

# GEO-ENVIRONMENTAL AUDIT

## PHASE 1 Preliminary Risk Assessment

Proposed Residential Development

Summershades

Oldham Road

Grasscroft

Oldham

OL4 4AJ

Author: Daniel Slattery  
Client: Clive Rainford Homes Ltd  
Reference: rep-tjba-CRH-summershades-Phs1 Env-140823.docx

Revision	Date	Reason
0	Aug 2023	Original to support planning application.

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## 1. PHASE 1 - PRELIMINARY RISK ASSESSMENT

### 1.1. Introduction

T. J. Booth Associates have been appointed by Clive Rainford Homes Ltd to undertake a Phase 1 Geo-environmental Audit & to Summershades, a Site in Grasscroft, Oldham. This report will support a Town & Country Planning permission for a residential end use.

The Site comprises a greenfield plot of land on the north side of the Grasscroft valley, sloping to the south towards Oldham Road, and is heavily vegetated.

It is within a residential area, with residential housing estates to the west and south, and individual executive residential dwellings to the east.

The Site has no recent planning history.

T J Booth associates have been employed to undertake an environmental assessment of the Site and surrounding within the planning regime.

This assessment follows current guidance including a desk-based study & intrusive ground investigation where required, based on current UK guidance for environmental assessment within the construction industry. Principal to the assessment is the potential for contamination pollutant linkages via the CLR-11 source-pathway-receptor methodology. Assessment of potential pollution linkages is primarily undertaken in strict accordance with BS 5930:2015, BS 10175:2011+A2:2017, CIRIA C665 and BS 8485:2015+A1:2019 et al.

### 1.2. Proposed Development

The proposed development is for the construction of 12No. executive residential dwellings which will have gardens and driveways local to the building plots. The dwellings will be served by an access road off Oldham Road which will snake around the dwellings and across the Site to relieve the topography/natural gradient.

Indicative proposals for the dwellings suggest ecologically friendly materials which will help the dwellings blend into the rural & mature vegetated landscape.

The proposed Site Plan indicates an existing area such as a green space corridor in which an existing stream will be kept along with proposals for a wildlife pond which may double up as SUDS compliant attenuation ponds. There are also other existing areas of designated increased vegetation & biodiversity which will be kept within the development.

### 1.3. Historic Maps

DATE	ON-SITE	OFF-SITE/SURROUNDING AREA
c1854	The Site comprises vacant agricultural land. There are small watercourses to the west and east Site boundaries both flowing south. The west watercourse appears to be culverted beneath the southwest part of the Site. Some footpaths noted across the Site.	Oldham Road to the south of the Site.  No particular environmental features within a 250m radius of the Site with only agricultural land surrounding the north, east & west with farm buildings/lanes etc within 100m of the Site boundaries.
c1894	Building & glasshouses noted to the northeast of the Site adjacent to a bowling green, and served by an access road/track from Oldham Road in the position of the existing track on-site. Site named as Summer Shade Gardens  Springs noted within the Site. The two streams/watercourses on the east & west sides appear to be tributaries to Grasscroft Clough.	No change.

c1906	No change.	No change.
c1932	No overall change although there is a relatively small rectangular feature to the northeast corner of the Site.	The beginning of residential dwellings being erected along Oldham Road including those adjacent the southeast side of the Site.
c1938	No change.	Further development along Oldham Road and to the south of the local area, generally comprising residential development.
c1952	Rectangle to the northeast corner of the Site is now noted as a pond which is attached to a drain which runs along the north Site boundary, presumably to catch overland flow from the agricultural land above.	Further development to the south and around the south boundary of the Site.
c1967-78	The Summer Shades Gardens buildings have now been demolished, and the rough outline of the former bowling green survives.  Minor watercourse are now shown within the Site, as well as down only parts of the east & west boundaries.	Much urban infill, especially concerning a residential housing estate bordering the west side of the Site.
c1982-90	No change.	No change.
c1992	Bowling green outline no longer shown. No other changes.	Some further residential development bordering the east side of the Site.

## 1.4. Present Day Maps

Site Boundaries, Outlines of Structures and Buildings:	<p>The current topographic survey indicates a generally steeply inclined Site, falling to the south and comprising heavy vegetation including mature trees.</p> <p>The remains of a benched area are apparent, in the location of the former bowling green.</p> <p>Site boundaries are formed generally by fencing/adjacent gardens, and stone walls to the south boundary.</p>
Ground Contours, Natural Drainage Features:	<p>Ground contours indicate levels around 256maOD to the north boundary, down to approximately 223maOD to the south adjacent Oldham Road. Given the length of the Site, the general gradient is approximately 1:7.</p> <p>Natural drainage is to the south.</p>
Water Courses:	<p>There are semi culverted watercourses flowing through the Site, adjacent to the northwest boundary, and also flowing northwest to southeast through the Site.</p> <p>The surface water system is part of Grasscroft Clough.</p>
Below Ground Obstructions:	Culverts.

## 1.5. Geology

Bedrock Geology:	<p>The Site is underlain by the Marsden Formation, generally larger sandstone units, and interbedded sandstone and mudstone layers.</p> <p>Both subcrop beneath the Site, with a band of Fletcher Bank Grit (sandstone) striking nominally central area.</p>
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	General dip is in the order of 20degrees north.
Superficial Geology:	No drift geology noted in the local area.
Mass movement Deposits:	There are mass movement deposits noted nominally from the east boundary of the Site to the east of the area. The deposits are noted as landslide deposits on the BGS database.
Coal Seams:	The are no coal seams locally noted to underlie the Site at shallow depth.

## 1.6. Boreholes Records

There were no relevant boreholes noted locally.

## 1.7. Planning Data.

No relevant planning data noted historically.

## 1.8. Landmark Environmental Data

### 1.8.1. Agency & Hydrological

Discharge consents:	No records within a 250m radius.
Pollution incidents to controlled waters:	1 records within a 250m radius of the Site. The record related to a Cat 3 Minor Incident nominally 45m south of the Site.
River quality:	N/A.
Substantiated pollution incident register:	N/A.
Water abstractions:	No records within a 250m radius.
Bedrock aquifer:	Secondary A Aquifer.
Superficial aquifer:	None.
Source protection zone:	Not within a Source Protection Zone.

### 1.8.2. Waste

BGS recorded landfill sites:	None noted within a 250m radius.
Historic landfill sites:	None noted within a 250m radius.
Registered landfill sites:	None noted within a 250m radius.

### 1.8.3. Hazardous Substances

Planning hazardous substance consents:	No records within a 250m radius of the Site.
Planning hazardous substance enforcements:	No records within a 250m radius of the Site.

### 1.8.4. Geological

Mining Instability:	Not within a coal mining area.
Potential for Collapsible Ground Stability Hazards:	Very low to no hazard.
Potential for Compressible Ground Stability Hazards:	No hazard.
Potential for Ground Dissolution Stability Hazards:	No hazard.
Potential for Landslide Ground Stability Hazards:	Low to very low risk noted onsite to the north & south, but a moderate potential hazard noted to the east of the Site. High risk noted offsite to the northeast.
Potential for Running Sand Ground Stability Hazards:	No hazard.
Potential for Shrinking or Swelling Clay Ground Stability Hazards:	Very low to no hazard.
Radon Potential - Radon Affected Areas:	The property is both within a lower probability radon area (<1% of homes estimated to be at or above the action level) and an intermediate probability radon area (1-3% at or above the action level).
Radon Potential - Radon Protection Measures:	No radon protection measures are required.

