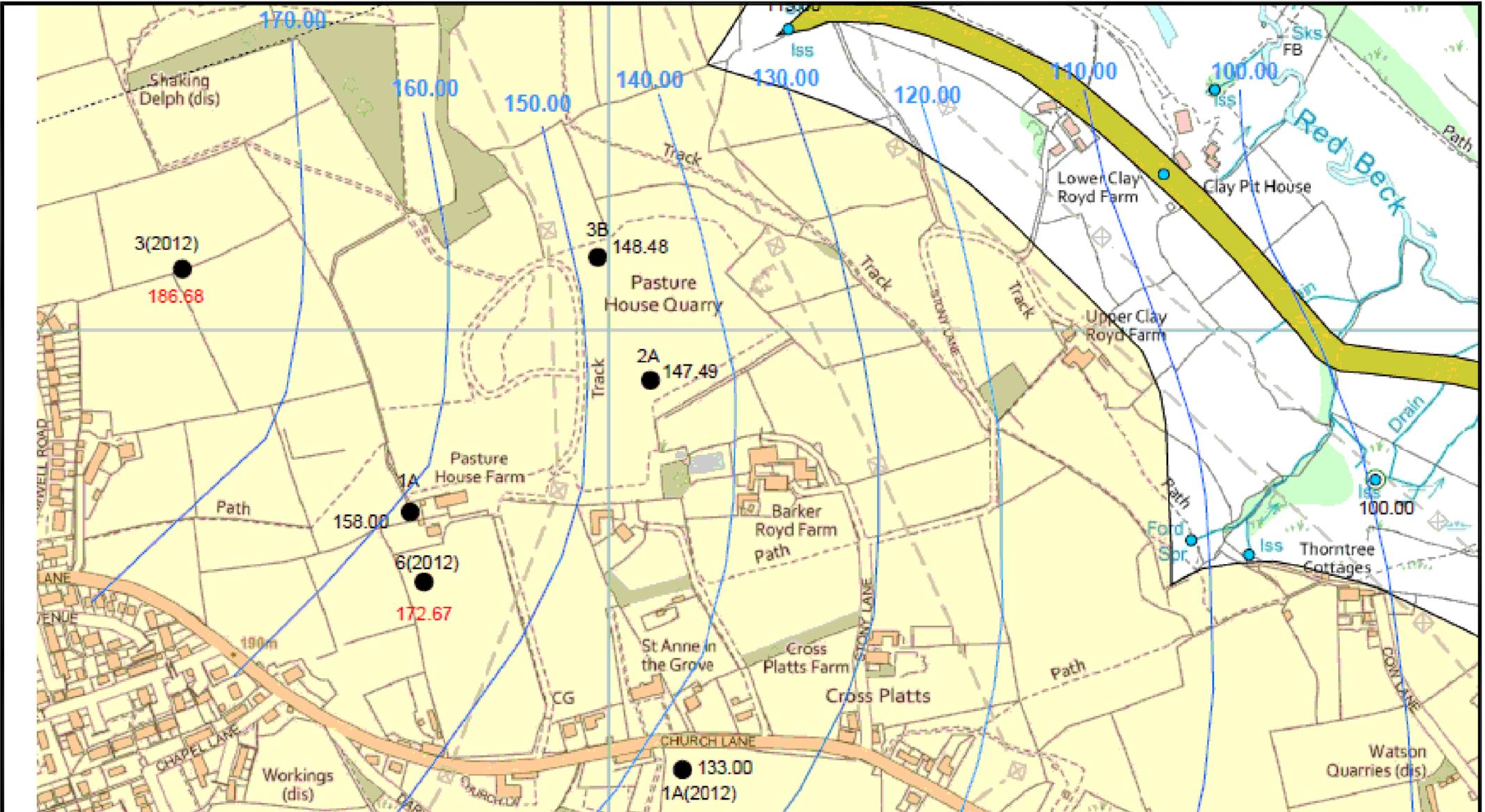
## Environmental Ltd

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Tel (0114) 2573487 Fax (0114) 2573459

Project No. 20293	Dwg No. ESSD 6	Rev	
Date: Sept 21	Drawn: MS	Chkd: RD	Scale: 1:1500 @ A3

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# Silkstone

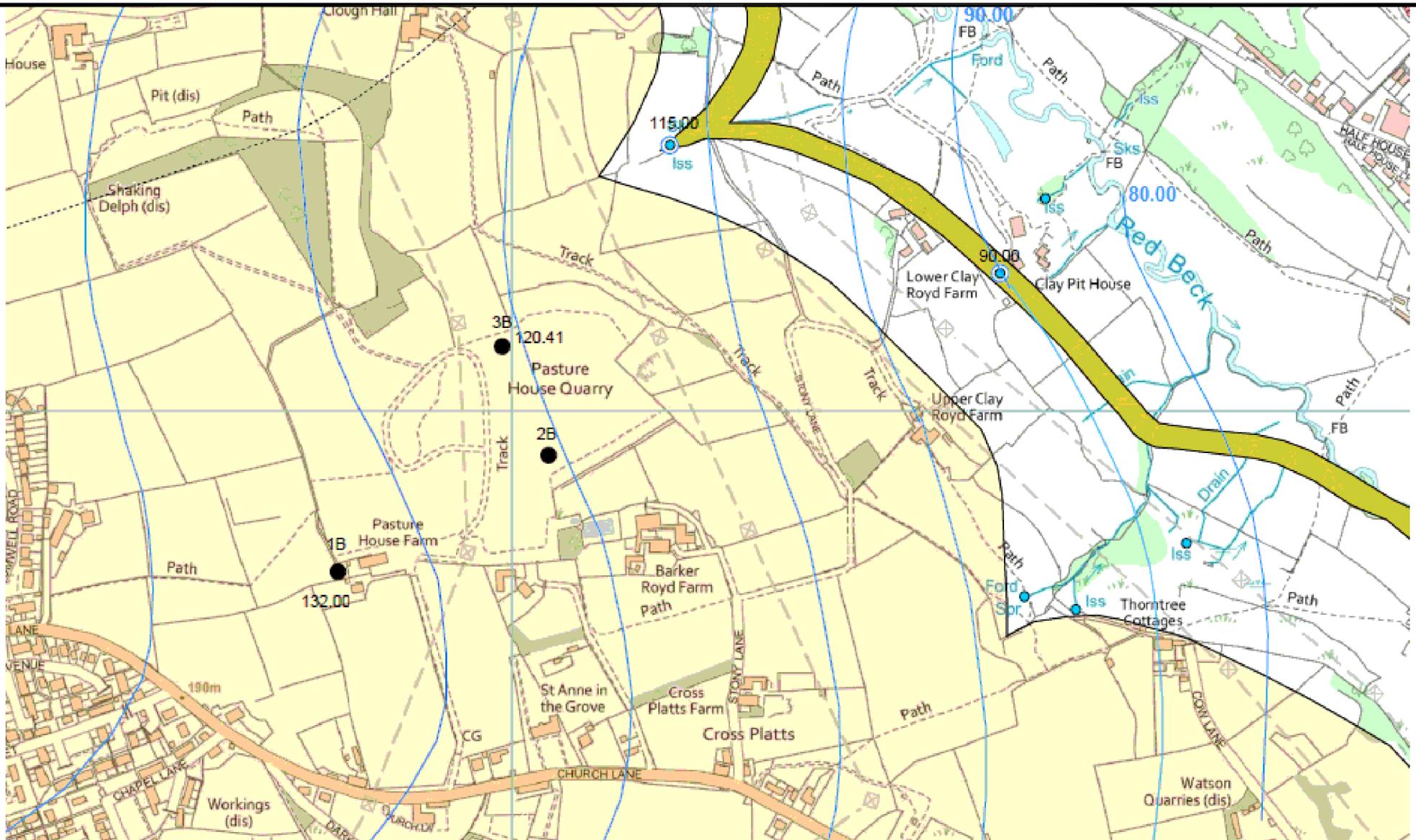
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 Tel (0114) 2573487 Fax (0114) 2573459

- 120.41 Monitoring borehole location with groundwater elevation mAOD
- Springs/issues with elevation mAOD
- Potential emission from 80YD Rock
- Lateral extent of Eiland Flags
- Lateral extent of 80 Yard Rock

Client:	<b>Marshalls</b> 	Drawing No.	ESSD 7a	Rev
Project:	PASTURE HOUSE QUARRY WASTE RECOVERY PERMIT APPLICATION	Project No.	20293	
Plan Title:	LOCAL HYDROGEOLOGY - UPPER SANDSTONE	Date:	Sept 2021	
		Scale:	1:10000 @ A4	
		Drawn:	PS	
		Chkd:		



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- 3B  
● 120.41 Monitoring borehole location with groundwater elevation mAOO
- Springs/issues with elevation mAOO
- Potential emission from 80YD Rock
- Lateral extent of Elland Flags
- Lateral extent of 80 Yard Rock

Client:

**Marshalls** 

Project:

PASTURE HOUSE QUARRY  
WASTE RECOVERY PERMIT APPLICATION

Plan Title:

LOCAL HYDROGEOLOGY - 80 YARD ROCK

Drawing No.  
ESSD 7b

Rev

Project No. 20293

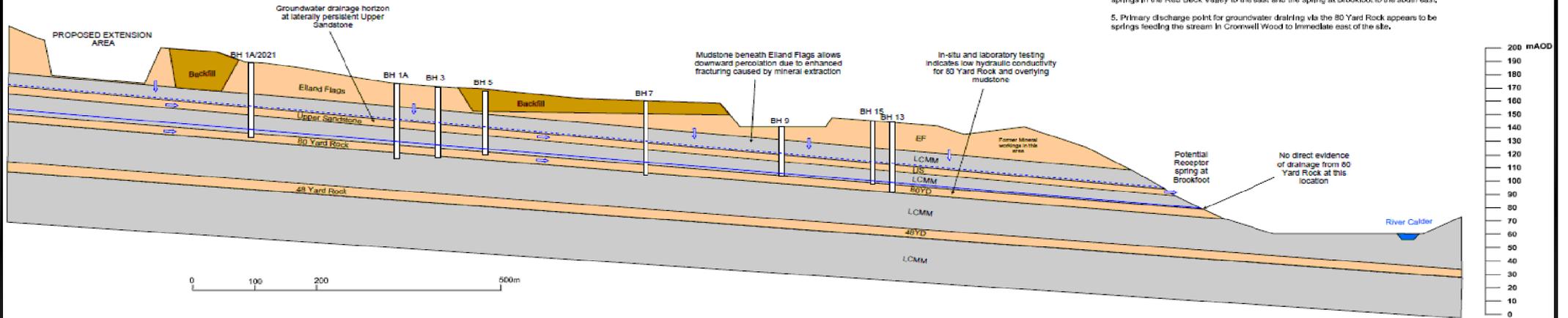
Date: Sept 2021

Scale: 1:10000 @ A4

Drawn: PS

Chkd:

**SECTION B - B'**  
NORTH WEST TO SOUTH EAST



**Notes:**

1. Groundwater level monitoring indicates that the Sandstone Unit in the mudstone and the underlying 80 Yard Rock both act as separate and hydraulically discrete groundwater drainage pathways.
2. Recharge to the Sandstone Unit occurs vertically via percolation through upper sections of mudstone beneath Elland Flags
3. Recharge to the 80 Yard Rock appears to come from lateral drainage from the north possibly related to minewater draining via deep mins working in former Water Clough Colliery to north of Cromwell Wood.
4. Primary discharge point for groundwater draining via Sandstone Unit appears to be the springs in the Red Beck Valley to the east and the spring at Brookfoot to the south east.
5. Primary discharge point for groundwater draining via the 80 Yard Rock appears to be springs feeding the stream in Cromwell Wood to immediate east of the site.

**LOWER COAL MEASURES STRATA**

EF	Elland Flags
LCMM	Mudstone
US	Upper Sandstone
LCMM	Mudstone
80YD	80 Yard Rock
LCMM	Mudstone
48YD	48 Yard Rock
LCMM	Mudstone

**HYDROLOGY**

	Groundwater level in Upper Sandstone
	Groundwater level in 80 Yard Rock
	Groundwater flow direction

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Tel (0114) 2573487 Fax (0114) 2573459

Client:

**Marshalls**

Drawing No.  
ESSD 8

Rev

Project:

PASTURE HOUSE QUARRY  
WASTE RECOVERY PERMIT APPLICATION

Project No. 20293

Date: Sept 2021

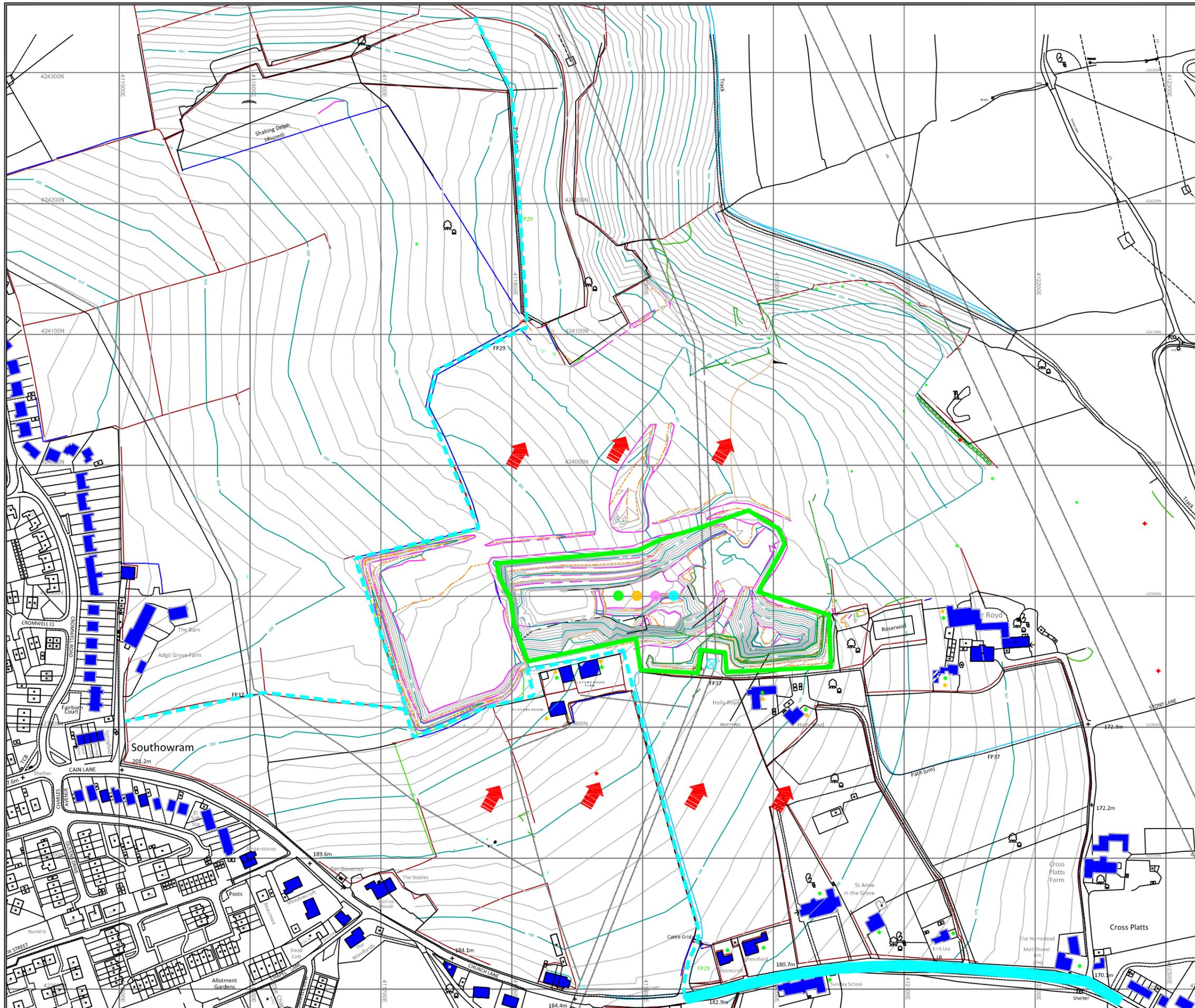
Plan Title:

HYDROGEOLOGICAL CROSS SECTIONS

Scale: NTS @ A4

Drawn: PS

Chkd:



- Proposed Waste Recovery Area
- Access route
- ➔ Potential hazard for noise, dust, oil and fire from machinery.
- ➔ Prevailing Wind Direction
- ◆ Potential Receptor
- Road -Potential receptor for noise and dust.
- - - Footpath -Potential receptor for noise and dust.
- Potential Noise Hazard
- Potential Dust Hazard
- Potential Fire Hazard
- Potential Oil Hazard
- ◆ Noise Receptor
- ◆ Dust Receptor

Rev	Description	Date	Drawn	Chkd

Client:

**Marshalls**

Project:

PASTURE HOUSE QUARRY  
BESPOKE RECOVERY PERMIT  
APPLICATION

Plan Title:

RECEPTORS & PATHWAYS PLAN

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Environmental Ltd

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7, Hall Annex, Thorncliffe Park, Chapeltown, Sheffield, S35 2PH  
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Project No. 20293	Dwg No. ESSD 9	Rev
Date: SEP 21	Drawn: PS	Chkd:
		Scale: 1:3000 @ A3

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## **Appendix B**

### **Envirocheck Report**

## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

280535908\_1\_1

**Customer Reference:**

Pasture

**National Grid Reference:**

411690, 424070

**Slice:**

A

**Site Area (Ha):**

0.01

**Search Buffer (m):**

1000

#### Site Details:

Site at

Southowram

Calderdale

#### Client Details:

Mr S Foster

SM Foster Associates Ltd

7 Bownas Road

Boston Spa

Leeds

LS23 6EX

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	16
Hazardous Substances	-
Geological	24
Industrial Land Use	43
Sensitive Land Use	45
Data Currency	46
Data Suppliers	50
Useful Contacts	51

### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.