### 1.9. Coal Authority

Mine Shafts, Pits, Adits/Entries:	No coal entries within 20m of the Site boundaries.
Past Recorded Underground Mining.	No recorded workings noted beneath the Site.
Present/Future Underground Mining.	Not known to be a risk.
Unrecorded Probable/Potential Shallow Underground Workings:	No unrecorded probable or potential shallow seams beneath the Site.
Past/Present/Future Surface Mining/Opencast:	None noted locally.
Mining Geology and Subsidence:	Not noted.
Hazards and Mine Gas:	No noted.
Development High Risk Area:	The Site is not within a Development High Risk Area.
Abandonment Plan Data:	No data available.

### 1.10. Industry Profiles

N/A.

### 1.11. Site Reconnaissance

Details of Existing Structures:	The Site was visited on the 17.08.2023. Weather was sunny and dry. The Site was accessed from a ginnel on Summershades Lane.
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	<p>Overall, the Site was heavily vegetated, sometimes prohibitively so especially in the southwest corner. In this area trees were juvenile to mature, with smaller ground shrubbery.</p> <p>The centre of the Site comprised more mature trees, which provided a more even canopy, and thus ground shrubbery was less apparent and the Site easier to navigate. The north part of the Site opens up with less mature trees, and some open areas.</p> <p>Over the whole of the Site, pockets of Himalayan Balsam were recorded.</p> <p>Due to wooded nature of the Site, surface soils were exposed and comprised natural soil generally free from any visual or olfactory evidence of contaminative materials, and in some places clay subsoil was exposed.</p> <p>The only exception to this was around the more formal and historic pathways noted from the bottom entrance of the Site adjacent Oldham Road which comprised gravels mixed into the natural soil, and around the former Summer Shade Gardens house location where some building materials were noted.</p> <p>There was also the area local to the former bowling green which was levelled historically, and exposed sides of the embankment showed gravelly soils.</p>
Adjacent Properties:	The Site was surrounded by residential housing estate properties to the west side, executive residential dwellings to the east, and semidetached residential dwellings to the south along Oldham Road.
Water Levels, Directions of Flow and Rates in Rivers:	<p>There was a network of small natural watercourse features through the Site as follows:</p> <ul style="list-style-type: none"> <li>• A natural channel to the northwest Site corner, with steep banks nominally 3-4m deep to channel invert which became culverted. Feeding into this was also a more recent outlet structure which comprised an approximately 450mm diameter pipe in a concrete wingwall outlet.</li> <li>• There was also a small watercourse/stream channel to the east side of the Site which straddled the eastern Site boundary flowing between the Site and neighbouring land. Ultimately this channel flows back into the Site at the southeast corner and drops into an old stone terminal culvert. Metal protection cages over the culvert protected it from further inspection.</li> <li>• There was also a channel protecting the north Site boundary (within the Site) which was also noted in historic maps, protecting surface water overflowing from the fields higher to the north. The channel flows to the east, and presumably flows into the channel on the east boundary.</li> <li>• There was also another partially culverted channel made up of two branches, one running straight through the Site (north-south), and another which was pipes (150dia) connecting nominally at the Site centre before flowing to the southeast corner and connecting into the terminal culvert noted above.</li> </ul> <p>Finally, a small spring was noted at the south Site footpath entrance, with ground/surface water running out onto the Oldham Road pathway.</p>
Old Mine or Quarry Workings:	None noted.
Obvious/Immediate Hazards to Health/Safety:	None noted.
Areas of Discoloured Soil, Polluted Water, Vegetation, and Significant Odours:	<p>None noted.</p> <p>Soils appeared to be natural and free from visual and olfactory evidence of contamination.</p> <p>The only area where gravelly inclusions were noted in the natural soils were in pathways and around the former dwelling.</p>
Relevant Ground Levels, Ground Water Levels, Positions of Wells and Springs:	The Site slopes to the south with approximately a 1:7 gradient noted from the topographic survey.

## 1.12. Identification of Source-Pathway-Receptor.

The Site was originally agricultural land until between c1890s & the 1960s when a residential house, greenhouses, and a bowling green were noted nominally to the centre east side of the Site.

Through the 20<sup>th</sup> Century, the Site appeared to have been abandoned over time and left to return to a greenfield state with heavy vegetation.

Site reconnaissance revealed little in the way of contaminative materials, although in the location of the former dwelling and the bowling green, there had clearly been some ground disturbance and infilling/levelling, with some minor areas of building materials in and around the ground surface. It is likely that the natural ground was used for reprofiling rather than imported fill, however, there is the possibility that some minor contaminants may have been introduced into this area.

In the wider area, no specific contaminative uses or risks were noted. The wider area is residential to all sides except the north which remains agricultural.

There are no landfill sites in the local area.

Geologically there is no radon bearing stratigraphy, and no shallow coal seams.

The Site is not within a source protection zone or a radon area.

### 1.12.1. Potential Contaminants

CURRENT SOURCE/S	ORIGINAL ASSOCIATED USAGE	CONTAMINANT/S
Made ground (bowling green & former dwelling areas only)	Former infilling/reprofiling.	Metals, PAH, sulphates, inorganics, asbestos.

### 1.12.2. Potential Pathways

PATHWAY	MEDIA
Soil and dust ingestion	Soil and indoor dust
Consumption of home-grown fruit and vegetables	Produce
Skin contact (indoors)	Indoor dust
Skin contact (outdoors)	Soil
Inhalation of dust (indoors)	Air
Inhalation of dust (outdoors)	Air
Vapours (indoors)	Air
Vapours (outdoors)	Air

### 1.12.3. Potential Receptors

Receptors mainly comprise workers in the construction phase, and residents for the proposed end use.



1.13. Preliminary Conceptual Model										
CURRENT SOURCE/S		ORIGINAL ASSOCIATED USAGE / LOCATION	CONTAMINANT TYPE	PATHWAY	RECEPTOR	POLLUTION LINKAGE	CONSEQUENCE	PROBABILITY	RISK	
CHEMICAL (SOLID)	Existing made ground/infilled ground - surface/subsoil.	Site infilling. Hydrocarbon storage tank. Asbestos clad building.	Metals, PAHs, sulphates, asbestos, hydrocarbons.	Direct ingestion, aerial ingestion, dermal contact, drinking water.	Site construction operatives & future occupants. Site buildings.	The Site was historically infilled and is now likely to comprise an unknown thickness of made ground. The made ground and potentially lower horizons have the potential to be contaminated above threshold levels allowed for a residential end use.	Medium.	Low likelihood.	Moderate to low risk.	
GROUND GAS RISK (VAPOURS)	Anthropogenic gas sources/existing made ground/infilled ground - surface/subsoil.	Potential fill or reprofiling is only located to the centre of the Site nominally in the bowling area.  Fill/reprofiled horizon isn't thick and exists above the natural ground surface.	CH4, CO2, other trace gases.	Diffusion through soil, substructures, aerial inhalation.  Difficult/tortuous through soft to firm virgin clay subsoil that covers the local area.	Future occupants. Explosion, suffocation.	Pollutant linkage is considered to be highly unlikely. There is no landfill in the local area, and potential made ground beneath the Site is considered to be an unlikely source of gas.  Further assessment of made ground on Site investigation prior to final consideration of risk.	Medium.	Unlikely.	Low risk.	
	Geological ground gas sources.	Coal mining/seams (shallow).					No mining has occurred at shallow depth and no entries exist at or close to the Site.	Medium.	Unlikely.	Low risk.
		Radon bearing rocks. No credible source				Rn	The Site is within a Class 1 radon area. No protective measures are required.	Medium.	Unlikely.	Low risk.
CHEMICAL (LIQUID)	Existing made ground/infilled ground - surface/subsoil.	Infilled ground in the local area from past historic construction & demolition.  Fuel tanks & spills.	Metals, PAHs, sulphates.  Hydrocarbons.	Permeation through soil.  Difficult/tortuous through soft to firm virgin clay subsoil that covers the local area.	Contaminated ground / surface water. Controlled Waters such as watercourses, canal, aquatic habitats & associated wildlife.	Groundwater is not considered to be at risk from Site soils.  The Site is primarily virgin ground, and if made ground does exist it will be local pockets only.  The Site is also underlain by impermeable geology.  The Site is not in a Source Protection Zone.	Mild.	Unlikely.	Very low risk.	

## 1.14. Site Investigation Strategy

### 1.15. Site & Remedial Objectives

The Site was initially part of agricultural land and later had a residential usage.

Although there hasn't been any contaminative usage on the Site, one potential pollutant linkage was identified in the areas where the former house and bowling green were located, and there is the potential for mildly contaminative materials used in construction. Past construction methods and fill often comprised materials which today are known to cause harm.

As only part of the Site is to be developed (nominally the central portion), this area should be subject to general soil sampling/trial pit investigation to ensure existing site soil is suitable for use, or any potential contaminated material is kept at a suitable depth from future site receptors.

The remainder of the Site is to be left as a wooded area with mature trees and shrubbery providing wildlife and ecology corridors. It isn't likely that any contamination has occurred in these areas.

#### **Ground Contamination.**

Contaminants of concern are:

- Metals
- PAHs
- Inorganics
- Asbestos

BS10175:2011+A1:2013 & R&D TECHNICAL REPORT P5-066/TR considers the upper 500mm is sufficient to categorise the site soils with respect to:

- human/animal intake arising from ingestion and dermal contact
- potential for wind entrainment leading to inhalation (of contaminated soils and dusts)
- or deposition onto neighbouring land
- surface water run-off (e.g. due to flash flooding)
- uptake by shallow rooting plants (e.g. crops, ornamental and wild species)
- surface leaching to groundwater

There is no definitive guidance on the number of samples required for soil representation in current guidance. However, R&D TECHNICAL REPORT P5-066/TR indicates that sample spacing should be between 10-25m for residential applications.

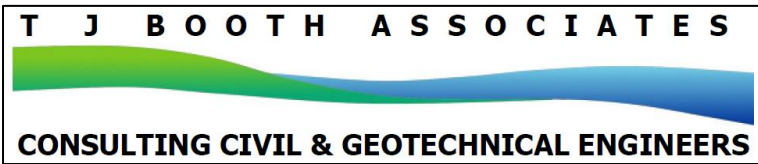
Considering the Site area, nominally 10 soil samples representative of the upper 500mm of existing/made ground would satisfy guidance criteria for sampling.

Soil samples should be tested for the following contaminant suites: metals, speciated PAH, inorganics & sulphates, SOM, and asbestos screening, and analysed against common threshold comparison data, specifically the Defra Category 4 Screening Levels (C4SLs) where available, then to the LQM/ClEH (S4ULs) thereafter.

### 1.16. Additional Notes

**Before any further work is undertaken, this report should be submitted to and agreed by the Local Planning Authority Contaminated Land Department/Building Control Department as necessary.**

We trust that the above clear, but should you require further advice please contact the undersigned.



Signed.....

D S Slattery BSc (Hons).

T J Booth Associates.

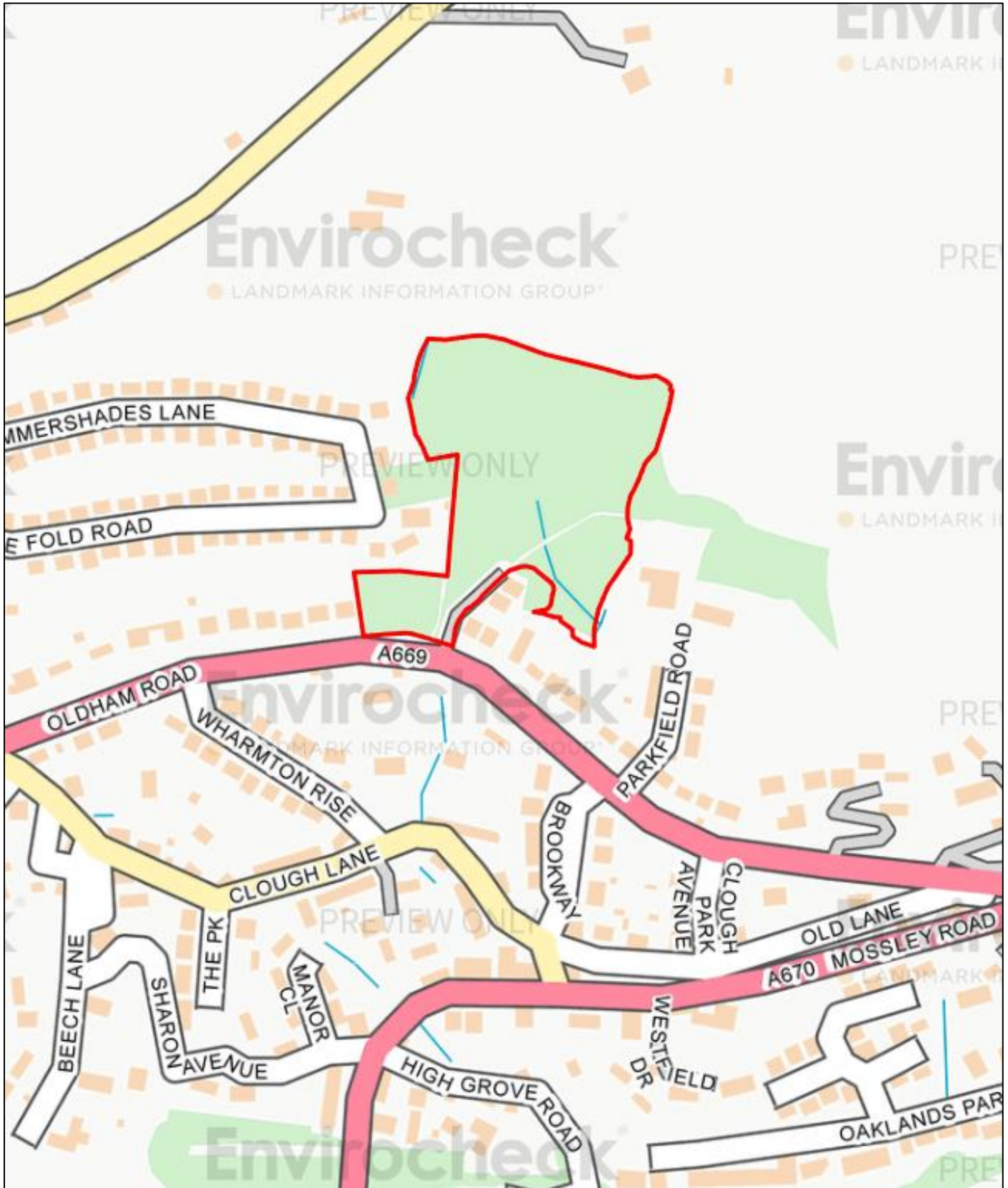
Signed.....