For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

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

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1				3
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 2				1
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 2				5
Local Authority Pollution Prevention and Control Enforcements	pg 2				2
Nearest Surface Water Feature	pg 3			Yes	
Pollution Incidents to Controlled Waters	pg 3				15
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 5				2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 6				2
Water Abstractions	pg 6				1 (*10)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 9	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 9	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 9			1	52

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites	pg 16				7
Historical Landfill Sites	pg 17				13
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 19				4
Licensed Waste Management Facilities (Locations)	pg 20				3
Local Authority Landfill Coverage	pg 20	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 21				3
Registered Landfill Sites	pg 21				7
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 23				1
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 24	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 24		7	6	67
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 37	Yes	n/a	n/a	n/a
Mining Instability	pg 37	Yes	n/a	n/a	n/a
Man-Made Mining Cavities	pg 37		1	3	18
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 41	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 41	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 41		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 41	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 41		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 41		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 43			8	11
Fuel Station Entries	pg 44				1
Gas Pipelines					
Underground Electrical Cables					
<b>Sensitive Land Use</b>					
Ancient Woodland					
Areas of Adopted Green Belt	pg 45	1			
Areas of Unadopted Green Belt	pg 45	1			
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	1	411692 424068
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	241	1	411850 424250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	372	1	411450 424350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SW (N)	393	1	411600 424450
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (N)	432	1	411692 424500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NE)	447	1	412100 424250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	469	1	411700 423600
1	<b>Discharge Consents</b> Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Dark Lane No 2 Cso, Wood Lane (Off Dark Peak), Halifax, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra8444 Permit Version: 1 Effective Date: 18th March 2005 Issued Date: 18th March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Tributary Of The River Calder Receiving Water: Tributary Of The River Calder <b>Status:</b> <b>New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b> Positional Accuracy: Located by supplier to within 10m	A8SE (S)	756	2	411980 423370
2	<b>Discharge Consents</b> Operator: Monoplas Industries Ltd Property Type: Undefined Or Other Location: Allen Works, Badger Lane, Hipperholme Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra7186 Permit Version: 1 Effective Date: 19th December 1995 Issued Date: 19th December 1995 Revocation Date: 8th February 2008 Discharge Type: Trade Discharge - Process Water Discharge: Freshwater Stream/River Environment: Red Beck Receiving Water: Red Beck <b>Status:</b> <b>Lapsed (under Environment Act 1995, Schedule 23)</b> Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	796	2	412200 424680
3	<b>Discharge Consents</b> Operator: Marshalls Mono Limited Property Type: Undefined Or Other Location: Marshalls Mono Ltd West Lane Works, Southowram, Halifax, West Yorkshire, Hx3 9tw Authority: Environment Agency, North East Region Catchment Area: Not Supplied Reference: Wra7729 Permit Version: 1 Effective Date: 2nd July 2001 Issued Date: 2nd July 2001 Revocation Date: 31st December 2004 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge: Land/Soakaway Environment: Groundwater Receiving Water: Groundwater <b>Status:</b> <b>New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b> Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	971	2	411170 423250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p><b>Integrated Pollution Prevention And Control</b></p> <p>Name: Marshalls Plc            Location: Cromwell Wood, Marshalls Mono Ltd, Brier Lane, Southowram, Halifax, West Yorkshire, HX3 9SY            Authority: Environment Agency, North East Region            Permit Reference: Lp3835se            Original Permit Ref: Lp3835se            Effective Date: Not Supplied  <b>Status: Application refused</b>            Application Type: Application            App. Sub Type: New            Positional Accuracy: Manually positioned within the geographical locality            Activity Code: 5.2 A(1) (A)            Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste            Primary Activity: N            Activity Code: 5.2 A(1) (A)            Activity Description: Waste Landfilling; Greater Than 10 T/D With Capacity Greater Than 25,000T Excluding Inert Waste            Primary Activity: Y</p>	A7NE (SW)	767	2	411224 423461
5	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: P &amp; S Taylor            Location: Sunnybank Bait Farm, Whitley Lane, Southowram, Halifax, Hx6 9tf            Authority: Calderdale Metropolitan Borough Council, Environmental Health            Permit Reference: 160            Dated: 27th September 1997            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/5 Maggot breeding processes  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	650	3	411773 424713
6	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Terex Halco            Location: West Lane, Southowram, Halifax, Hx3 9tw            Authority: Calderdale Metropolitan Borough Council, Environmental Health            Permit Reference: 212            Dated: Not Supplied            Process Type: Local Authority Pollution Prevention and Control            Description: Part B process (no specific reference)  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	888	3	411155 423361
7	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Marshalls Plc            Location: West Lane Works, Southowram, Halifax, Hx3 9sy            Authority: Calderdale Metropolitan Borough Council, Environmental Health            Permit Reference: 95            Dated: 14th February 1992            Process Type: Local Authority Pollution Prevention and Control            Description: PG3/1 Blending, packing, loading and use of bulk cement  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	942	3	411073 423358
7	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Marshalls Mono Ltd            Location: Brier Lodge, Hall Ings, Southowram, Halifax, West Yorkshire, Hx3 9sy            Authority: Calderdale Metropolitan Borough Council, Environmental Health            Permit Reference: 93            Dated: 14th February 1992            Process Type: Local Authority Pollution Prevention and Control            Description: PG3/10 China and ball clay  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	942	3	411073 423358
7	<p><b>Local Authority Pollution Prevention and Controls</b></p> <p>Name: Marshalls Mono Ltd            Location: Lower Briar Lodge, Southowran, Hx3 9sy            Authority: Calderdale Metropolitan Borough Council, Environmental Health            Permit Reference: 187            Dated: Not Supplied            Process Type: Local Authority Pollution Prevention and Control            Description: PG6/29 Di-isocyanate processes  <b>Status: Permitted</b>            Positional Accuracy: Manually positioned to the address or location</p>	A7SE (SW)	942	3	411073 423358
8	<p><b>Local Authority Pollution Prevention and Control Enforcements</b></p> <p>Location: Sunnybank Bait Farm, Whitley Lane, Southowram, Halifax, Hx3            Type: Air Pollution Control Enforcement Notice            Reference: PB160            Date Issued: Not Supplied            Enforcement Date: 30th August 2005            Details: Not Supplied            Positional Accuracy: Manually positioned to the address or location</p>	A18SE (N)	651	3	411777 424713

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<b>Local Authority Pollution Prevention and Control Enforcements</b> Location: West Lane, Southoram, Halifax Type: Air Pollution Control Enforcement Notice Reference: PPC/212 Date Issued: 10th November 2008 Enforcement Date: Not Supplied Details: Not Supplied Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	888	3	411155 423361
	<b>Nearest Surface Water Feature</b>	A14SW (SE)	415	-	412064 423884
10	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Red Beck Authority: Environment Agency, North East Region Pollutant: Surface Water Note: Not Supplied Incident Date: 26th February 1992 Incident Reference: 130858 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	671	2	412100 424600
11	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial: Other Location: Calder Afl Authority: Environment Agency, North East Region Pollutant: Unknown Note: Fish Killed: No Information; Calder Afl Incident Date: 27th September 1995 Incident Reference: SL950885 Catchment Area: Calder Tributaries Receiving Water: Pond/Lake Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	703	2	412000 424700
12	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Red Beck Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 4th September 1989 Incident Reference: 102917 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	740	2	411800 424800
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Brookfoot Lane Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 8th March 1989 Incident Reference: 8687 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	805	2	412300 424595
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Brookfoot Lane Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 7th March 1989 Incident Reference: 8685 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	808	2	412300 424600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Elland Road Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 7th March 1989 Incident Reference: 8670 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	809	2	412305 424595
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Elland Road Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 8th March 1989 Incident Reference: 8676 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	812	2	412305 424600
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Sutcliffe Road Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 3rd March 1989 Incident Reference: 8664 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	812	2	412300 424605
13	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Red Beck Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 10th March 1989 Incident Reference: 8691 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	815	2	412305 424605
14	<b>Pollution Incidents to Controlled Waters</b> Property Type: Other General Premises Location: Rastrick Bridge, /North Dean Bridge Calder 06C Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 1st July 1991 Incident Reference: 123862 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	838	2	412100 424800
15	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Mouth/Gomersal Spen Afl Authority: Environment Agency, North East Region Pollutant: Chemicals - Paints / Dyes Note: Not Supplied Incident Date: 19th April 1993 Incident Reference: 143024 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	852	2	412500 423800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	<b>Pollution Incidents to Controlled Waters</b> Property Type: Farm Location: Todmorden/Source Calder Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 3rd July 1990 Incident Reference: 112229 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	858	2	411900 424900
17	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Red Beck Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Natural Note: Not Supplied Incident Date: 7th April 1989 Incident Reference: 8840 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	888	2	412000 424900
18	<b>Pollution Incidents to Controlled Waters</b> Property Type: Industrial Premises Location: Weir Brookfoot/Footbridge Calder 57 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 7th March 1989 Incident Reference: 8716 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	938	2	412600 424300
19	<b>Pollution Incidents to Controlled Waters</b> Property Type: Miscellaneous Premises: Unknown Location: Rastrick Bridge, /North Dean Bridge Calder 06C Authority: Environment Agency, North East Region Pollutant: Miscellaneous - No Visible Pollution/Nothing Found Note: Not Supplied Incident Date: 23rd May 1991 Incident Reference: 122691 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18NE (N)	983	2	412001 425001
	<b>River Quality</b> Name: Red_Beck GQA Grade: Not Supplied Reach: Sunny_Bank_Clough_Calder_And_Hebble_C Estimated Distance (km): 2.4 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A19SW (NE)	779	2	412288 424568
	<b>River Quality</b> Name: Red_Beck GQA Grade: Not Supplied Reach: Shebden_Head_Sunny_Bank_Cloug Estimated Distance (km): 3 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A19SW (NE)	810	2	412164 424726

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<p><b>Substantiated Pollution Incident Register</b></p> <p>Authority: Environment Agency - North East Region, Yorkshire Area            Incident Date: 6th July 2004            Incident Reference: 249029            Water Impact: Category 2 - Significant Incident            Air Impact: Category 4 - No Impact            Land Impact: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 10m            Pollutant: Crude Sewage</p>	A9SW (SE)	915	2	412126 423263
21	<p><b>Substantiated Pollution Incident Register</b></p> <p>Authority: Environment Agency - North East Region, Yorkshire Area            Incident Date: 27th February 2003            Incident Reference: 139873            Water Impact: Category 2 - Significant Incident            Air Impact: Category 4 - No Impact            Land Impact: Category 3 - Minor Incident            Positional Accuracy: Located by supplier to within 10m            Pollutant: Sewage Materials: Process Effluent</p>	A8SW (S)	965	2	411360 423162
22	<p><b>Water Abstractions</b></p> <p>Operator: Monoplas Industries Limited            Licence Number: 2/27/12/149            Permit Version: 100            Location: 2 Reservoirs - Hipperholme Works            Authority: Environment Agency, North East Region            Abstraction: Construction: General Use (Medium Loss)            Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints            Source: Surface            Daily Rate (m3): 218            Yearly Rate (m3): 6819            Details: Hipperholme Works, Halifax            Authorised Start: 01 January            Authorised End: 31 December            Permit Start Date: 7th July 1988            Permit End Date: Not Supplied            Positional Accuracy: Located by supplier to within 100m</p>	A18SE (N)	705	2	411960 424720
	<p><b>Water Abstractions</b></p> <p>Operator: Ashday (1986) Ltd            Licence Number: 2/27/12/304            Permit Version: 100            Location: Well - Spring Fed - Coal Measures - Elland            Authority: Environment Agency, North East Region            Abstraction: Holiday Sites: Camp Sites And Tourist Attractions: Drinking; Cooking; Sanitary; Washing; (Small Garden)            Abstraction Type: Water may be abstracted from a single point            Source: Groundwater            Daily Rate (m3): 5            Yearly Rate (m3): 909            Details: Ashday Campsite, Elland Road, Elland            Authorised Start: 01 January            Authorised End: 31 December            Permit Start Date: 28th June 1994            Permit End Date: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A4SW (S)	1460	2	412200 422700
	<p><b>Water Abstractions</b></p> <p>Operator: Crestline Wire Products Ltd            Licence Number: 2/27/12/148            Permit Version: 100            Location: Spring Fed Well            Authority: Environment Agency, North East Region            Abstraction: Metal: General Use Relating To Secondary Category (Medium Loss)            Abstraction Type: Water may be abstracted from a single point            Source: Groundwater            Daily Rate (m3): 18            Yearly Rate (m3): 5455            Details: Ashday Works, Elland, Yorkshire            Authorised Start: 01 January            Authorised End: 31 December            Permit Start Date: 17th March 1966            Permit End Date: Not Supplied            Positional Accuracy: Located by supplier to within 100m</p>	A4SW (S)	1460	2	412200 422700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p><b>Water Abstractions</b></p> <p>Operator: Ashday (1986) Ltd  Licence Number: 2/27/12/304  Permit Version: 100  Location: Borehole - Coal Measures - Elland  Authority: Environment Agency, North East Region  Abstraction: Holiday Sites; Camp Sites And Tourist Attractions: Drinking; Cooking; Sanitary; Washing; (Small Garden)  Abstraction Type: Water may be abstracted from a single point  Source: Groundwater  Daily Rate (m3): Not Supplied  Yearly Rate (m3): Not Supplied  Details: Ashday Campsite, Elland Road, Elland  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 28th June 1994  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 10m</p>	A4SW (S)	1578	2	412270 422600
	<p><b>Water Abstractions</b></p> <p>Operator: Canal And River Trust  Licence Number: 2/27/12/237  Permit Version: 101  Location: Calder And Hebble Navigation - Brighouse  Authority: Environment Agency, North East Region  Abstraction: Mineral Products: General Use (Medium Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Surface  Daily Rate (m3): Not Supplied  Yearly Rate (m3): Not Supplied  Details: Premises Of Finamix Ready Concrete Ltd, Elland Road, Brighouse  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 1st April 2008  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 100m</p>	(S)	1870	2	412300 422300
	<p><b>Water Abstractions</b></p> <p>Operator: British Waterways Board  Licence Number: 2/27/12/237  Permit Version: 100  Location: Calder &amp; Hebble Navigation  Authority: Environment Agency, North East Region  Abstraction: Other Industrial/Commercial/Public Services: General Use (Medium Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Surface  Daily Rate (m3): 0  Yearly Rate (m3): 8183  Details: Premises Of Finamix Ready Concrete Ltd, Elland Road, Brighouse  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 26th May 1966  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 100m</p>	(S)	1870	2	412300 422300
	<p><b>Water Abstractions</b></p> <p>Operator: British Waterways  Licence Number: 2/27/12/237  Permit Version: 100  Location: Calder And Hebble Navigation - Brighouse  Authority: Environment Agency, North East Region  Abstraction: Mineral Products: General Use (Medium Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Surface  Daily Rate (m3): Not Supplied  Yearly Rate (m3): Not Supplied  Details: Premises Of Finamix Ready Concrete Ltd, Elland Road, Brighouse  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 26th May 1966  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 10m</p>	(S)	1870	2	412300 422300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p><b>Water Abstractions</b></p> <p>Operator: Younger Homes (Northern) Limited  Licence Number: 2/27/12/033  Permit Version: 101  Location: Red Beck  Authority: Environment Agency, North East Region  Abstraction: Textiles And Leather: General Use (Medium Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Surface  Daily Rate (m3): Not Supplied  Yearly Rate (m3): Not Supplied  Details: Brookfoot Dyeworks, Brighouse  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 9th August 2000  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 10m</p>	(E)	1950	2	413530 423420
	<p><b>Water Abstractions</b></p> <p>Operator: Croda Colours Ltd  Licence Number: 2/27/12/033  Permit Version: 100  Location: Red Beck  Authority: Environment Agency, North East Region  Abstraction: Textiles And Leather: General Use (Medium Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Surface  Daily Rate (m3): 454  Yearly Rate (m3): 22700  Details: Brookfoot Dyeworks, Brighouse  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 1st April 1980  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 100m</p>	(E)	1950	2	413530 423420
	<p><b>Water Abstractions</b></p> <p>Operator: Nestle UK Ltd  Licence Number: 2/27/12/177  Permit Version: 100  Location: Spring - Millstone Grit - Albion Mills  Authority: Environment Agency, North East Region  Abstraction: Food And Drink: General Cooling (Existing Licences Only) (Low Loss)  Abstraction Type: Water may be abstracted from a single point  Source: Groundwater  Daily Rate (m3): Not Supplied  Yearly Rate (m3): Not Supplied  Details: Factory Offices &amp; Albion Mills  Authorised Start: 01 January  Authorised End: 31 December  Permit Start Date: 15th November 1968  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 10m</p>	(NW)	1956	2	409900 424850
	<p><b>Water Abstractions</b></p> <p>Operator: Rowntree Mackintosh Ltd  Licence Number: 2/27/12/178  Permit Version: Not Supplied  Location: Location Description Not Available  Authority: Environment Agency, North East Region  Abstraction: Cooling/Gen Ind.  Abstraction Type: Not Supplied  Source: Groundwater  Daily Rate (m3): 2182  Yearly Rate (m3): 545520  Details: Millstone Grit Licence Revoked  Authorised Start: Not Supplied  Authorised End: Not Supplied  Permit Start Date: Not Supplied  Permit End Date: Not Supplied  Positional Accuracy: Located by supplier to within 100m</p>	(W)	1958	2	409790 424530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (NE)	0	4	411692 424068
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> None				
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A13NE (NE)	0	4	411692 424068
	<b>Superficial Aquifer Designations</b> No Data Available				
	<b>Extreme Flooding from Rivers or Sea without Defences</b> None				
	<b>Flooding from Rivers or Sea without Defences</b> None				
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				
23	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 410.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	424	5	411552 424468
24	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 185.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (NE)	521	5	412168 424281
25	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 198.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	583	5	412062 424519
26	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 175.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SE (N)	585	5	411903 424614

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 119.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A8NW (S)	605	5	411591 423472
28	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 239.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A8NE (S)	607	5	411838 423480
29	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 48.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	652	5	412151 424530
30	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 185.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A8SW (S)	681	5	411671 423388
31	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	699	5	412180 424568
32	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	701	5	412345 424321
33	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 92.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	707	5	412184 424574
34	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 105.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NW (E)	708	5	412352 424322
35	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 55.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	738	5	412046 424715

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	765	5	412197 424643
37	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 161.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A8SE (S)	766	5	411843 423317
38	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	768	5	412258 424586
39	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	771	5	412213 424636
40	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	775	5	412211 424643
41	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 96.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	775	5	412213 424642
42	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	775	5	412265 424589
43	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 66.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Upper Lake Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	776	5	412094 424731
44	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 152.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	776	5	412209 424645