T J Booth BSc (Hons), C. Eng. C. Env. MICE.

T J Booth Associates.

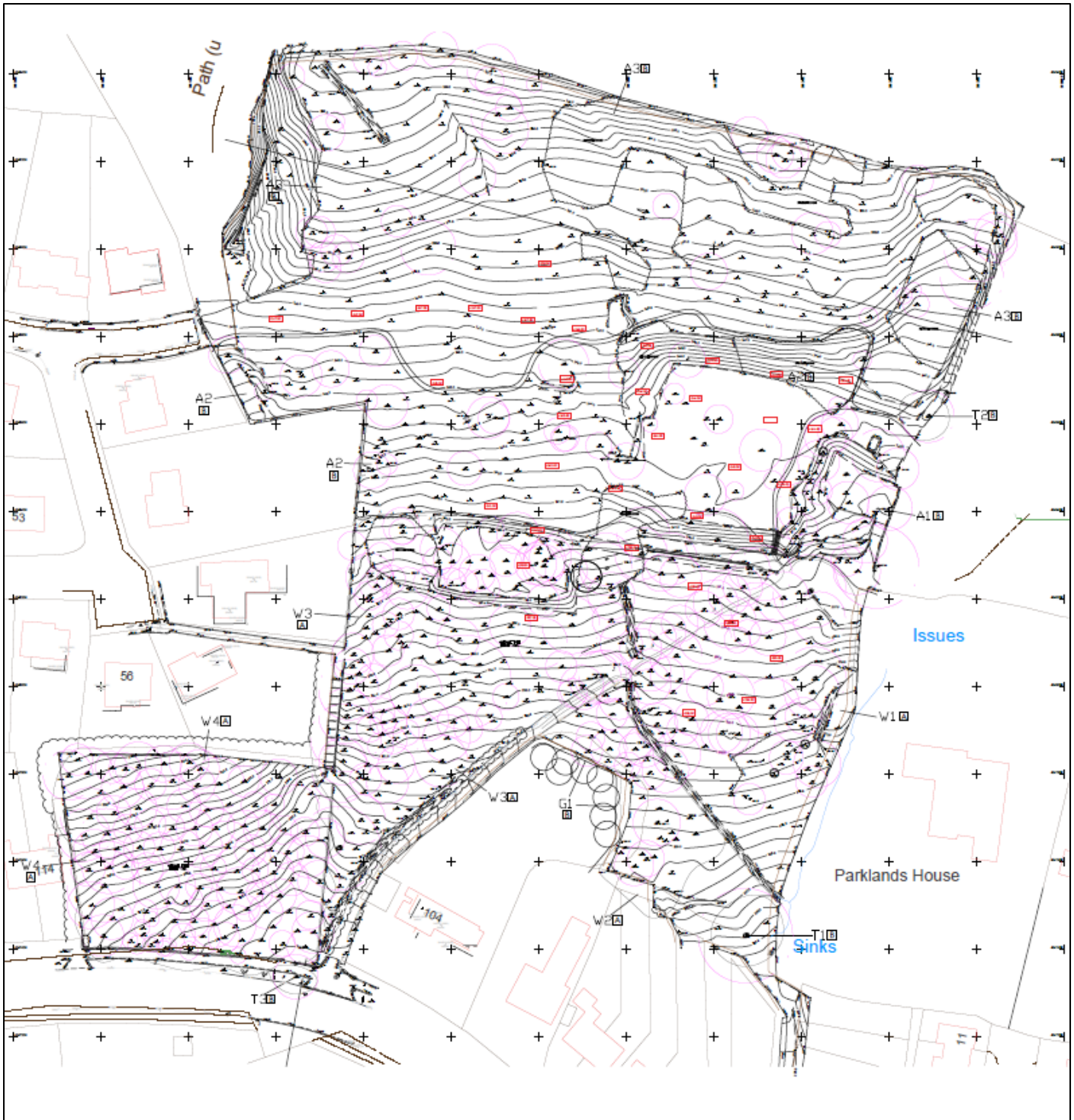
## 2. APPENDIX A: FIGURES

### 2.1. Location Plan





## 2.2. Ex Site Plan/Topographic Survey



## 2.3. Proposed Development



## 2.4. Trial pit and borehole logging (BS5930)

N/A – Phase 1 only. TBC.

## 2.5. TJBA Soil Analysis

N/A – Phase 1 only. TBC.

## 2.6. Envirolab Ltd Certificates

N/A – Phase 1 only. TBC.



### 3. APPENDIX B: PHOTOS



Figure 1 – View of south west Site corner & footpath/newbuild access to right. Himalayan balsam along boundary.



Figure 2 – View of surface water runoff to south boundary. Himalayan balsam noted on left.





Figure 3 – Historic entrance to the Site at the north end of the newbuild private road.



Figure 4 – Old access road through the Site to former dwelling.





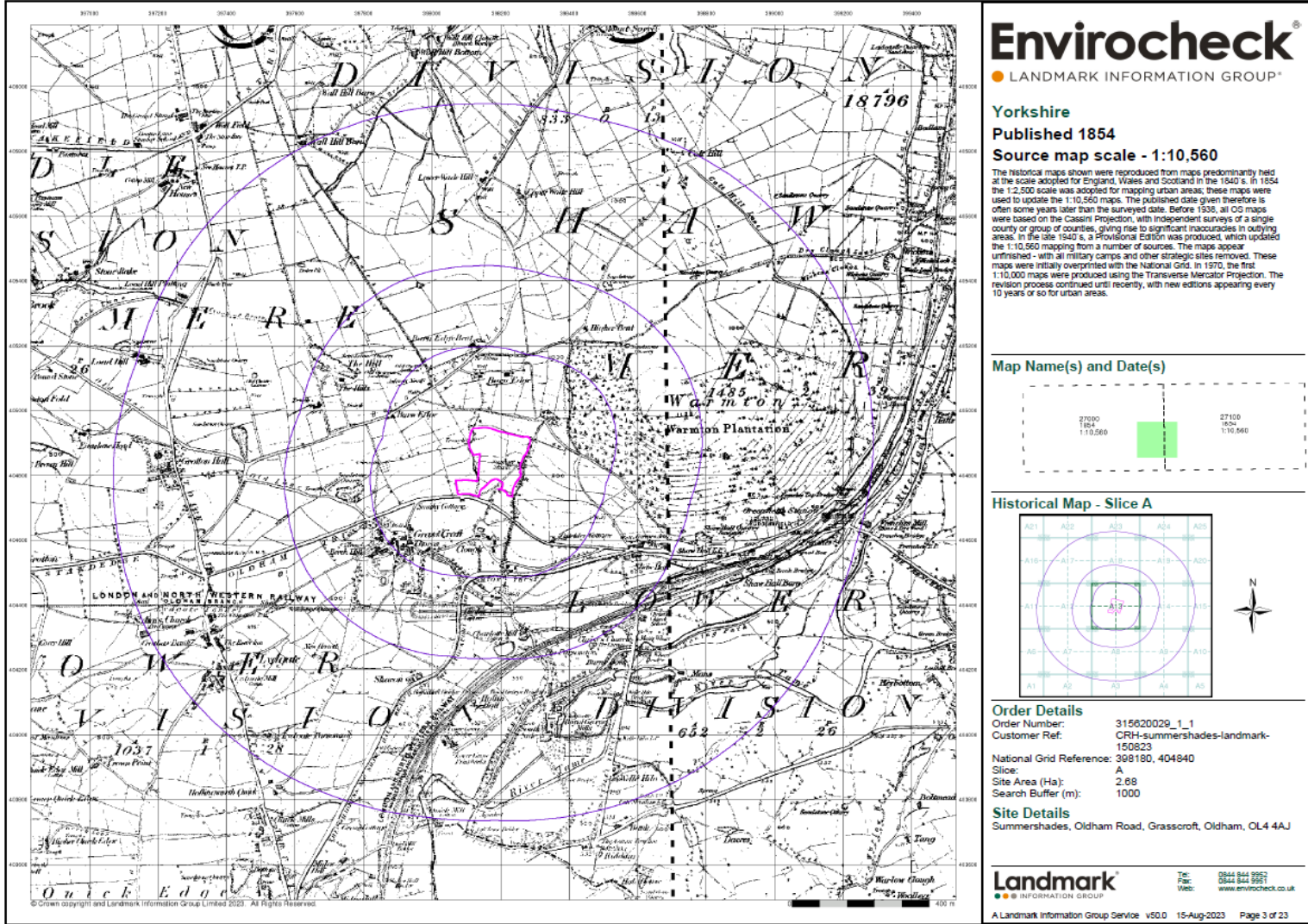
Figure 5 – Drainage ditch with Himalayan Balsam to north Site boundary (view to west).

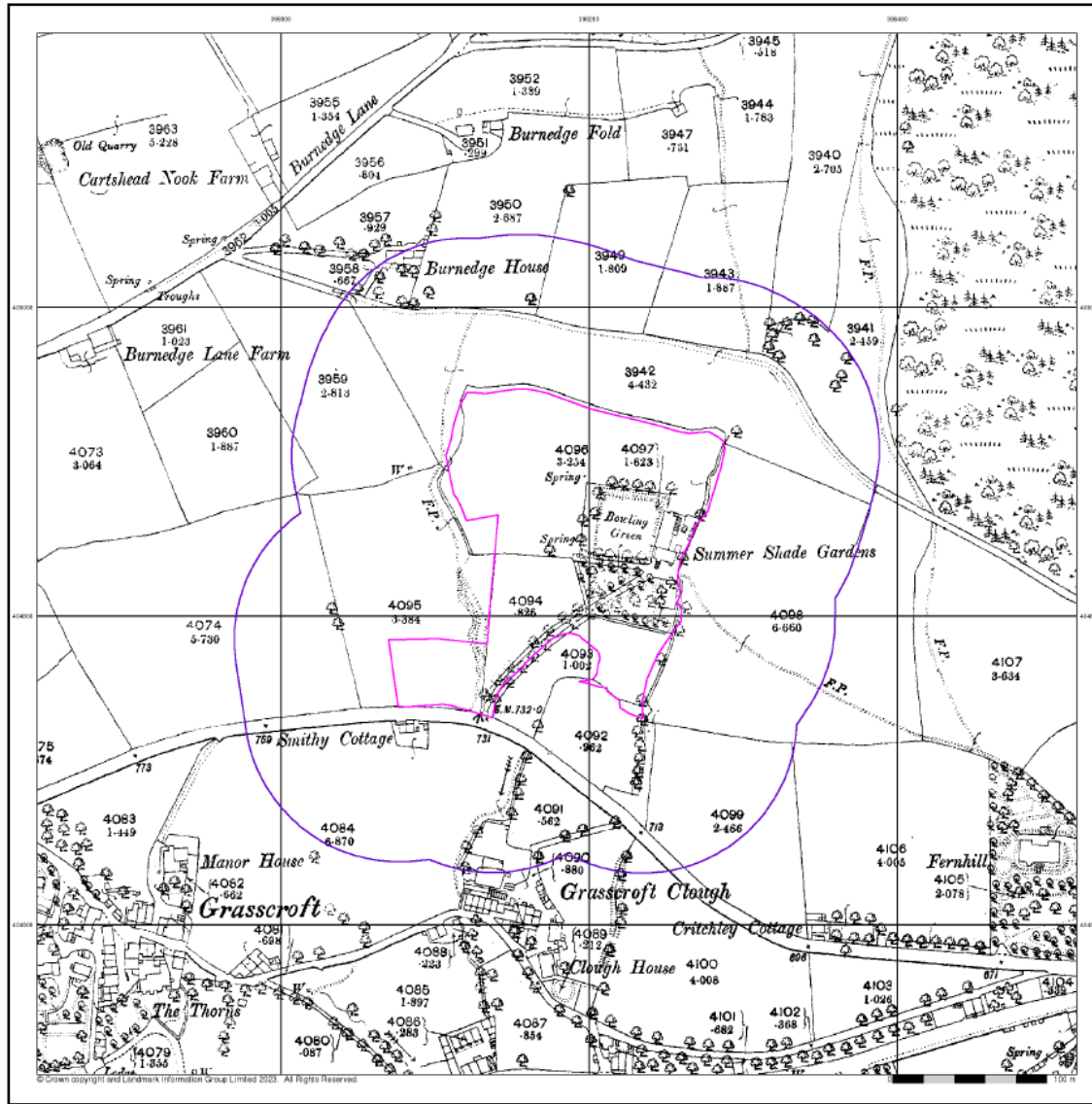


Figure 6 Ultimate Site culvert to the southeast corner.



**4. APPENDIX C: LANDMARK ENVIROCHECK**





**Envirocheck**  
 LANDMARK INFORMATION GROUP

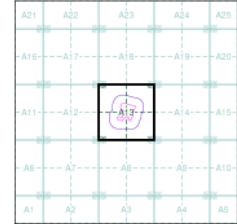
**Yorkshire**  
**Published 1894**  
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the outvoted parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