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 471.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A19SW (NE)	776	5	412267 424588
46	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 588.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A8SE (SE)	803	5	412002 423328
47	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 53.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	810	5	412444 424368
48	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 63.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	810	5	412444 424368
49	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A19NW (NE)	833	5	412152 424762
50	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	835	5	412484 424333
51	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 41.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	838	5	412488 424329
52	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	838	5	412526 424145
53	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 587.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A19NW (NE)	842	5	412138 424781

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	848	5	412537 424137
55	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 6.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	850	5	412538 424142
56	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	855	5	412543 424135
57	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 22.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	865	5	412554 424129
58	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	873	5	412503 424390
59	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	876	5	412506 424391
60	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 246.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	876	5	412506 424391
61	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	878	5	412505 424397
62	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 69.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	884	5	412562 424223

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 86.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	884	5	412572 424141
64	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 58.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	896	5	412547 423802
65	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 112.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	921	5	412609 423990
66	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 36.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	941	5	412600 423825
67	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 133.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	941	5	412600 423825
68	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	944	5	412615 424264
69	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 98.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	945	5	412620 424246
70	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	947	5	412618 424264
71	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	953	5	412636 424198

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
72	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 214.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Red Beck Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	958	5	412641 424200
73	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 56.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14NE (E)	961	5	412628 424285
74	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 116.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	991	5	412679 423983
75	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 66.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A14SE (E)	997	5	412678 423921

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Milling Hill Quarry            Location: Ashdate Lane, HALIFAX, Yorks            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: No threat to ground water            Surface Water: No threat to surface water            Geology: N/A            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Derived</p>	A8SW (S)	712	-	411516 423379
77	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Stein's Tip            Location: Sunnyvale, Hipperholme, BRIGHOUSE, West Yorkshire            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Information not available            Surface Water: Information not available            Geology: N/A            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate</p>	A19SW (NE)	725	-	412146 424632
78	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: New Farm Quay            Location: Ashday Lane, SOUTHOWRAM, Yorks            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Potential threat to ground water            Surface Water: Potential threat to surface water            Geology: N/A            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate</p>	A8SW (S)	800	-	411565 423279
79	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Grange House Quarry            Location: Binns Top Lane, BRIGHOUSE, West Yorkshire            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Information not available            Surface Water: Information not available            Geology: N/A            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate</p>	A8SW (S)	876	-	411423 423235
80	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Marsh Lane            Location: Southoram, HALIFAX, West Yorkshire            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Potential threat to ground water            Surface Water: Potential threat to surface water            Geology: N/A            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate</p>	A17NE (NW)	911	-	411085 424746
81	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Thurpass Quarry            Location: Norcliffe Lane, HALIFAX, Yorks            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: No threat to ground water            Surface Water: No threat to surface water            Geology: N/A            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Derived</p>	A17NE (NW)	940	-	411173 424852
82	<p><b>BGS Recorded Landfill Sites</b></p> <p>Site Name: Bricks Boyd Tip            Location: Brookfoot Lane, HALIFAX, Yorks            Authority: British Geological Survey, National Geoscience Information Service            Ground Water: Potential threat to ground water            Surface Water: No threat to surface water            Geology: N/A            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Derived</p>	A9NE (SE)	973	-	412536 423586

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	<b>Historical Landfill Sites</b> Licence Holder: Not Supplied Location: Cote Hill Name: Cote Hill Farm Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04145 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4700/1134	A8NE (S)	514	2	411720 423556
84	<b>Historical Landfill Sites</b> Licence Holder: St Annes Church PCC Location: Church Lane, Southowram Name: Land Next to Sunday School Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04102 First Input Date: 1st January 1987 Last Input Date: 31st January 1989 Specified Waste: Deposited Waste included Inert and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0571 BGS Ref: Not Supplied Other Ref: 4700/0639	A8NE (SE)	546	2	411970 423599
85	<b>Historical Landfill Sites</b> Licence Holder: North East Gas Location: Siddal New Road, Halifax, Calderdale Name: Hipperholme Works - Stoney Royd Holder Station Operator Location: Hipperholme Works - Hipperholme, Halifax Boundary Accuracy: As Supplied Provider Reference: EAHLD04151 First Input Date: 1st January 1967 Last Input Date: 31st December 1978 Specified Waste: Deposited Waste included Inert and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0546 BGS Ref: Not Supplied Other Ref: 4700/1003, 58	A18SE (NE)	601	2	411946 424612
86	<b>Historical Landfill Sites</b> Licence Holder: Simpson and Curran Location: Ashday Lane, Southowram Name: Milking Hill Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31853 First Input Date: 31st March 1972 Last Input Date: 31st December 1978 Specified Waste: Deposited Waste included Inert and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0728 BGS Ref: 770 Other Ref: C1819	A8NW (S)	628	2	411495 423473
87	<b>Historical Landfill Sites</b> Licence Holder: Not Supplied Location: Off Law Lane, Southowram Name: Within Fields Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD34942 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A12SE (W)	632	2	411063 424011

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: G R Stein Refractories Limited            Location: Sunnyvale, Hipperholme, Brighouse, West Yorkshire            Name: Steins Tip            Operator Location: Hipperholme Works, Hipperholme, Halifax            Boundary Accuracy: As Supplied            Provider Reference: EAHLD04098            First Input Date: 1st January 1880            Last Input Date: 31st December 1990            Specified Waste: Deposited Waste included Inert, Industrial and Commercial Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0547            BGS Ref: 745            Other Ref: 4700/0104</p>	A19SW (NE)	699	2	412125 424616
89	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Binns Brothers Quarry Owners Limited            Location: Southowram, Halifax            Name: Pinnar Lane Quarries            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD04104            First Input Date: 19th October 1981            Last Input Date: 1st April 1987            Specified Waste: Deposited Waste included Inert and Commercial Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0585            BGS Ref: Not Supplied            Other Ref: 4700/0269</p>	A12SE (W)	701	2	411037 423819
90	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Marshalls Mono Ltd            Location: Southowram, Halifax, West Yorkshire            Name: Grange House Quarry            Operator Location: Newton Chambers Road, Thorncliffe Bus Park, Chapeltown Sheffield, Yorkshire            Boundary Accuracy: As Supplied            Provider Reference: EAHLD36105            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste: Deposited Waste included Industrial Waste            Type:            EA Waste Ref: 60730            Regis Ref: Not Supplied            WRC Ref: Not Supplied            BGS Ref: Not Supplied            Other Ref: Not Supplied</p>	A7NE (SW)	730	2	411337 423431
91	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: J J Fee Limited            Location: Hipperholme, Halifax            Name: Sunnyvale Gardens            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD04111            First Input Date: 31st December 1982            Last Input Date: 28th April 1994            Specified Waste: Deposited Waste included Inert and Commercial Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0592            BGS Ref: Not Supplied            Other Ref: 4700/0322</p>	A19SW (NE)	739	2	412054 424712
92	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Gordon Smith            Location: Ashday Lane, Southowram, Yorkshire            Name: Milking Hill Tips            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD04124            First Input Date: 17th October 1960            Last Input Date: 22nd April 1993            Specified Waste: Deposited Waste included Inert, Commercial and Household Waste, and            Type: Liquid Sludge            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0624            BGS Ref: 752            Other Ref: 4700/0742, 4700/0727, C1820</p>	A8SW (S)	788	2	411572 423290

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: W S Crossley (Yorkstone) Limited            Location: Norcliffe Lane, Southowram, Halifax, West Yorkshire            Name: Thumpus Quarry            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD33049            First Input Date: Not Supplied            Last Input Date: Not Supplied            Specified Waste: Not Supplied            Type:            EA Waste Ref: 60741            Regis Ref: YQ3/L/WSC001            WRC Ref: 4700/0517            BGS Ref: Not Supplied            Other Ref: 346, NE4625</p>	A17NE (NW)	829	2	411235 424759
94	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: D Hodgeson            Location: Southoram, Halifax, West Yorkshire            Name: Marsh Lane Tip            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD31840            First Input Date: 31st December 1948            Last Input Date: 31st December 1976            Specified Waste: Deposited Waste included Commercial and Household Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0709            BGS Ref: 740            Other Ref: C1816</p>	A17NE (NW)	911	2	411085 424747
95	<p><b>Historical Landfill Sites</b></p> <p>Licence Holder: Clugstons Reclamation Limited            Location: Halifax, Yorkshire            Name: Southedge and Stubbins Tip            Operator Location: Not Supplied            Boundary Accuracy: As Supplied            Provider Reference: EAHLD04112            First Input Date: 1st January 1951            Last Input Date: 31st December 1989            Specified Waste: Deposited Waste included Inert, Industrial and Commercial Waste            Type:            EA Waste Ref: 0            Regis Ref: Not Supplied            WRC Ref: 4700/0619            BGS Ref: 748            Other Ref: 1269, 4700/0619, X0677, 4700/0677</p>	A19NW (NE)	985	2	412232 424891
96	<p><b>Licensed Waste Management Facilities (Landfill Boundaries)</b></p> <p>Name: Cromwell Quarries            Licence Number: 60742            Location: Land/ Premises At, Church Lane, Southowram, Halifax, West Yorkshire, HX3 9SZ            Licence Holder: Marshalls Mono Ltd            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Household, Commercial And Industrial Waste Landfills            Max Input Rate: Not Supplied  <b>Licence Status: Closure</b>            Issued: 4th December 1984            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: As Supplied</p>	A9NW (SE)	617	2	412111 423617
97	<p><b>Licensed Waste Management Facilities (Landfill Boundaries)</b></p> <p>Name: Grange House Quarry            Licence Number: 60730            Location: West Lane Works, Southowram, Halifax, West Yorkshire, HX3 9SY            Licence Holder: Marshalls Mono Limited            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Industrial Waste Landfills            Max Input Rate: Not Supplied  <b>Licence Status: Closure</b>            Issued: 1st August 1979            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: As Supplied</p>	A7NE (SW)	730	2	411337 423431

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
98	<p><b>Licensed Waste Management Facilities (Landfill Boundaries)</b></p> <p>Name: Birks Field            Licence Number: 60785            Location: Birks Royd, Church Lane, Southowram, Halifax, West Yorkshire, HX3 9TD            Licence Holder: Ley William Ernest            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings)            Max Input Rate: Not Supplied  <b>Licence Status: Expired</b>            Issued: 27th July 1995            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: As Supplied</p>	A9NE (SE)	804	2	412382 423658
99	<p><b>Licensed Waste Management Facilities (Landfill Boundaries)</b></p> <p>Name: Thumpas Quarry            Licence Number: 60741            Location: Norcliffe Lane, Southowram, Halifax, West Yorkshire, HX3 8PL            Licence Holder: W S Crossley ( Yorkstone ) Ltd            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings)            Max Input Rate: Large (Equal to or greater than 75,000 tonnes per year)  <b>Licence Status: Inactive</b>            Issued: 16th December 1982            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: As Supplied</p>	A17NE (NW)	830	2	411235 424761
100	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 60730            Location: West Lane Works, Southowram, Halifax, West Yorkshire, HX3 9SY            Operator Name: Marshalls Mono Ltd            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Industrial Waste Landfills  <b>Licence Status: Surrendered</b>            Issued: 1st August 1979            Last Modified: 4th March 2016            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: 2nd December 2020            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SW)	930	2	411324 423215
101	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 103471            Location: Cromwell Wood Quarry, Brookfoot Lane, Brighouse, Halifax, West Yorkshire, HX3 9SZ            Operator Name: Moorhead Excavations Ltd            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Use of waste in a deposit for recovery op  <b>Licence Status: Modified</b>            Issued: 17th November 2011            Last Modified: 16th October 2017            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: Not Supplied            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A9SW (SE)	952	2	412336 423368
102	<p><b>Licensed Waste Management Facilities (Locations)</b></p> <p>Licence Number: 60741            Location: Norcliffe Lane, Southowram, Halifax, West Yorkshire, HX3 8PL            Operator Name: W S Crossley ( Yorkstone ) Ltd            Operator Location: Not Supplied            Authority: Environment Agency - North East Region, Yorkshire Area            Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings)  <b>Licence Status: Surrendered</b>            Issued: 16th December 1982            Last Modified: Not Supplied            Expires: Not Supplied            Suspended: Not Supplied            Revoked: Not Supplied            Surrendered: 23rd January 2003            IPPC Reference: Not Supplied            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	963	2	411110 424835
	<p><b>Local Authority Landfill Coverage</b></p> <p>Name: Calderdale Metropolitan Borough Council            - Has supplied landfill data</p>		0	3	411692 424068

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	<p><b>Local Authority Recorded Landfill Sites</b></p> <p>Location: New Farm Quarry, Ashday Lane, Southowram            Reference: Not Supplied            Authority: Calderdale Metropolitan Borough Council, Environmental Health  <b>Last Reported Status: Unknown</b>            Types of Waste: Domestic            Date of Closure: Not Supplied            Positional Accuracy: Positioned by the supplier            Boundary Quality: Moderate</p>	A8SW (S)	800	3	411568 423278
104	<p><b>Local Authority Recorded Landfill Sites</b></p> <p>Location: Marsh Lane Tip, Marsh Lane, Southowram            Reference: Not Supplied            Authority: Calderdale Metropolitan Borough Council, Environmental Health  <b>Last Reported Status: Closed</b>            Types of Waste: Household            Date of Closure: Not Supplied            Positional Accuracy: Positioned by the supplier            Boundary Quality: Moderate</p>	A17SW (NW)	935	3	410994 424690
105	<p><b>Local Authority Recorded Landfill Sites</b></p> <p>Location: Birksroyd, Brookfoot Lane, Southowram            Reference: Not Supplied            Authority: Calderdale Metropolitan Borough Council, Environmental Health  <b>Last Reported Status: Unknown</b>            Types of Waste: Rubber Backed Carpet, Fly-Ash, Rubble            Date of Closure: Not Supplied            Positional Accuracy: Positioned by the supplier            Boundary Quality: Good</p>	A9NE (SE)	937	3	412498 423592
106	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: St Annes Church P.C.C.            Licence Reference: 639            Site Location: Adj. St Annes Church, Church Lane, Southowram, Halifax, West Yorkshire            Licence Easting: 412000            Licence Northing: 423570            Operator Location: As Site Address            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Undefined            Waste Source: No known restriction on source of waste            Restrictions:            Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled            Dated: 1st January 1988            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Excavation Materials            Solid, Inert, Non-Putresc. Constr'N/Demol            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes</p>	A8NE (SE)	586	2	412000 423570
107	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: G R Stein Refractories            Licence Reference: 104            Site Location: Hipperholme Works (Site B), Hipperholme, HALIFAX, West Yorkshire, HX3 8PW            Licence Easting: 412150            Licence Northing: 424660            Operator Location: As Site Address            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Undefined            Waste Source: Only waste produced on site            Restrictions:            Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled            Dated: 23rd August 1979            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Brick Making Wastes            Excavated Natural Materials \$            Inert Waste            Prohibited Waste: Poisonous, Noxious, Polluting Wastes</p>	A19SW (NE)	749	2	412150 424660

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: Binns Bros Ltd            Licence Reference: 269            Site Location: Pinnar Lane Quarries, Pinnar Lane, Southowram, HALIFAX, West Yorkshire, HX3 9QH            Licence Easting: 410900            Licence Northing: 423900            Operator Location: As Site Address            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Very Small (Less than 10,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled            Dated: 16th July 1981            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Construction And Demolition Wastes            Excavation Waste            Max.Waste Permitted By Licence            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes            Putrescible Waste</p>	A12SW (W)	810	2	410900 423900
109	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: W S Crossley (York Stone) Ltd            Licence Reference: 346            Site Location: Thumpas Quarry, Southowram, HALIFAX, West Yorkshire, HX3 8PL            Licence Easting: Not Supplied            Licence Northing: Not Supplied            Operator Location: As Site Address            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Status: Site Closed            Dated: 16th December 1982            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Positioned by the supplier            Boundary Accuracy: Moderate            Authorised Waste: Construction And Demolition Wastes            Excavation Waste            Max.Waste Permitted By Licence            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes            Special Wastes (As In '96 Regs)            Waste N.O.S.</p>	A17NE (NW)	830	2	411232 424759
110	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: Stonehill Ltd            Licence Reference: 322            Site Location: Sunnyvale Gardens, Hipperholme, Halifax, West Yorkshire            Licence Easting: 412300            Licence Northing: 424650            Operator Location: Southowram, HALIFAX, West Yorkshire, HX3 9UA            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled            Dated: 2nd July 1982            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Construction And Demolition Wastes            Excavation Waste            Foundry Sand            Max.Waste Permitted By Licence            Wood            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes</p>	A19SW (NE)	842	2	412300 424650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
111	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: Marshalls Mono Ltd            Licence Reference: 13            Site Location: Grange House Quarry, West Lane Works, Southowram, Halifax, West Yorkshire            Licence Easting: 411300            Licence Northing: 423300            Operator Location: Southowram, HALIFAX, West Yorkshire, HX3 9SY            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Undefined            Waste Source: Only waste produced on site            Restrictions:            Status: Operational as far as is knownOperational            Dated: 1st August 1979            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Concrete Waste            Excavated Natural Materials \$            Prohibited Waste: Poisonous, Noxious, Polluting Wastes            Special Wastes (As In '96 Regs)            Waste N.O.S.</p>	A7SE (SW)	863	2	411300 423300
112	<p><b>Registered Landfill Sites</b></p> <p>Licence Holder: G Smith            Licence Reference: 742            Site Location: Adj Southowram Cricket Club, Southowram, Halifax, West Yorkshire            Licence Easting: 411570            Licence Northing: 423150            Operator Location: Steep Bank Side, Southowram Bank, HALIFAX, West Yorkshire, HX3 9PX            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Landfill            Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled            Dated: 1st March 1991            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Accuracy: Not Applicable            Authorised Waste: Uncontam. Earth &amp; Excavation Waste            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes</p>	A8SW (S)	927	2	411570 423150
113	<p><b>Registered Waste Treatment or Disposal Sites</b></p> <p>Licence Holder: Monoplas Industries Ltd            Licence Reference: 1017            Site Location: Allen Works, Badger Lane, Hipperholme, HALIFAX, West Yorkshire, HX3 8PW            Operator Location: Mylestone House, Sowerby New Road, Sowerby Bridge, HALIFAX, West Yorkshire, HX6 1AA            Authority: Environment Agency - North East Region, Ridings Area            Site Category: Transfer - with treatment            Max Input Rate: Very Small (Less than 10,000 tonnes per year)            Waste Source: No known restriction on source of waste            Restrictions:            Licence Status: Site dormant (licence partially suspended)Site Dormant            Dated: 23rd January 1992            Preceded By: Not Given            Licence:            Superseded By: Not Given            Licence:            Positional Accuracy: Manually positioned to the address or location            Boundary Quality: Not Supplied            Authorised Waste: Chem.Uncontam. Waste Polymers As            Lump Waste From Manuf.Process            Off-Spec'N Virgin Polymer            Sheet/Reject Moulding Scrap            Wet/Dirty Virgin Polymer            Prohibited Waste: Liable To Cause Environmental Hazards            Poisonous, Noxious, Polluting Wastes</p>	A19SW (NE)	684	2	412050 424650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13NE (NE)	0	1	411692 424068
114	<b>BGS Recorded Mineral Sites</b> Site Name: Shaking Delf Location: Southowram, Halifax, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 253168 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Elland Flags Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NE (E)	56	1	411745 424085
115	<b>BGS Recorded Mineral Sites</b> Site Name: Pasture House Quarry Location: Southowram, Halifax, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 196149 Type: Opencast <b>Status: Ceased</b> Operator: Marshalls Natural Stone Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Elland Flags Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	125	1	411805 424017
116	<b>BGS Recorded Mineral Sites</b> Site Name: Shaking Delf Location: Southowram, Halifax, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 7220 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Elland Flags Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	145	1	411770 424190
117	<b>BGS Recorded Mineral Sites</b> Site Name: Pasture House Quarry Location: Southowram, Halifax, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 253169 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Elland Flags Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NE (E)	157	1	411845 424100
118	<b>BGS Recorded Mineral Sites</b> Site Name: Pasture House Quarry Location: Southowram, Halifax, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 433 Type: Opencast <b>Status: Ceased</b> Operator: Marshalls Natural Stone Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Elland Flags Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	188	1	411800 423915