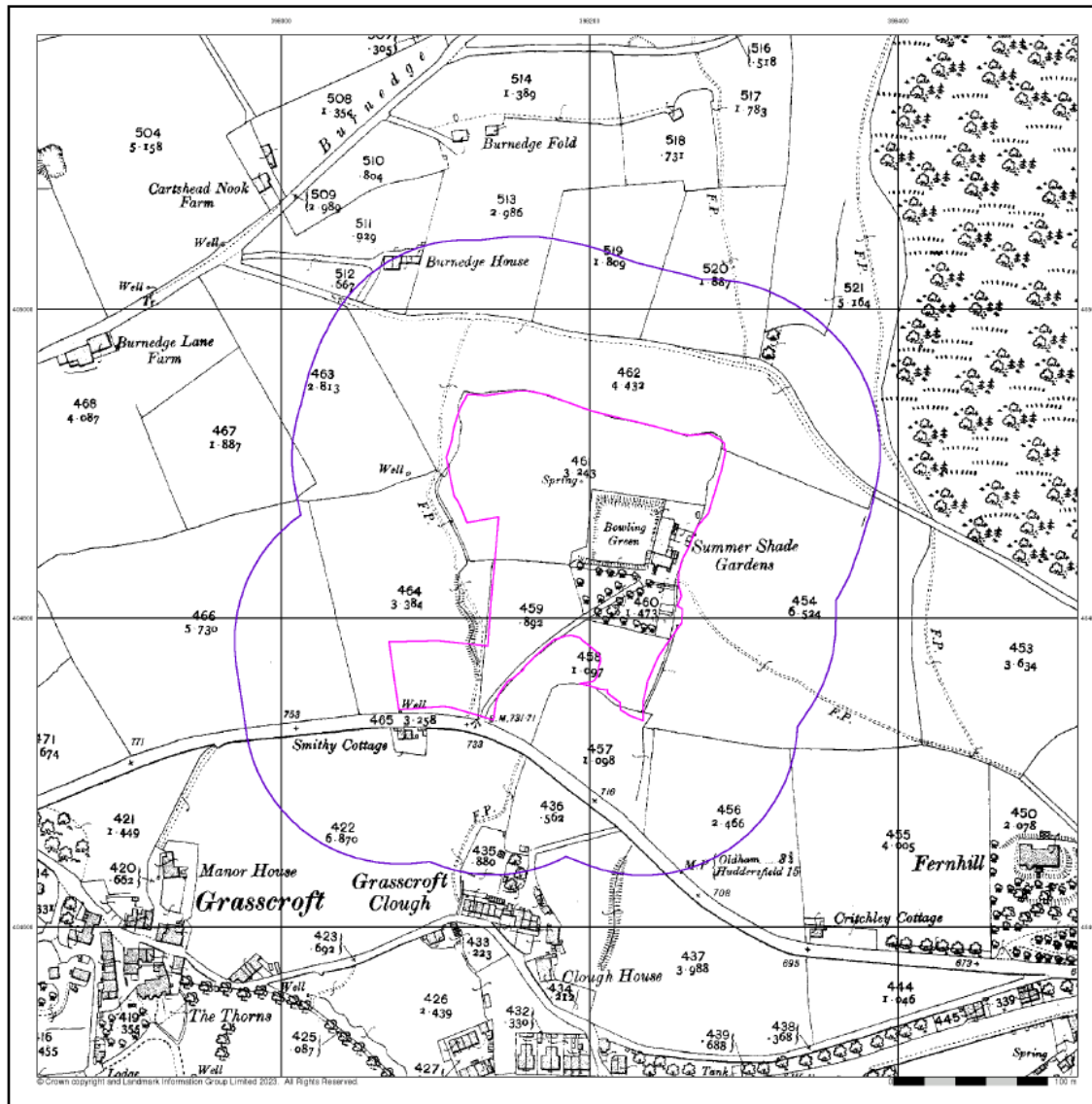
**Historical Map - Segment A13**



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 National Grid Reference: 998180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 100

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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

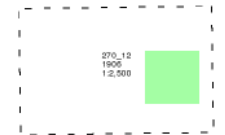


**Envirocheck**  
 LANDMARK INFORMATION GROUP

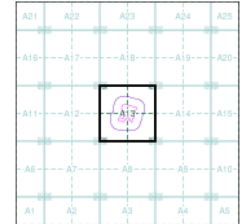
Yorkshire  
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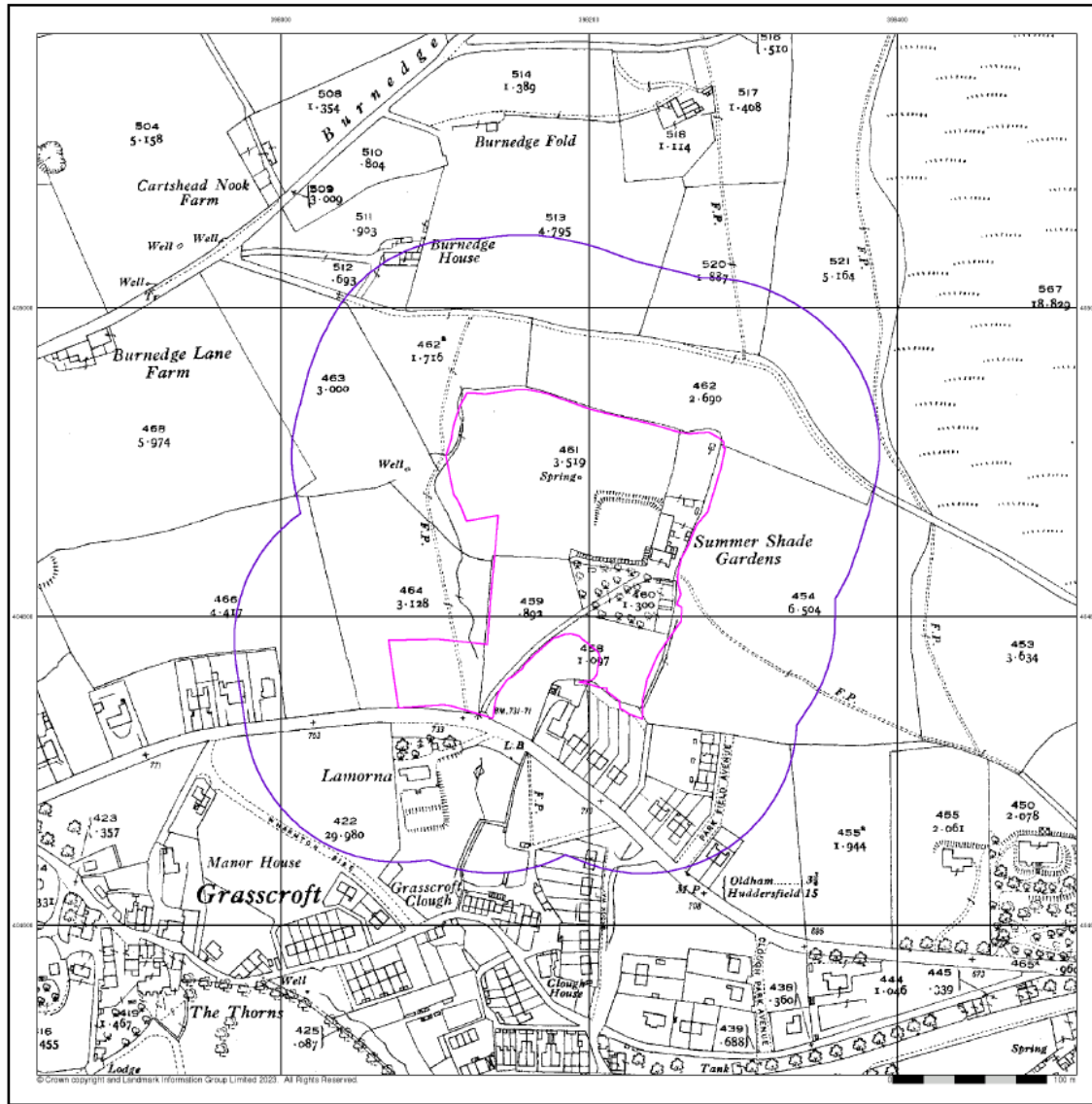
Historical Map - Segment A13



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 National Grid Reference: 398180, 404840  
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 Site Area (Ha): 2.68  
 Search Buffer (m): 100

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ



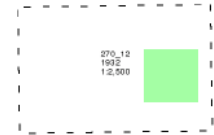


**Envirocheck**  
 LANDMARK INFORMATION GROUP

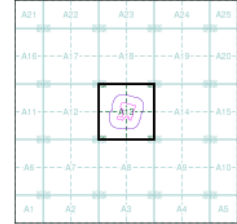
Yorkshire  
 Published 1932  
 Source map scale - 1:2,500

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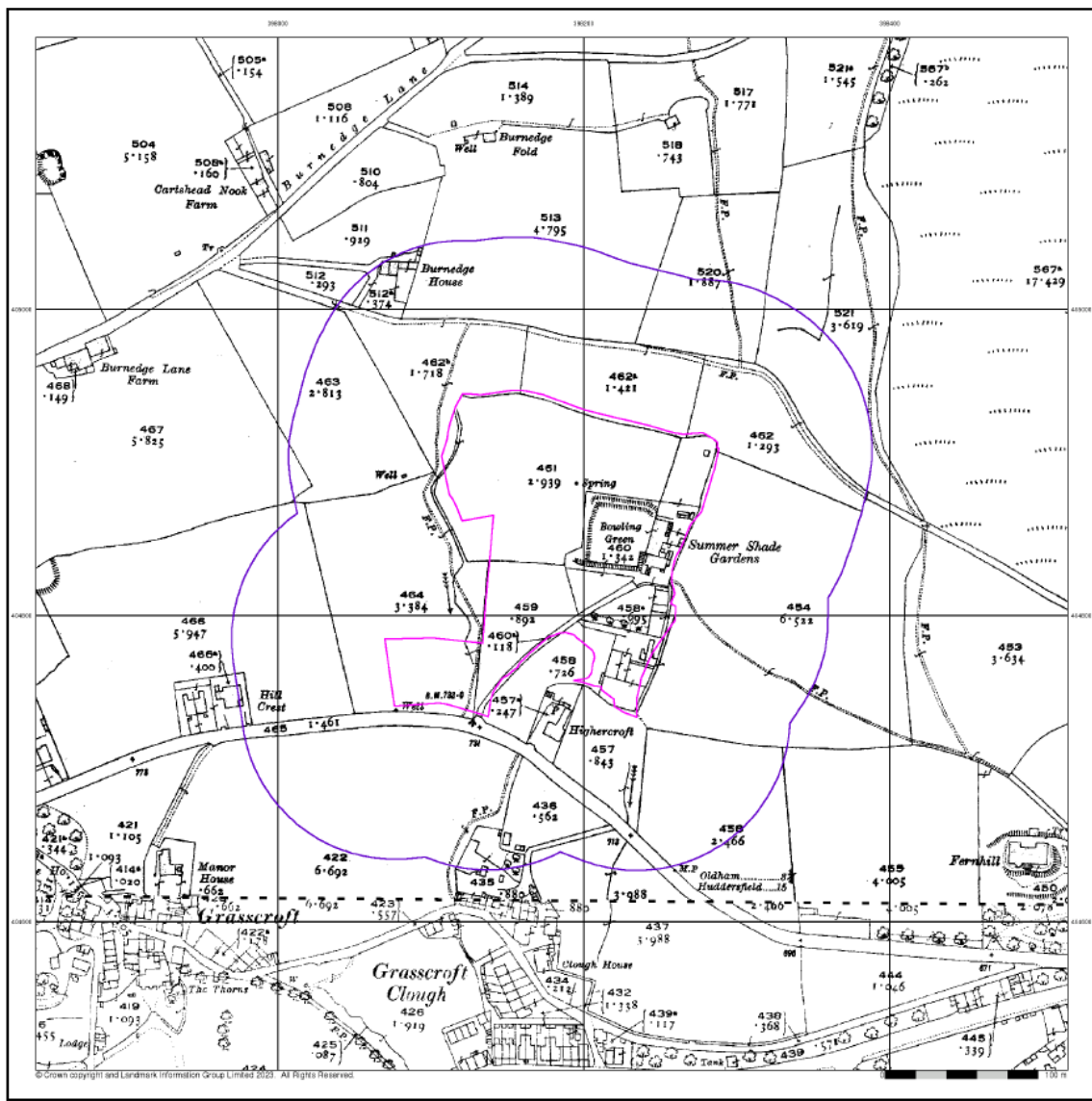
Historical Map - Segment A13



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 Site Area (Ha): 2.68  
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**Landmark**  
 INFORMATION GROUP  
 Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk

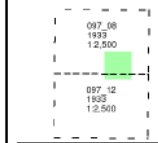


**Envirocheck**  
 LANDMARK INFORMATION GROUP

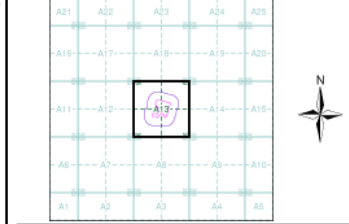
**Lancashire And Furness**  
**Published 1933**  
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1935, all O.G. maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