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Shaking Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72393            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A13NE (N)	208	1	411740 424270
120	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Shaking Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 196150            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A13NW (N)	227	1	411625 424285
121	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pasture House Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 195181            Type: Opencast  <b>Status: Active</b>            Operator: Marshalls Natural Stone            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A13SE (E)	263	1	411950 424020
122	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: St. Anne In The Grove Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 253170            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A8NE (S)	426	1	411795 423655
123	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Law Lane            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 9152            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	465	1	411253 423917
124	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 245636            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	468	1	411482 424486

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
125	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Southowram            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227722            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	471	1	411227 423993
126	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Yew House Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227723            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	480	1	411213 424051
127	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunnybank Farm Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 442            Type: Opencast  <b>Status: Dormant</b>            Operator: Mytholme Stone Sales Ltd (R Taylor)            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	522	1	411550 424570
128	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: New Street Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72403            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A8NW (SW)	528	1	411434 423608
129	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 245635            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	559	1	411504 424594
130	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Lud Hill Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 427            Type: Opencast  <b>Status: Ceased</b>            Operator: Individual'S Name Withheld            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A8NE (S)	567	1	411728 423503

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunnybank Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 443            Type: Opencast  <b>Status: Ceased</b>            Operator: Individual'S Name Withheld            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (NW)	582	1	411445 424595
132	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Withen Field            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227724            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	597	1	411097 424019
133	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Barker Royd            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29711            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A14SW (E)	613	1	412275 423880
134	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Mytholme Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29753            Type: Opencast  <b>Status: Active</b>            Operator: Mytholme Stone Sales Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	614	1	411600 424675
135	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 245637            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	628	1	411651 424694
136	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Barker Royd            Location: Brighouse, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72392            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A14SW (SE)	651	1	412276 423782

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136	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29720            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A14SW (SE)	691	1	412305 423750
137	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Allen'S Fire Clay Works            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 13560            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Lower Coal Measures Formation            Commodity: Fireclay            Positional Accuracy: Located by supplier to within 10m</p>	A18SE (NE)	668	1	411981 424670
138	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29754            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18SW (N)	677	1	411495 424715
139	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Withen Field Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72395            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (W)	683	1	411026 423917
140	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252781            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	695	1	411085 423730
141	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Pit            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 245638            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Lower Coal Measures Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A18NE (N)	713	1	411717 424780

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
142	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinner Lane Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72396            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SE (SW)	716	1	411035 423785
143	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Winter Hill Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252784            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	727	1	411225 423512
144	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Great House Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227719            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	731	1	411140 423590
145	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Withen Field            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72394            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	735	1	410960 424010
146	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Milking Hill            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 7103            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A8SW (S)	744	1	411540 423340
147	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29745            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	745	1	410980 423850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227718            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	760	1	411075 423625
149	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts Original            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 7244            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A14SE (SE)	779	1	412400 423745
150	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29746            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	781	1	410965 423785
150	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252785            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (SW)	814	1	410944 423748
151	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Sunny Bank Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29755            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	797	1	411460 424830
152	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Grange House Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29760            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SW)	815	1	411318 423345

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Woodcroft Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227720            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	817	1	411065 423545
154	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Layerock Hall            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227717            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	819	1	410875 424024
154	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29751            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	833	1	410859 424064
155	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252786            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	821	1	410975 423670
156	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 8578            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	823	1	410875 423970
157	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Woodcroft Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252782            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	838	1	411080 423497

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Thumpus Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29757            Type: Opencast  <b>Status: Ceased</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	851	1	411190 424755
159	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29758            Type: Opencast  <b>Status: Ceased</b>            Operator: Marshalls Natural Stone            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	855	1	412445 423665
160	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Marsh Delf            Location: Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72385            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A18NW (N)	860	1	411450 424893
161	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Grange House Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 6234            Type: Opencast  <b>Status: Ceased</b>            Operator: Marshalls Mono Ltd., Natural Stone Division            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SW)	863	1	411354 423275
162	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Winter Hill Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252783            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SW)	867	1	411095 423440
163	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Walterclough Fireclay Mine            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 16522            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Lower Coal Measures Formation            Commodity: Fireclay            Positional Accuracy: Located by supplier to within 10m</p>	A14NE (E)	871	1	412555 424180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
164	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cromwell            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29719            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9SW (SE)	874	1	412190 423350
165	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Marsh Lane Colliery            Location: Bank Top, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 239074            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Lower Coal Measures Formation            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	879	1	410910 424468
166	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 434            Type: Opencast  <b>Status: Ceased</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A12SW (W)	885	1	410835 423850
167	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cromwell Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 426            Type: Opencast  <b>Status: Ceased</b>            Operator: Marshalls Natural Stone            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NW (SE)	900	1	412315 423420
168	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Bell Croft            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 11213            Type: Opencast  <b>Status: Ceased</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	910	1	410860 423700
169	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: High Field Coal Pit            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 72397            Type: Underground  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Coal Measures Group            Commodity: Coal - Deep            Positional Accuracy: Located by supplier to within 10m</p>	A12NW (W)	911	1	410784 424135

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Longlands Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29749            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	914	1	411015 423455
171	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Lower Marsh Quarry            Location: Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 73564            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Pennine Lower Coal Measures Formation            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	915	1	410987 424650
172	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Marsh Lane Quarries            Location: Bank Top, Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 238639            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	917	1	410914 424552
172	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Marsh Lane Quarries            Location: Bank Top, Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 238638            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17SW (NW)	966	1	410870 424575
173	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Little Marsh Quarry            Location: Bank Top, Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 238636            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	920	1	411070 424745
174	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Grange House Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 13553            Type: Opencast  <b>Status: Ceased</b>            Operator: Marshalls Mono Ltd., Natural Stone Division            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A8SW (S)	929	1	411475 423165

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
175	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Winter Hill Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 227721            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SW)	933	1	411060 423382
176	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Thumpus Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 444            Type: Opencast  <b>Status: Dormant</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	935	1	411130 424815
177	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Longlands Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252787            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	936	1	410920 423540
177	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Longlands Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252780            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	939	1	410945 423500
178	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29715            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	944	1	412540 423655
178	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29716            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	947	1	412560 423690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
179	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: West Lane Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 7105            Type: Opencast  <b>Status: Ceased</b>            Operator: Marshalls Natural Stone            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SW)	946	1	411263 423225
180	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Birks Royd            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 5743            Type: Opencast  <b>Status: Ceased</b>            Operator: Individual'S Name Withheld            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	949	1	412480 423540
181	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Thumpus Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29756            Type: Opencast  <b>Status: Ceased</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	955	1	411215 424895
182	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Longlands Delf            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 252779            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	958	1	410965 423445
183	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Little Marsh Quarry            Location: Bank Top, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 7100            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	961	1	411020 424755
184	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Thumpus North            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 7247            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A17NE (NW)	985	1	411080 424840

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Pinnar Lane Quarry            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 6227            Type: Opencast  <b>Status: Dormant</b>            Operator: W. S. Crossley (York Stone) Ltd.            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A7NW (SW)	987	1	410855 423545
186	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Cross Platts Quarries            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29717            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (E)	989	1	412615 423715
187	<p><b>BGS Recorded Mineral Sites</b></p> <p>Site Name: Birks Royd            Location: Southowram, Halifax, West Yorkshire            Source: British Geological Survey, National Geoscience Information Service            Reference: 29718            Type: Opencast  <b>Status: Ceased</b>            Operator: Unknown Operator            Operator Location: Not Supplied            Periodic Type: Carboniferous            Geology: Elland Flags            Commodity: Sandstone            Positional Accuracy: Located by supplier to within 10m</p>	A9NE (SE)	994	1	412560 423585
	<p><b>Coal Mining Affected Areas</b></p> <p>Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.</p>	A13NE (NE)	0	6	411692 424068
	<p><b>Mining Instability</b></p> <p>Mining Evidence: Conclusive Rock Mining            Source: Ove Arup &amp; Partners            Boundary Quality: As Supplied</p>	A13NE (NE)	0	-	411692 424068
	<p><b>Man-Made Mining Cavities</b></p> <p>Easting: 411700            Northing: 423900            Distance: 169            Quadrant Reference: A13            Quadrant Reference: SE            Bearing Ref: S            Cavity Type: Elland Flagstone Mine-Details Unknown            Commodity: Flagstones            Solid Geology Detail: Lower Coal Measures            Superficial Geology: No Details            Detail:</p>	A13SE (S)	169	7	411700 423900
	<p><b>Man-Made Mining Cavities</b></p> <p>Easting: 411900            Northing: 423900            Distance: 268            Quadrant Reference: A13            Quadrant Reference: SE            Bearing Ref: SE            Cavity Type: Elland Flagstone Mine-Details Unknown            Commodity: Flagstones            Solid Geology Detail: Lower Coal Measures            Superficial Geology: No Details            Detail:</p>	A13SE (SE)	268	7	411900 423900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Man-Made Mining Cavities</b> Easting: 411600 Northing: 424400 Distance: 345 Quadrant Reference: A13 Quadrant Reference: NW Bearing Ref: N Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: No Details Superficial Geology No Details Detail:	A13NW (N)	345	7	411600 424400
	<b>Man-Made Mining Cavities</b> Easting: 411700 Northing: 423600 Distance: 469 Quadrant Reference: A8 Quadrant Reference: NE Bearing Ref: S Cavity Type: Elland Flagstone Mine-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A8NE (S)	469	7	411700 423600
	<b>Man-Made Mining Cavities</b> Easting: 412200 Northing: 423800 Distance: 575 Quadrant Reference: A14 Quadrant Reference: SW Bearing Ref: SE Cavity Type: Shaft Entry Elland Flagstone Mines Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A14SW (SE)	575	7	412200 423800
	<b>Man-Made Mining Cavities</b> Easting: 411200 Northing: 424400 Distance: 594 Quadrant Reference: A12 Quadrant Reference: NE Bearing Ref: NW Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A12NE (NW)	594	7	411200 424400
	<b>Man-Made Mining Cavities</b> Easting: 411100 Northing: 424300 Distance: 636 Quadrant Reference: A12 Quadrant Reference: NE Bearing Ref: W Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A12NE (W)	636	7	411100 424300
	<b>Man-Made Mining Cavities</b> Easting: 411100 Northing: 423800 Distance: 650 Quadrant Reference: A12 Quadrant Reference: SE Bearing Ref: SW Cavity Type: Elland Flagstone Mining-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology Infilled Ground Detail:	A12SE (SW)	650	7	411100 423800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Man-Made Mining Cavities</b> Easting: 411500 Northing: 424700 Distance: 661 Quadrant Reference: A18 Quadrant Reference: SW Bearing Ref: N Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: Lower Coal Measures, Elland Flags Superficial Geology Made Ground Detail:	A18SW (N)	661	7	411500 424700
	<b>Man-Made Mining Cavities</b> Easting: 411000 Northing: 424300 Distance: 730 Quadrant Reference: A12 Quadrant Reference: NW Bearing Ref: W Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A12NW (W)	730	7	411000 424300
	<b>Man-Made Mining Cavities</b> Easting: 411100 Northing: 424500 Distance: 733 Quadrant Reference: A17 Quadrant Reference: SE Bearing Ref: NW Cavity Type: Elland Flagstone Mine-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A17SE (NW)	733	7	411100 424500
	<b>Man-Made Mining Cavities</b> Easting: 410900 Northing: 424300 Distance: 826 Quadrant Reference: A12 Quadrant Reference: NW Bearing Ref: W Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A12NW (W)	826	7	410900 424300
	<b>Man-Made Mining Cavities</b> Easting: 412400 Northing: 423600 Distance: 849 Quadrant Reference: A9 Quadrant Reference: NE Bearing Ref: SE Cavity Type: Shaft Entry Elland Flagstone Mines Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A9NE (SE)	849	7	412400 423600
	<b>Man-Made Mining Cavities</b> Easting: 411600 Northing: 423200 Distance: 873 Quadrant Reference: A8 Quadrant Reference: SW Bearing Ref: S Cavity Type: Elland Flagstone Mine-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology Infilled Ground, Made Ground Detail:	A8SW (S)	873	7	411600 423200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Man-Made Mining Cavities</b> Easting: 411000 Northing: 424600 Distance: 873 Quadrant Reference: A17 Quadrant Reference: SW Bearing Ref: NW Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology: Made Ground Detail:	A17SW (NW)	873	7	411000 424600
	<b>Man-Made Mining Cavities</b> Easting: 410900 Northing: 424500 Distance: 902 Quadrant Reference: A17 Quadrant Reference: SW Bearing Ref: NW Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology: No Details Detail:	A17SW (NW)	902	7	410900 424500
	<b>Man-Made Mining Cavities</b> Easting: 411100 Northing: 424800 Distance: 942 Quadrant Reference: A17 Quadrant Reference: NE Bearing Ref: NW Cavity Type: Elland Flagstone Mining-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology: No Details Detail:	A17NE (NW)	942	7	411100 424800
	<b>Man-Made Mining Cavities</b> Easting: 411100 Northing: 423300 Distance: 970 Quadrant Reference: A7 Quadrant Reference: SE Bearing Ref: SW Cavity Type: Shaft Entry Elland Flagstone Mining-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology: No Details Detail:	A7SE (SW)	970	7	411100 423300
	<b>Man-Made Mining Cavities</b> Easting: 412000 Northing: 425000 Distance: 982 Quadrant Reference: A18 Quadrant Reference: NE Bearing Ref: N Cavity Type: Not supplied Commodity: Flagstones Solid Geology Detail: No Details Superficial Geology: No Details Detail:	A18NE (N)	982	7	412000 425000
	<b>Man-Made Mining Cavities</b> Easting: 412500 Northing: 423500 Distance: 988 Quadrant Reference: A9 Quadrant Reference: NE Bearing Ref: SE Cavity Type: Elland Flagstone Mine-Details Unknown Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology: No Details Detail:	A9NE (SE)	988	7	412500 423500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Man-Made Mining Cavities</b> Easting: 410800 Northing: 424500 Distance: 991 Quadrant Reference: A17 Quadrant Reference: SW Bearing Ref: NW Cavity Type: Shaft Entry Elland Flagstone Mine Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A17SW (NW)	991	7	410800 424500
	<b>Man-Made Mining Cavities</b> Easting: 411200 Northing: 423200 Distance: 998 Quadrant Reference: A7 Quadrant Reference: SE Bearing Ref: SW Cavity Type: Shaft Entry Elland Flagstone Mines Commodity: Flagstones Solid Geology Detail: Lower Coal Measures Superficial Geology No Details Detail:	A7SE (SW)	998	7	411200 423200
	<b>Non Coal Mining Areas of Great Britain</b> Risk: Likely Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	43	1	411732 424083
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	197	1	411825 424212
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	174	1	411856 424125
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	203	1	411854 424191
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	209	1	411797 423888
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	222	1	411801 423876
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	43	1	411732 424083
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	24	1	411690 424045
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	127	1	411672 423944
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	174	1	411856 424125
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	411692 424068

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
188	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: W D Robinson &amp; Sons Transport Ltd            Location: 57, Fairfax Crescent, Halifax, West Yorkshire, HX3 9SQ            Classification: Road Haulage Services  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NW (W)	322	-	411374 424113
189	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Ivyhouse Cheese            Location: The New House, Ivy House Farm, Whitley Lane, Southowram, Halifax, HX3 9TF            Classification: Cheese Makers &amp; Suppliers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A13NW (NW)	365	-	411515 424387
190	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Halifax Clean            Location: 16, Queens Drive, Halifax, West Yorkshire, HX3 9RX            Classification: Cleaning Services - Domestic  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	469	-	411454 423665
190	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Cleaning Co            Location: 16, Queens Drive, Halifax, HX3 9RX            Classification: Commercial Cleaning Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	469	-	411454 423665
190	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Cleaning Co            Location: 16, Queens Drive, Halifax, West Yorkshire, HX3 9RX            Classification: Commercial Cleaning Services  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	469	-	411454 423665
190	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: The Cleaning Co            Location: 16, Queens Drive, Halifax, West Yorkshire, HX3 9RX            Classification: Cleaning Services - Domestic  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	469	-	411454 423665
190	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Halifax Housemaids            Location: 11, Kings View, Halifax, West Yorkshire, HX3 9RU            Classification: Cleaning Services - Domestic  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	490	-	411423 423659
191	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: D Bluck            Location: 2, Church Lane, Southowram, Halifax, West Yorkshire, HX3 9TD            Classification: Domestic Appliances - Servicing, Repairs &amp; Parts  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NE (S)	479	-	411830 423610
192	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Glendale Filtration            Location: 117, New Street, Southowram, Halifax, HX3 9SN            Classification: Filter Manufacturers &amp; Suppliers  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	503	-	411498 423605
193	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Butterflies            Location: 8, Townley Avenue, Halifax, West Yorkshire, HX3 9QR            Classification: Cleaning Services - Domestic  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A12SE (SW)	630	-	411125 423796
194	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Electrical Engineering            Location: 7, Grange Court, Halifax, West Yorkshire, HX3 9RN            Classification: Electronic Engineers  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A8NW (SW)	662	-	411423 423464

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
195	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: S D Robinson            Location: 8, The Park, Southowram, Halifax, West Yorkshire, HX3 9QY            Classification: Road Haulage Services  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	692	-	411160 423627
196	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: West Lane Garage Ltd            Location: West Lane, Halifax, HX3 9RG            Classification: Garage Services  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A7NE (SW)	740	-	411259 423468
196	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Marshalls            Location: Brier Lodge, Hall Ings, Halifax, West Yorkshire, HX3 9SY            Classification: Concrete Products  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	754	-	411282 423436
197	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Simon Quinn            Location: 61, Church Lane, Southowram, Halifax, West Yorkshire, HX3 9TD            Classification: Road Haulage Services  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A9NW (SE)	784	-	412288 423560
198	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Marshall Control Systems Ltd            Location: West La, Halifax, West Yorkshire, HX3 9TW            Classification: Control Panel Manufacturers  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A7SE (SW)	935	-	411073 423368
198	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Classical Flagstones            Location: West Lane, Southowram, Halifax, West Yorkshire, HX3 9RG            Classification: Slate &amp; Slate Products  <b>Status: Inactive</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A7SE (SW)	975	-	411034 423349
199	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Ashday Hall Farm Ltd            Location: Ashday Hall, Ashday Lane, Halifax, HX3 9TR            Classification: Builders' Merchants  <b>Status: Active</b>            Positional Accuracy: Automatically positioned to the address</p>	A8SE (S)	952	-	411975 423160
200	<p><b>Contemporary Trade Directory Entries</b></p> <p>Name: Perrott Engineering Ltd            Location: Wood Royde, Sutcliffe Wood Lane, Halifax, West Yorkshire, HX3 8PS            Classification: Engineers - General  <b>Status: Inactive</b>            Positional Accuracy: Automatically positioned to the address</p>	A19SE (NE)	977	-	412541 424550
201	<p><b>Fuel Station Entries</b></p> <p>Name: Marshalls            Location: West Lane, Southowram, Halifax, West Yorkshire, HX3 9RG            Brand: OBSOLETE            Premises Type: Not Applicable  <b>Status: Obsolete</b>            Positional Accuracy: Manually positioned to the road within the address or location</p>	A7NE (SW)	768	-	411229 423456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
202	<p><b>Areas of Adopted Green Belt</b></p> <p>Authority: Calderdale Metropolitan Borough Council                      Plan Name: Replacement Calderdale Unitary Development Plan                      Status: <b>Adopted</b>                      Plan Date: 25th August 2006</p>	A13NE (NE)	0	9	411692 424068
203	<p><b>Areas of Unadopted Green Belt</b></p> <p>Authority: Calderdale Metropolitan Borough Council                      Plan Name: Proposal Map                      Status: <b>Submission Draft</b>                      Plan Date: 11th January 2019</p>	A13NE (NE)	0	9	411692 424068

Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Bradford Metropolitan City Council - Environmental Health Environment Agency - Head Office Kirklees Metropolitan Borough Council - Planning Services Calderdale Metropolitan Borough Council - Environmental Health	January 2020 June 2020 November 2013 September 2014	Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - North East Region	April 2021	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - North East Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - North East Region	October 2008	
<b>Integrated Pollution Prevention And Control</b> Environment Agency - North East Region	April 2021	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> Kirklees Metropolitan Borough Council - Environmental Health Department Bradford Metropolitan City Council - Environmental Health Calderdale Metropolitan Borough Council - Environmental Health	April 2014 October 2014 October 2014	Variable Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> Kirklees Metropolitan Borough Council - Environmental Health Department Bradford Metropolitan City Council - Environmental Health Calderdale Metropolitan Borough Council - Environmental Health	April 2014 October 2014 October 2014	Annual Rolling Update Annual Rolling Update Annual Rolling Update
<b>Local Authority Pollution Prevention and Control Enforcements</b> Kirklees Metropolitan Borough Council - Environmental Health Department Bradford Metropolitan City Council - Environmental Health Calderdale Metropolitan Borough Council - Environmental Health	April 2014 January 2013 October 2014	Variable Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	January 2021	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - North East Region	December 1998	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - North East Region	March 2013	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - North East Region	March 2013	
<b>Registered Radioactive Substances</b> Environment Agency - North East Region	June 2016	Annually
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	July 2012	Annually
<b>Substantiated Pollution Incident Register</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	April 2021 April 2021	Quarterly Quarterly
<b>Water Abstractions</b> Environment Agency - North East Region	April 2021	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - North East Region	October 2017	Quarterly
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	Annually

Agency & Hydrological	Version	Update Cycle
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	Annually
<b>Source Protection Zones</b> Environment Agency - Head Office	May 2021	Bi-Annually
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	March 2021	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	March 2021	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	March 2021	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	March 2021	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	March 2021	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	September 2020	Quarterly
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
<b>Historical Landfill Sites</b> Environment Agency - Head Office	May 2021	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - North East Region	October 2008	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	April 2021 April 2021	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	April 2021 April 2021	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council - Environmental Health Kirklees Metropolitan Borough Council - Planning Services	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council - Environmental Health Kirklees Metropolitan Borough Council - Planning Services	May 2000 May 2000 May 2000	
<b>Registered Landfill Sites</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	Not Applicable Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2003 March 2003	

Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	April 2018	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	Annually
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	November 2000	
<b>Planning Hazardous Substance Enforcements</b> Kirklees Metropolitan Borough Council - Planning Services Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council	August 2015 February 2016 February 2016	Variable Variable Variable
<b>Planning Hazardous Substance Consents</b> Kirklees Metropolitan Borough Council - Planning Services Bradford Metropolitan City Council - Planning Department Calderdale Metropolitan Borough Council	August 2015 February 2016 February 2016	Variable Variable Variable
Geological	Version	Update Cycle
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	May 2021	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	March 2014	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	October 2000	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	Annually
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	Annually
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	July 2011	Annually

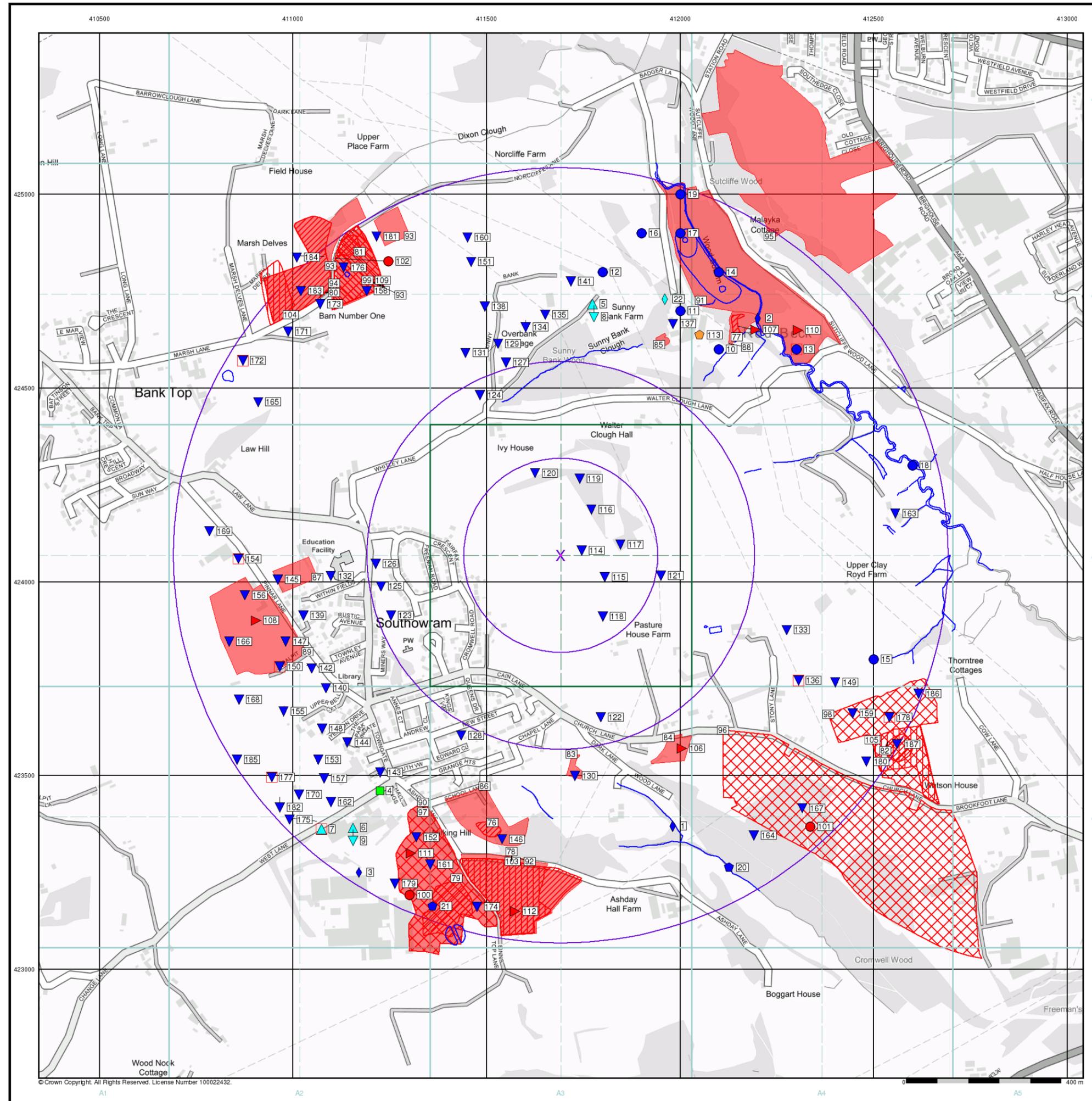
Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	April 2021	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	June 2021	Quarterly
<b>Gas Pipelines</b> National Grid	May 2021	
<b>Underground Electrical Cables</b> National Grid	May 2021	
Sensitive Land Use	Version	Update Cycle
<b>Ancient Woodland</b> Natural England	February 2021	Bi-Annually
<b>Areas of Adopted Green Belt</b> Bradford Metropolitan City Council Calderdale Metropolitan Borough Council Kirklees Metropolitan Borough Council	June 2020 June 2020 June 2020	As notified As notified As notified
<b>Areas of Unadopted Green Belt</b> Bradford Metropolitan City Council Calderdale Metropolitan Borough Council Kirklees Metropolitan Borough Council	June 2020 June 2020 June 2020	As notified As notified As notified
<b>Areas of Outstanding Natural Beauty</b> Natural England	January 2021	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	January 2017	
<b>Forest Parks</b> Forestry Commission	April 1997	Not Applicable
<b>Local Nature Reserves</b> Natural England	February 2021	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	July 2019	Bi-Annually
<b>National Nature Reserves</b> Natural England	January 2021	Bi-Annually
<b>National Parks</b> Natural England	April 2017	Bi-Annually
<b>Nitrate Sensitive Areas</b> Natural England	April 2016	Not Applicable
<b>Nitrate Vulnerable Zones</b> Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
<b>Ramsar Sites</b> Natural England	August 2020	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	February 2021	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	July 2020	Bi-Annually
<b>Special Protection Areas</b> Natural England	February 2021	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

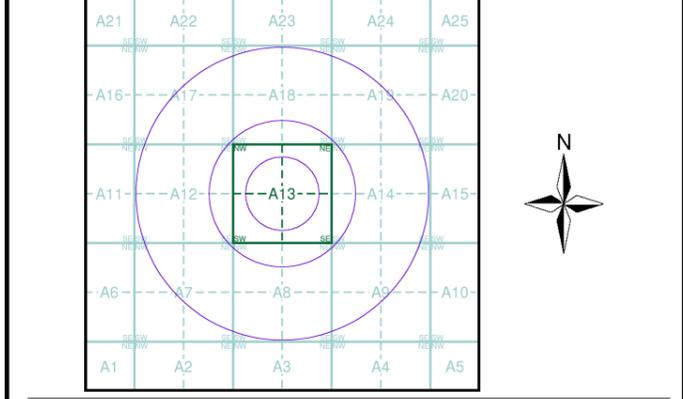
Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	<b>Calderdale Metropolitan Borough Council - Environmental Health</b> Northgate House, Northgate, Halifax, West Yorkshire, HX1 1UN	Telephone: 01422 357257 Fax: 01422 392238 Website: www.calderdale.gov.uk
4	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	<b>The Coal Authority - Property Searches</b> 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
7	<b>Stantec UK Ltd</b> Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
8	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
9	<b>Calderdale Metropolitan Borough Council</b> Crossley House, Crossley Street, Halifax, West Yorkshire, HX1 1TP	Telephone: 01422 357257 Fax: 01422 392238 Website: www.calderdale.gov.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site (Buffered Point)
  - 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
  - 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
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site
- Industrial Land Use**
- Contemporary Trade Directory Entry
  - Fuel Station Entry

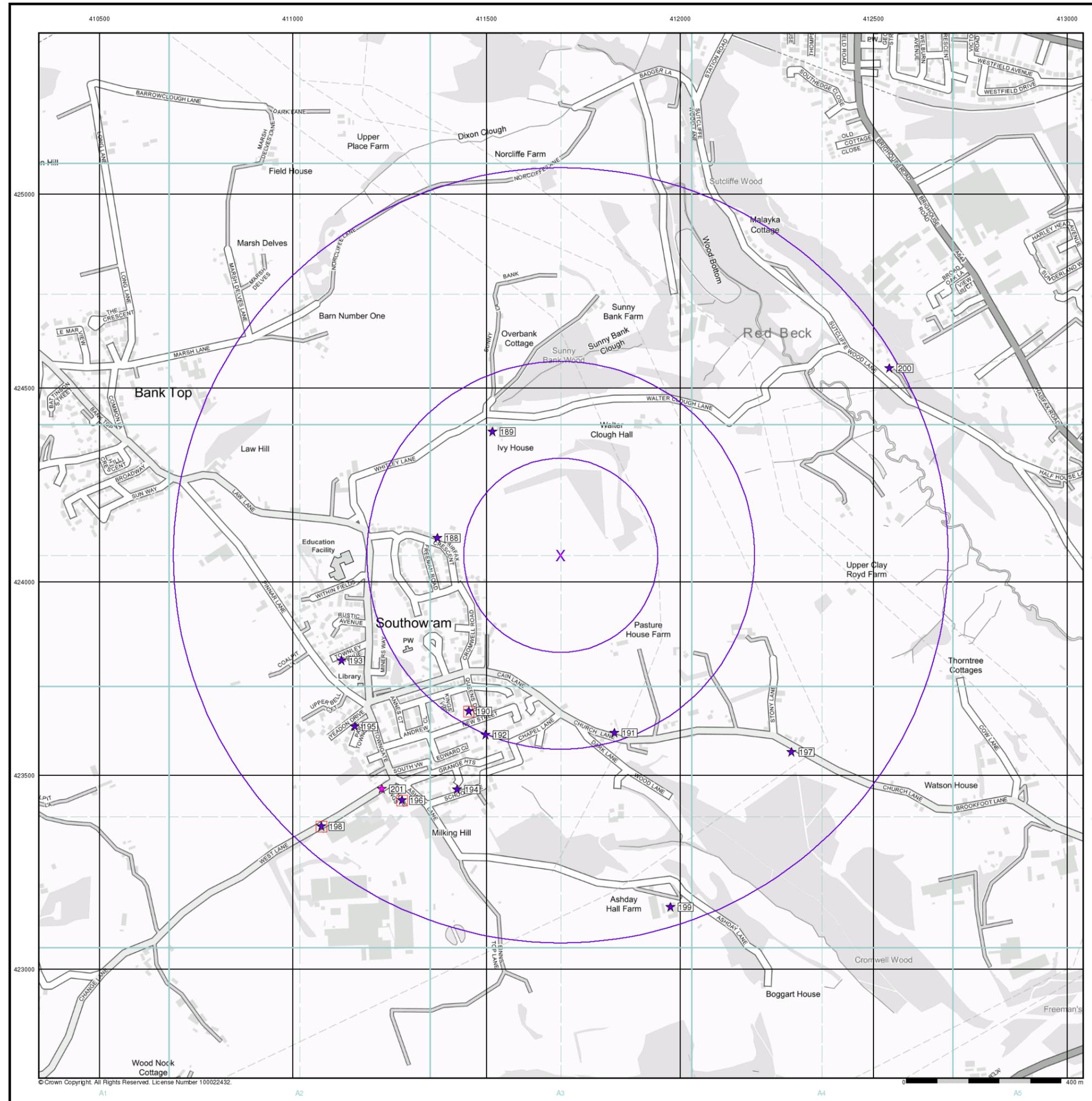
### Site Sensitivity Map - Slice A



**Order Details**

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

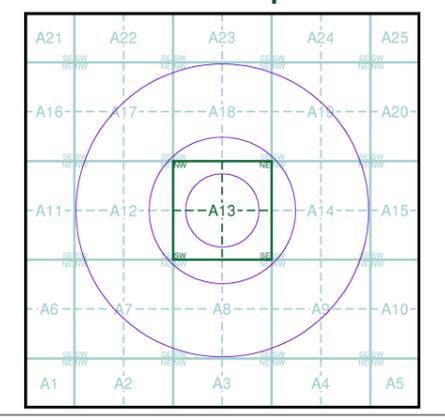
**Site Details**  
 Site at, Southowram, Calderdale



## 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
  - Underground Electrical Cables

### Industrial Land Use Map - Slice A



### Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

### Site Details

Site at, Southowram, Calderdale

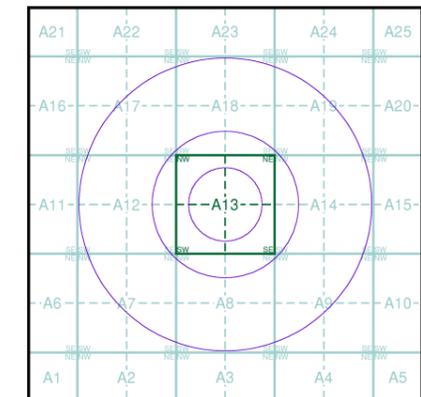
### General

-  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

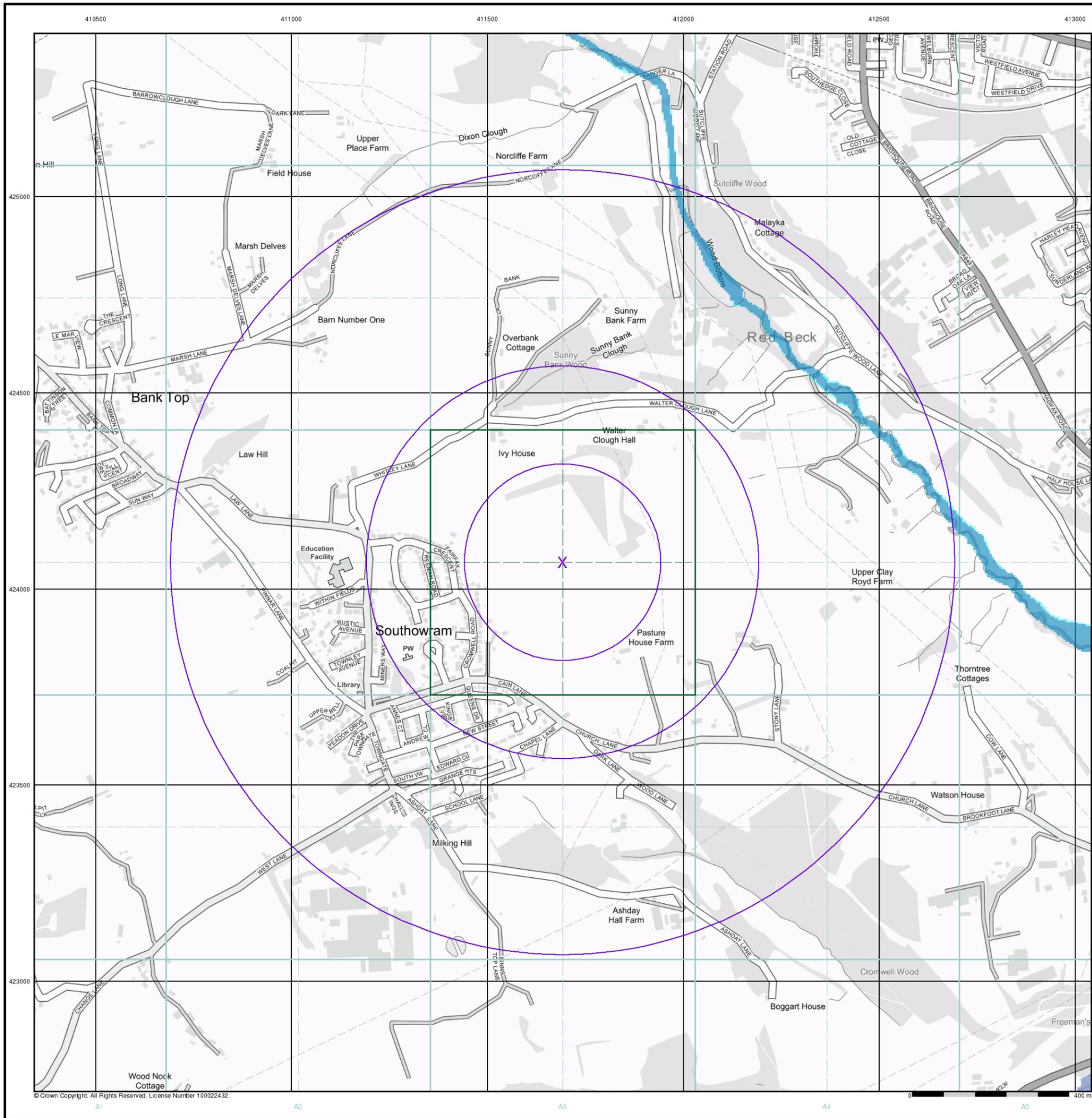


### Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

### Site Details

Site at, Southowram, Calderdale



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### General

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

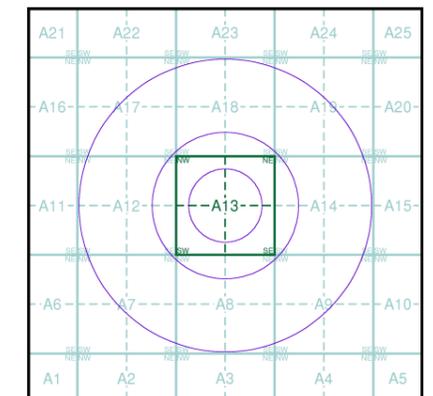
### Agency and Hydrological (Boreholes)

- 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

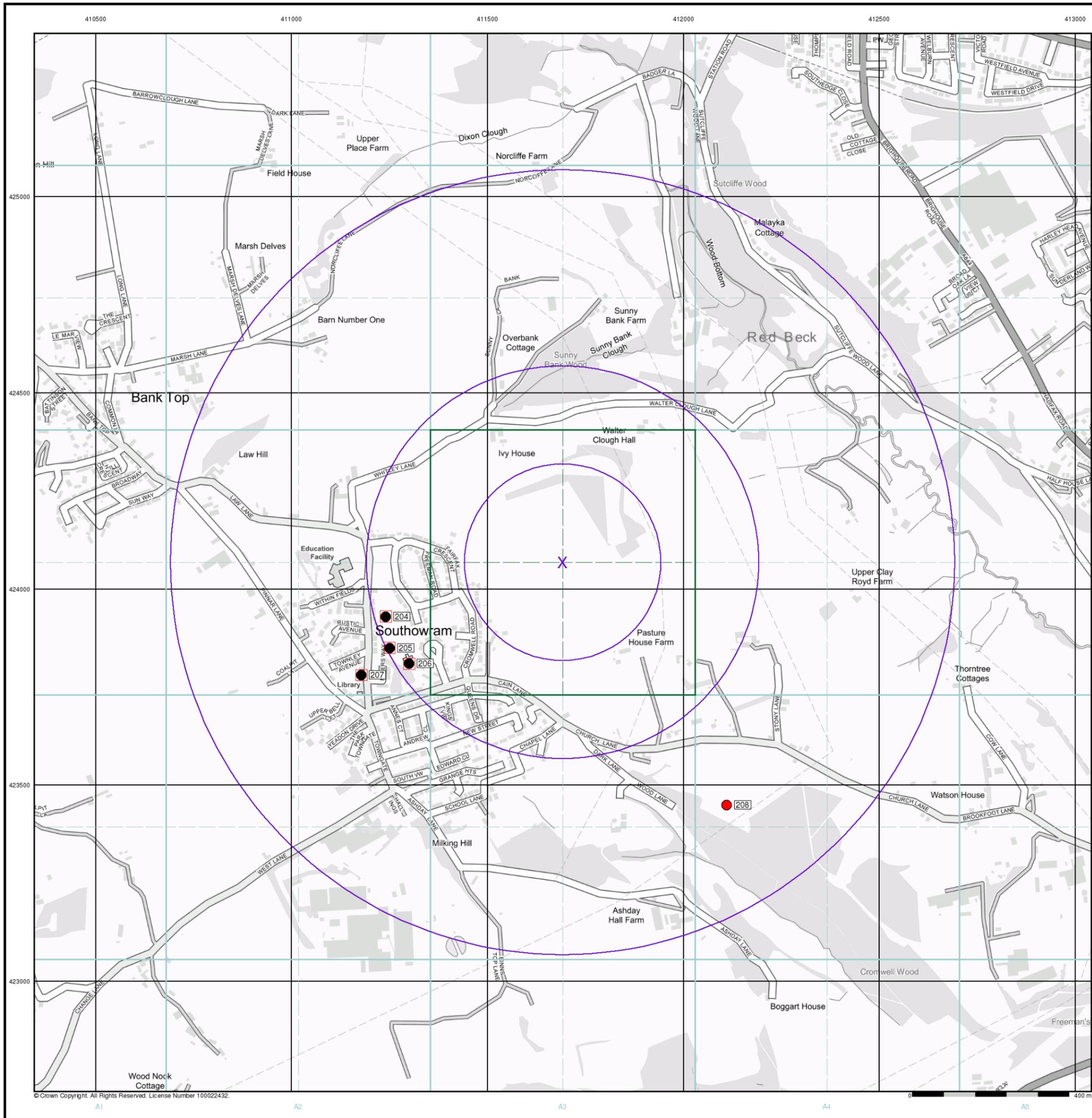


### Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

### Site Details

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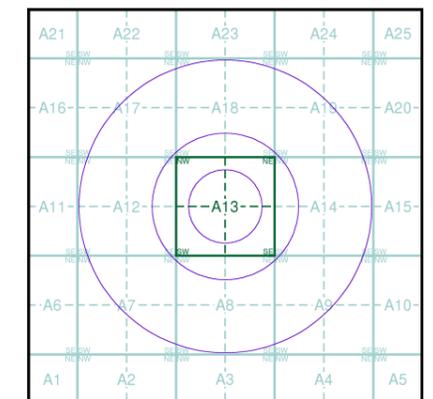
### General

- 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                     |

### OS Water Network Map - Slice A

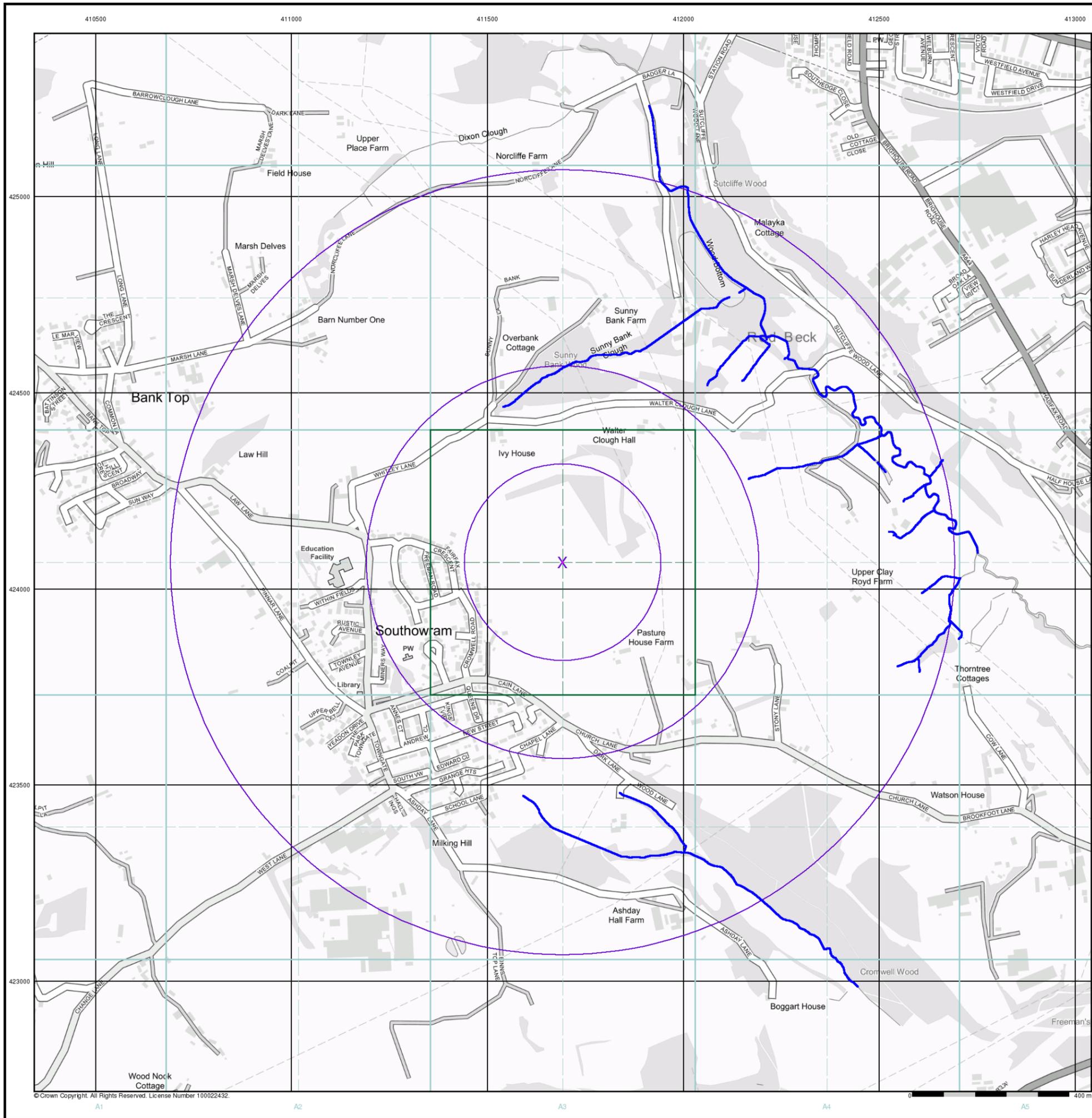


### Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

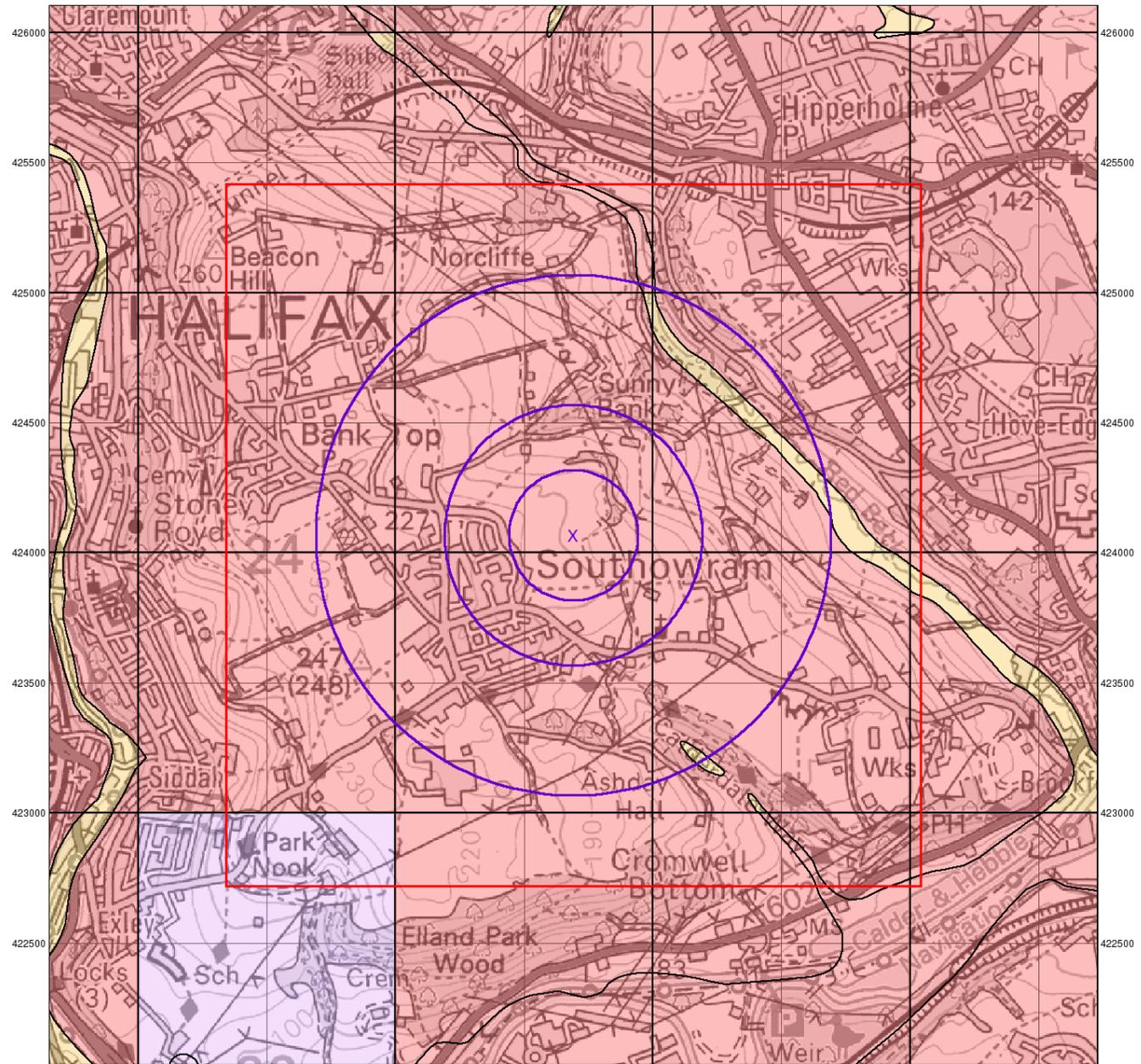
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41000 410500 411000 411500 412000 412500 413000 413500



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## Groundwater Vulnerability

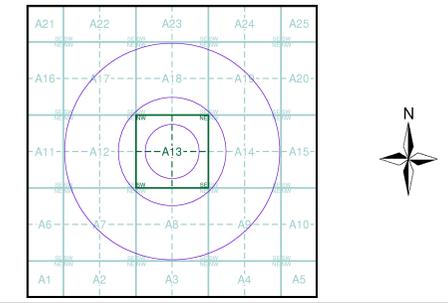
### General

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

### Agency and Hydrological

- | Bedrock Aquifers                        | Superficial Aquifers                    |
|---|---|
| High Vulnerability, Principal Aquifer   | High Vulnerability, Principal Aquifer   |
| High Vulnerability, Secondary Aquifer   | High Vulnerability, Secondary Aquifer   |
| Medium Vulnerability, Principal Aquifer | Medium Vulnerability, Principal Aquifer |
| Medium Vulnerability, Secondary Aquifer | Medium Vulnerability, Secondary Aquifer |
| Low Vulnerability, Principal Aquifer    | Low Vulnerability, Principal Aquifer    |
| Low Vulnerability, Secondary Aquifer    | Low Vulnerability, Secondary Aquifer    |
| Unproductive Aquifer                    |   |
| Soluble Rock                            |   |

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

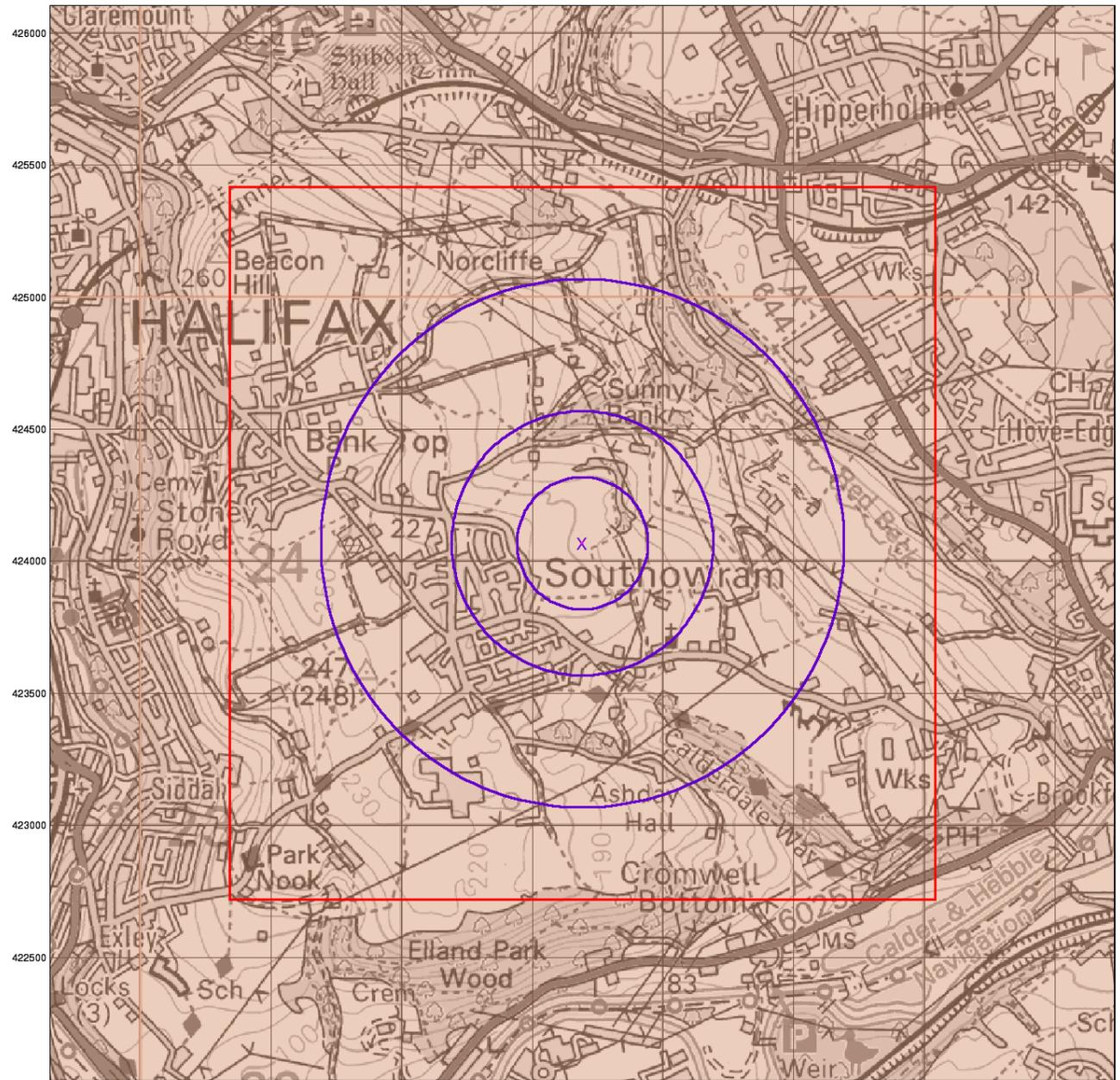
### Site Details

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41000 41050 41100 41150 41200 41250 41300 41350



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0 1 km

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## Bedrock Aquifer Designation

### General

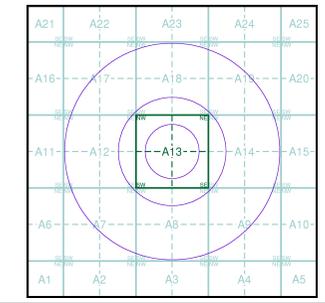
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

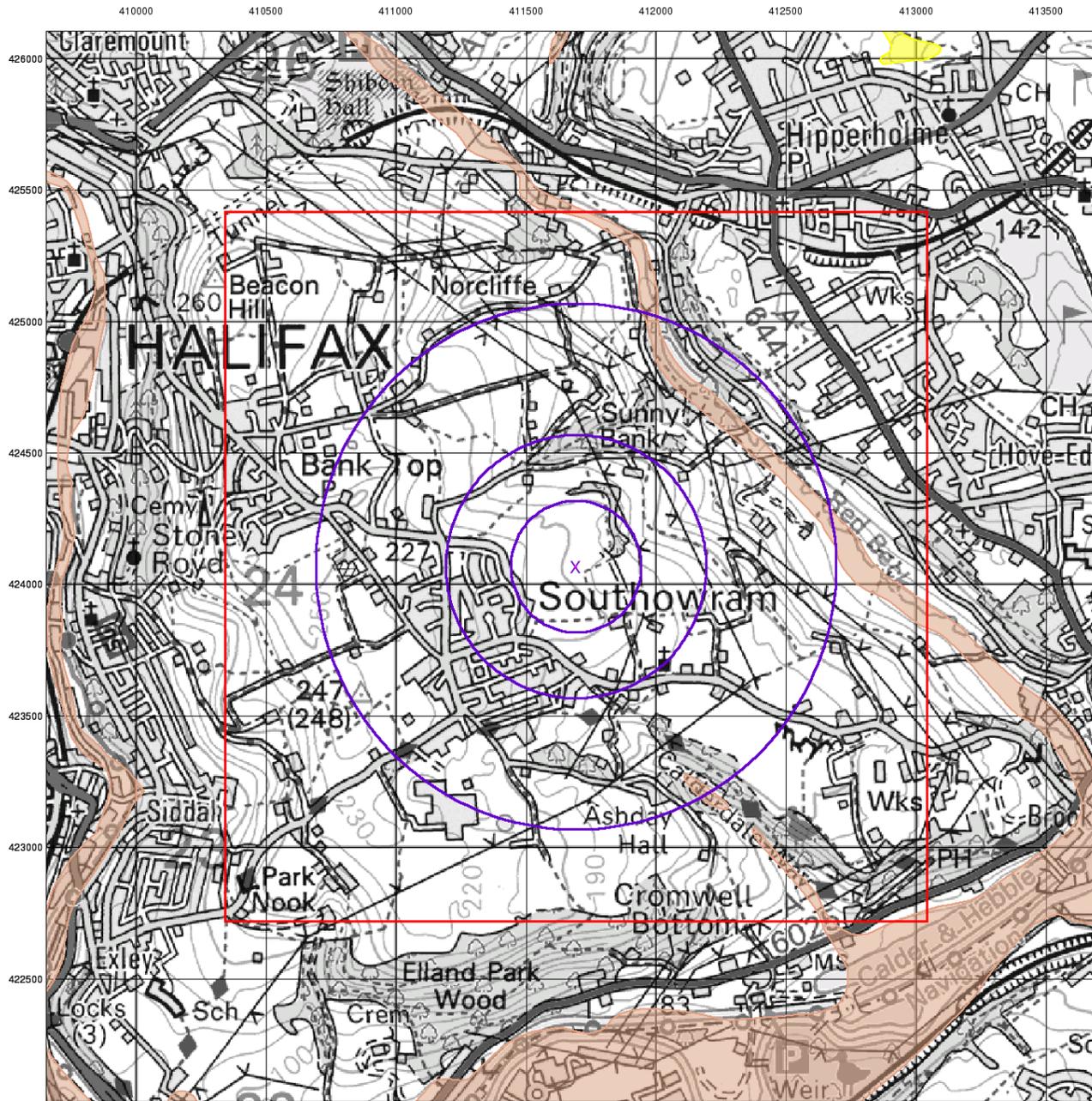
Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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## Superficial Aquifer Designation

### General

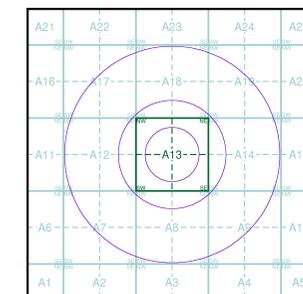
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### 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

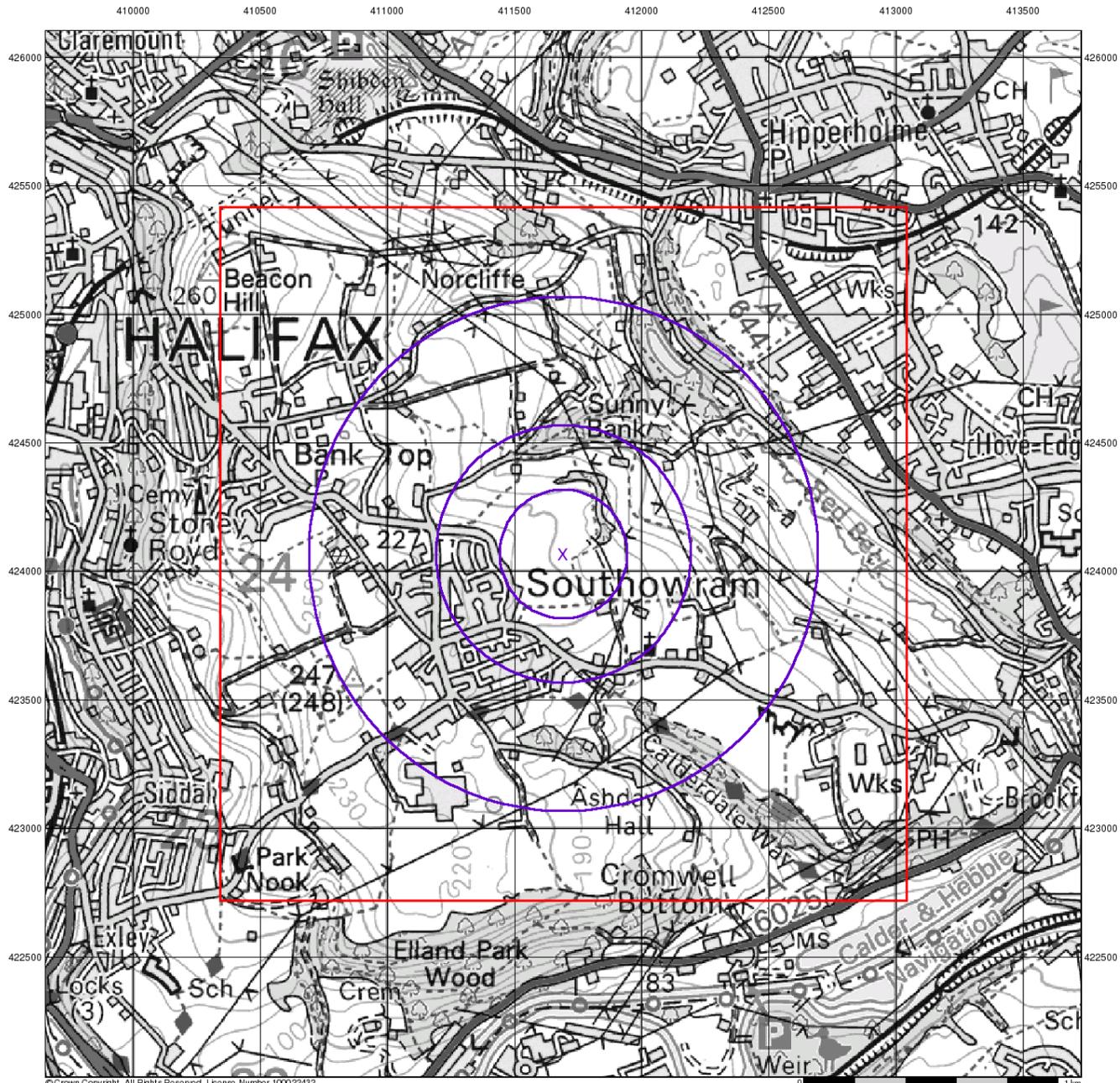
Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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## Source Protection Zones

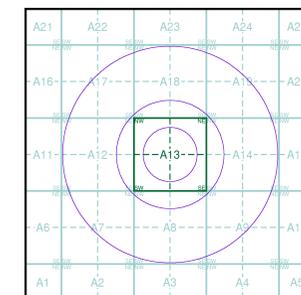
### General

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

### Agency and Hydrological

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

## Site Sensitivity Context Map - Slice A



### Order Details

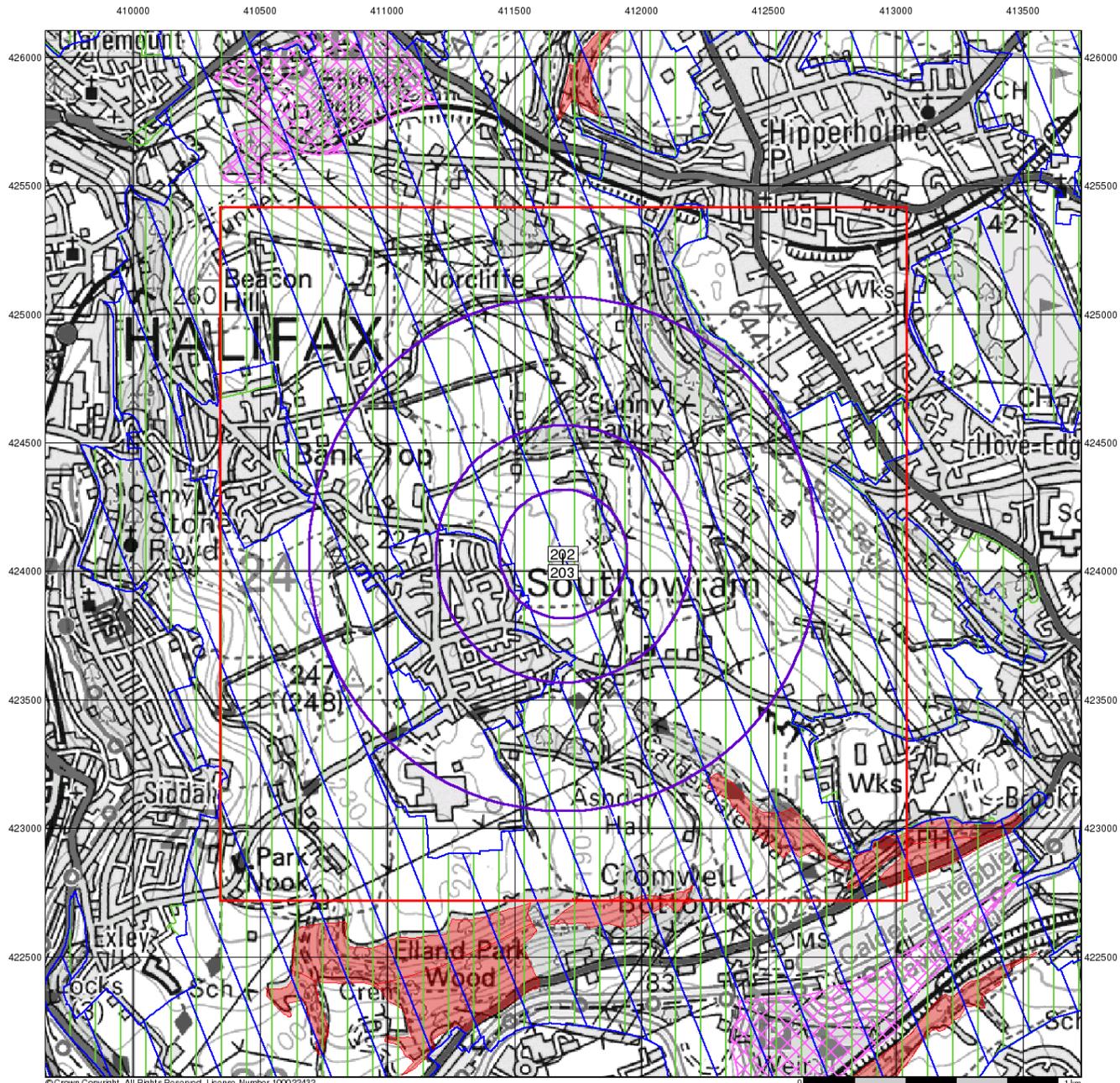
Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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## Sensitive Land Uses

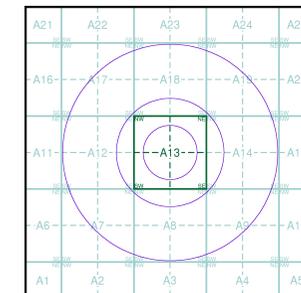
### General

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

### Sensitive Land Uses

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

### Site Sensitivity Context Map - Slice A



### Order Details

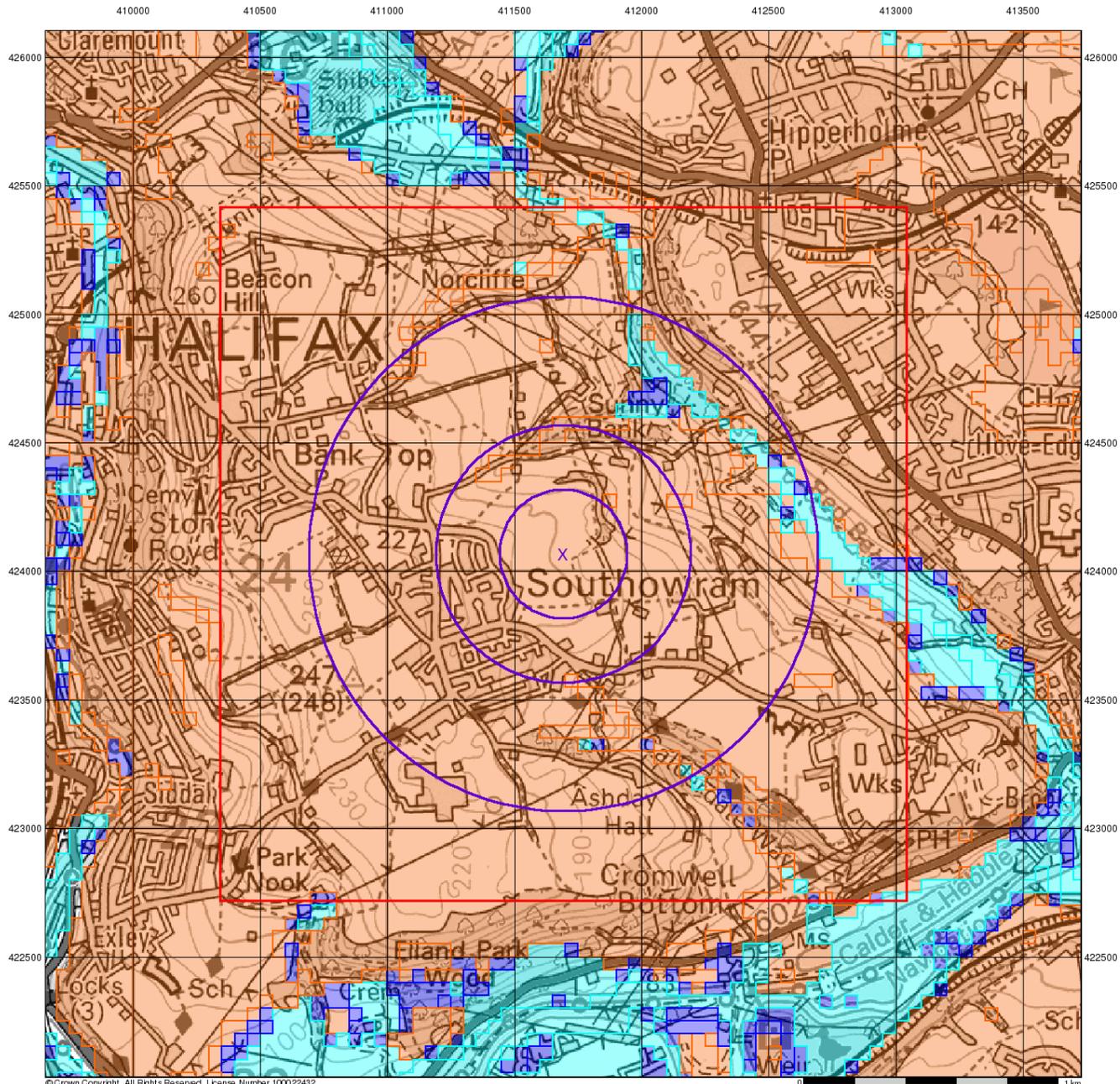
Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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0 1 km

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## BGS Flood GFS Data

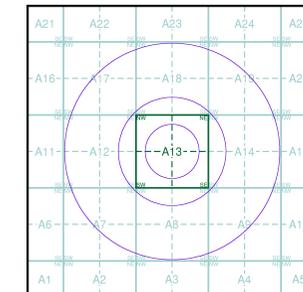
### General

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

### Agency and Hydrological (Flood)

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

## Site Sensitivity Context Map - Slice A



## Order Details

Order Number: 280535908\_1\_1  
 Customer Ref: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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## Geology 1:50,000 Maps Legends

### Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Not Supplied - Quaternary

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MG	Millstone Grit Group [See also Migr]	Mudstone, Siltstone and Sandstone	Not Supplied - Namurian
		Faults		
		Rock Segments		

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	GFDMP	Glaciofluvial Deposits, Mid Pleistocene	Sand and Gravel	Not Supplied - Cromerian
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	EF	Elland Flags	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	EYR	80 Yard Rock	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	GM	Greenmoor Rock	Sandstone	Not Supplied - Westphalian
	STNR	Stanningley Rock	Sandstone	Not Supplied - Westphalian
	MBR	Middle Band Rock	Sandstone	Not Supplied - Westphalian
	SBF	Soft Bed Flags	Sandstone	Not Supplied - Westphalian
	GR	Grenoside Sandstone	Sandstone	Not Supplied - Westphalian
	KKBS	Kirkburton Sandstone	Sandstone	Not Supplied - Westphalian
	RR	Rough Rock	Sandstone	Not Supplied - Namurian
	RF	Rough Rock Flags	Sandstone	Not Supplied - Namurian

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### Geology 1:50,000 Maps

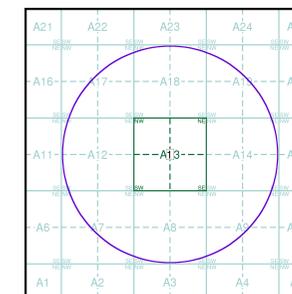
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	077
Map Name:	Huddersfield
Map Date:	2003
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice A



### Order Details:

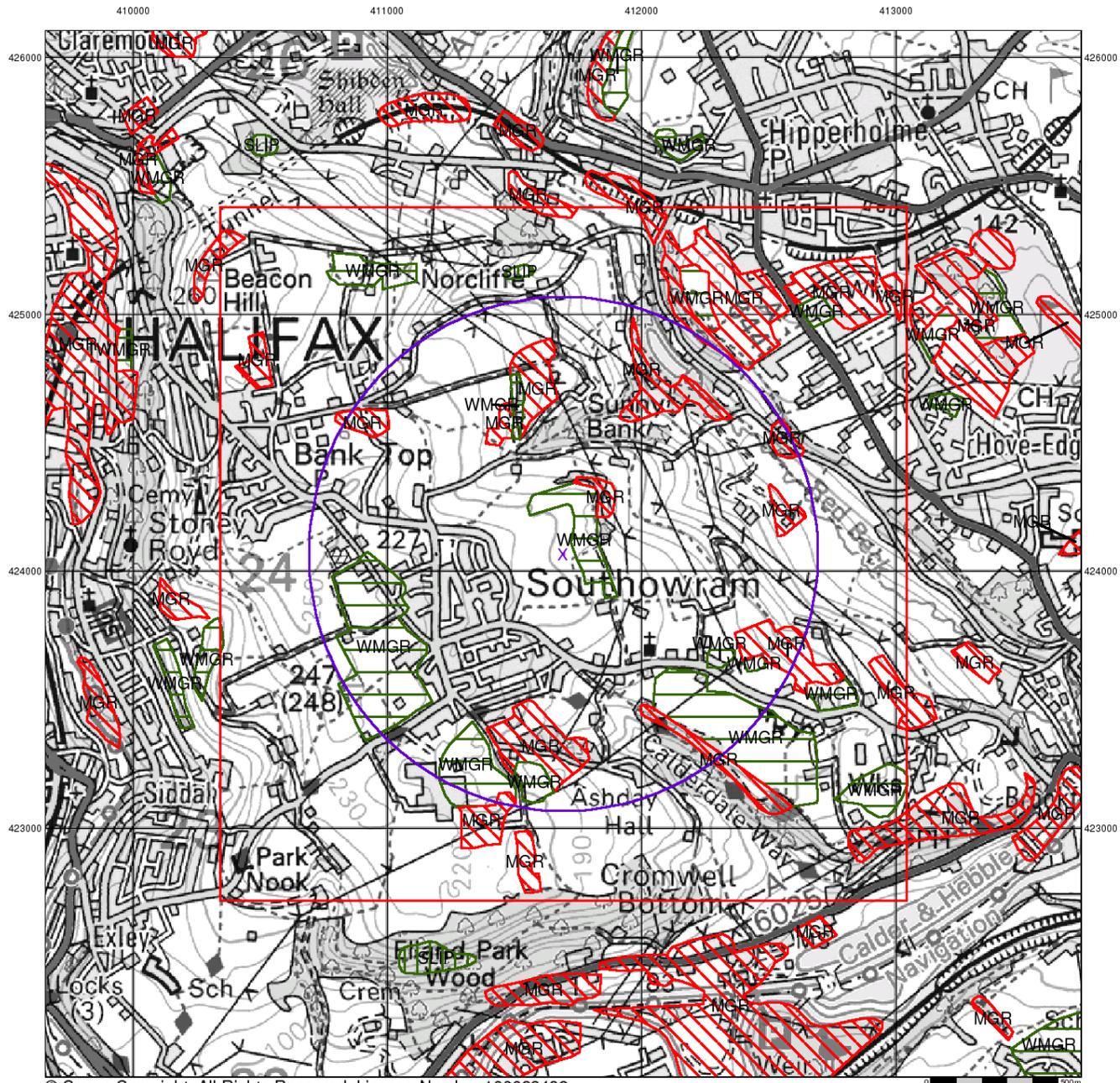
Order Number:	280535908_1_1
Customer Reference:	Pasture
National Grid Reference:	411690, 424070
Slice:	A
Site Area (Ha):	0.01
Search Buffer (m):	1000

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## Artificial Ground and Landslip

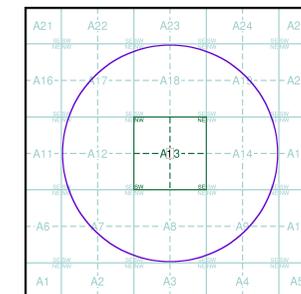
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions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

Artificial ground includes:

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

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

## Artificial Ground and Landslip Map - Slice A



### Order Details:

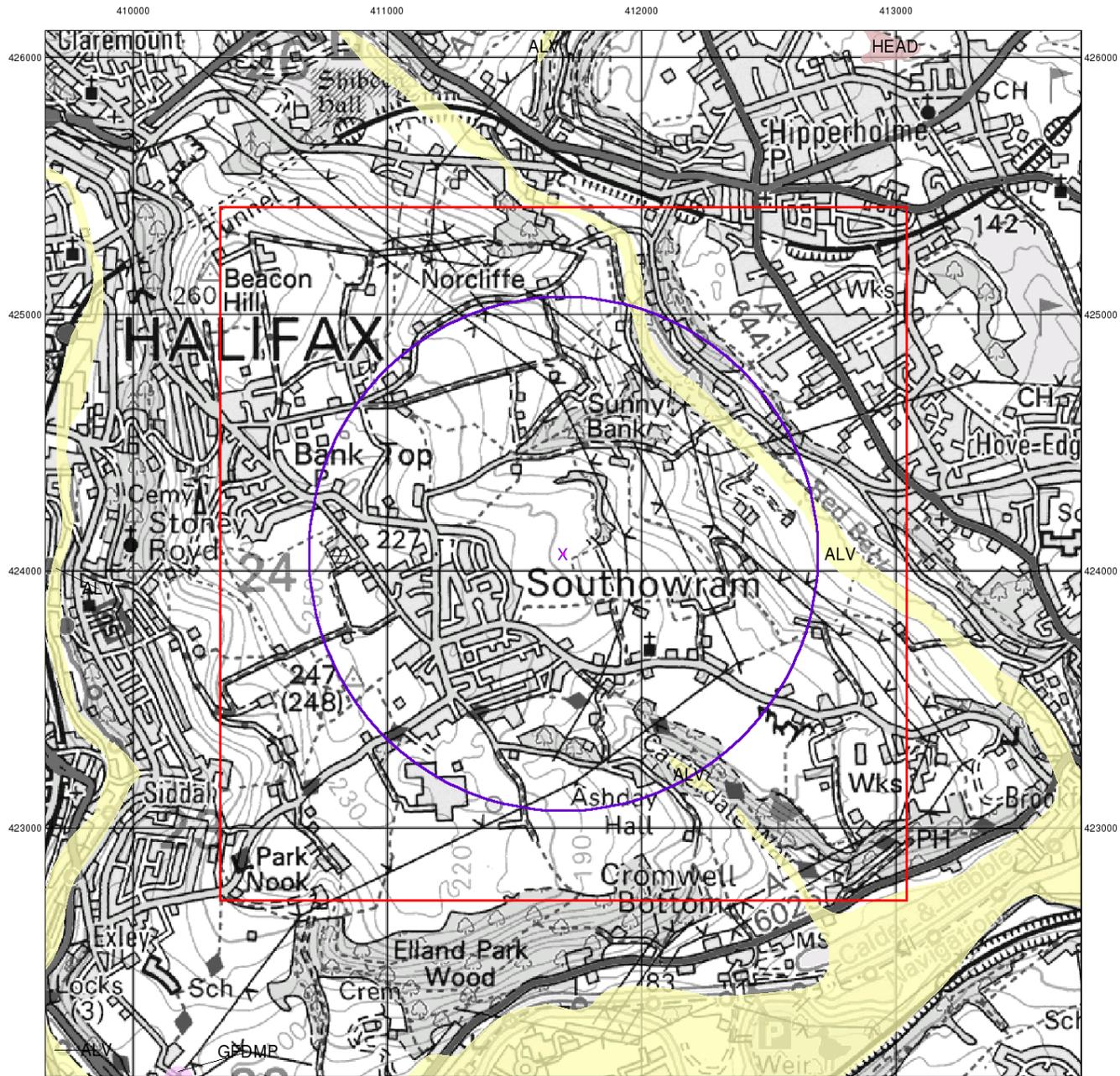
Order Number: 280535908\_1\_1  
 Customer Reference: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

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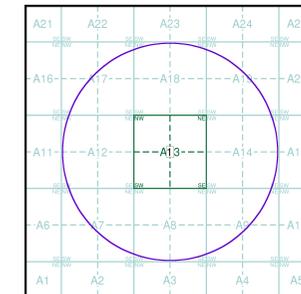
## Superficial Geology

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

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

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

## Superficial Geology Map - Slice A



### Order Details:

Order Number: 280535908\_1\_1  
 Customer Reference: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

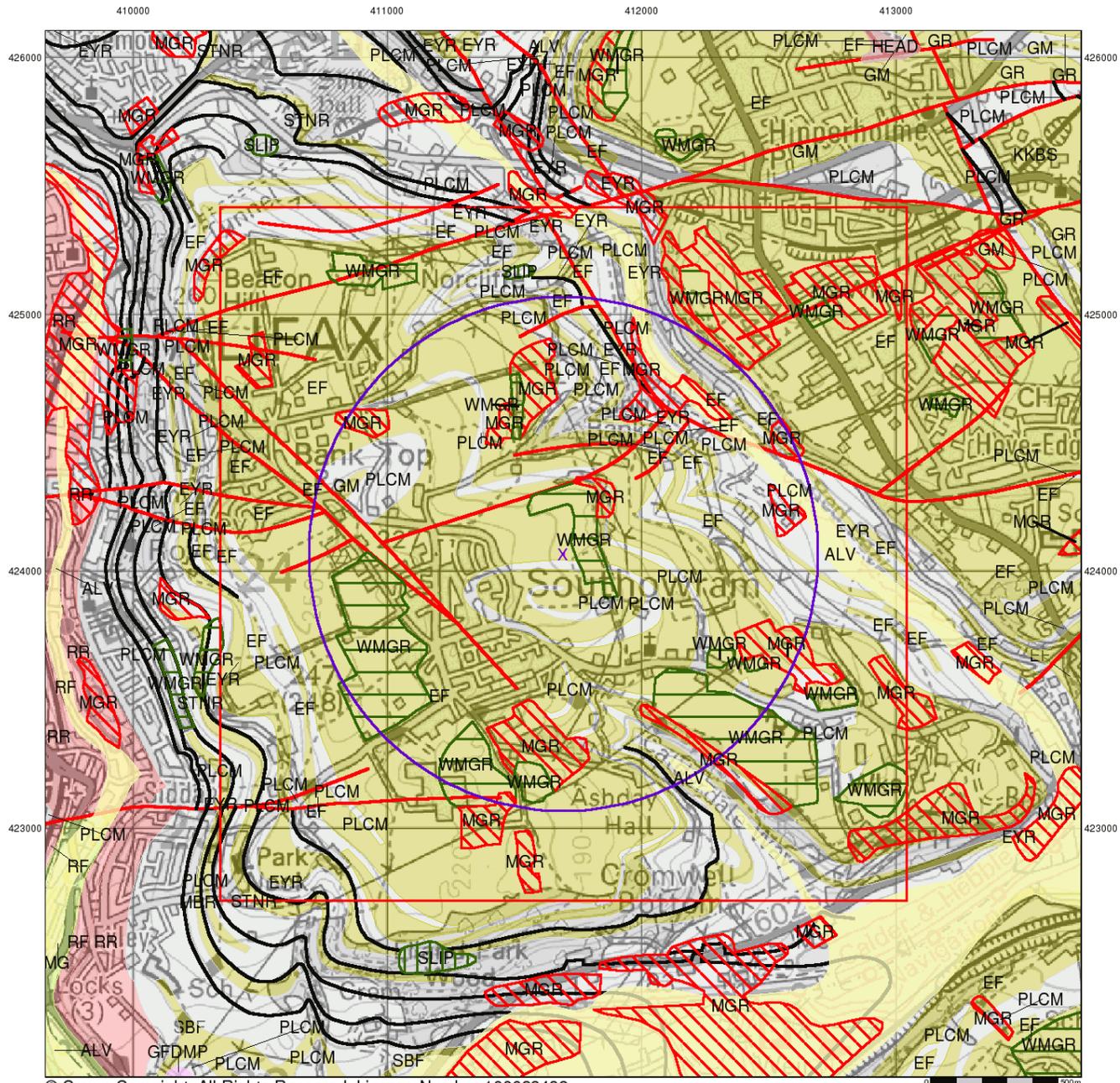
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## Combined Surface Geology

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

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

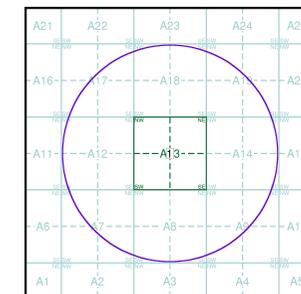
## Additional Information

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

## Contact

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

## Combined Geology Map - Slice A



## Order Details:

Order Number: 280535908\_1\_1  
 Customer Reference: Pasture  
 National Grid Reference: 411690, 424070  
 Slice: A  
 Site Area (Ha): 0.01  
 Search Buffer (m): 1000

## Site Details:

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