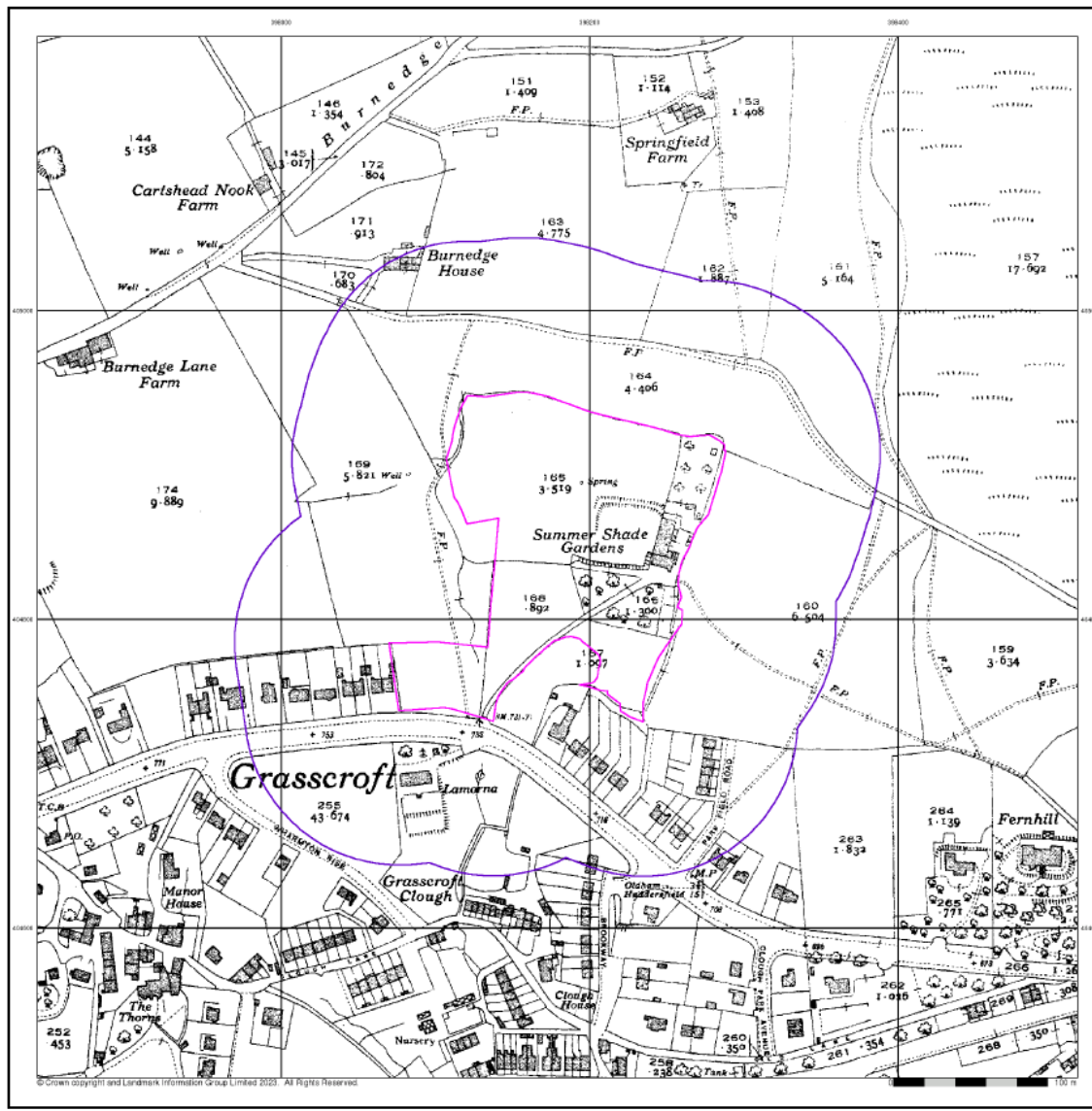


**Order Details**

Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 100

**Site Details**

Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

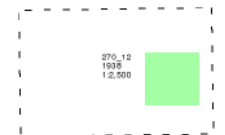


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 LANDMARK INFORMATION GROUP<sup>®</sup>

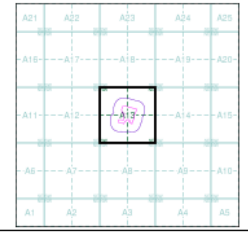
**Yorkshire**  
**Published 1938**  
**Source map scale - 1:2,500**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1864 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1936, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**



**Historical Map - Segment A13**

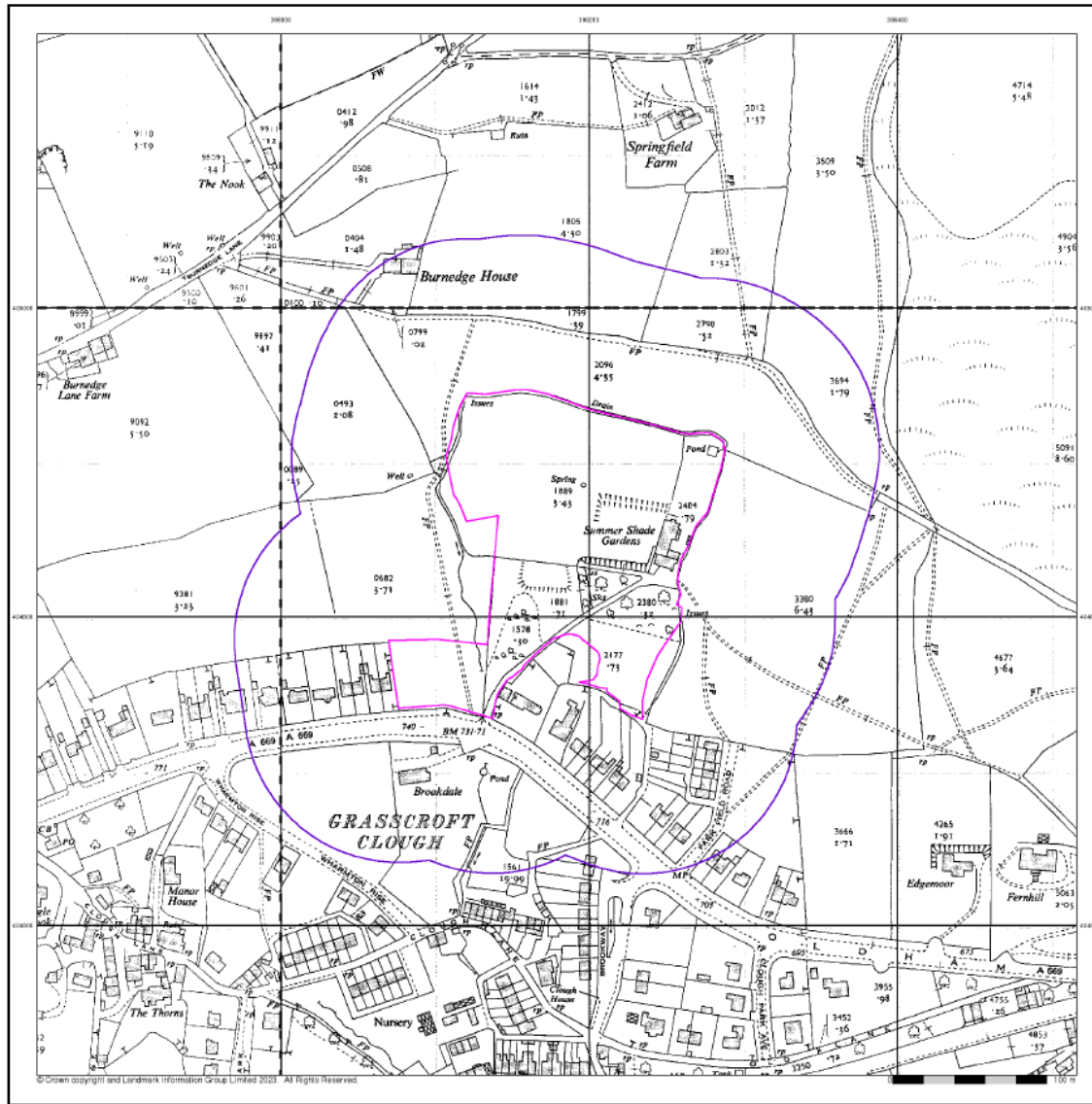


**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 100

**Site Details**  
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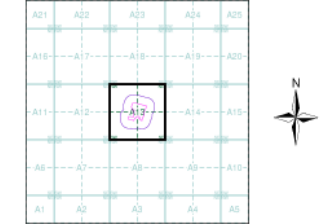
**Ordnance Survey Plan**  
 Published 1952  
 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what was considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**

SD9785 1952 1:2,500	SD9805 1952 1:2,500
SD9784 1952 1:2,500	SD9804 1952 1:2,500

**Historical Map - Segment A13**



**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 100

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ





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**Ordnance Survey Plan**  
 Published 1967 - 1978  
 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

**Map Name(s) and Date(s)**

SD9705 1967 1:2,500	SD9904 1978 1:2,500
---------------------------	---------------------------

**Historical Map - Segment A13**

**Order Details**

Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 100

**Site Details**  
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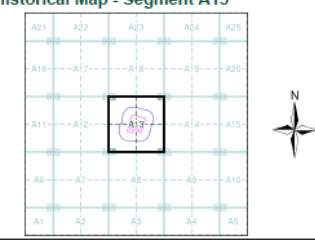
**Additional SIMs**  
 Published 1982 - 1990  
 Source map scale - 1:2,500

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

**Map Name(s) and Date(s)**

SD8805	1982	1:2,500
SD8804	1990	1:2,500

**Historical Map - Segment A13**



**Order Details**

Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 988180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 100

**Site Details**  
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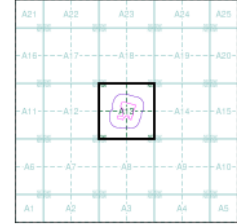
**Large-Scale National Grid Data**  
**Published 1992**  
**Source map scale - 1:2,500**

\*Large Scale National Grid Data superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

**Map Name(s) and Date(s)**

SD9745 1992 1:2,500	SD9825 1992 1:2,500
SD9834 1992 1:2,500	

**Historical Map - Segment A13**



**Order Details**

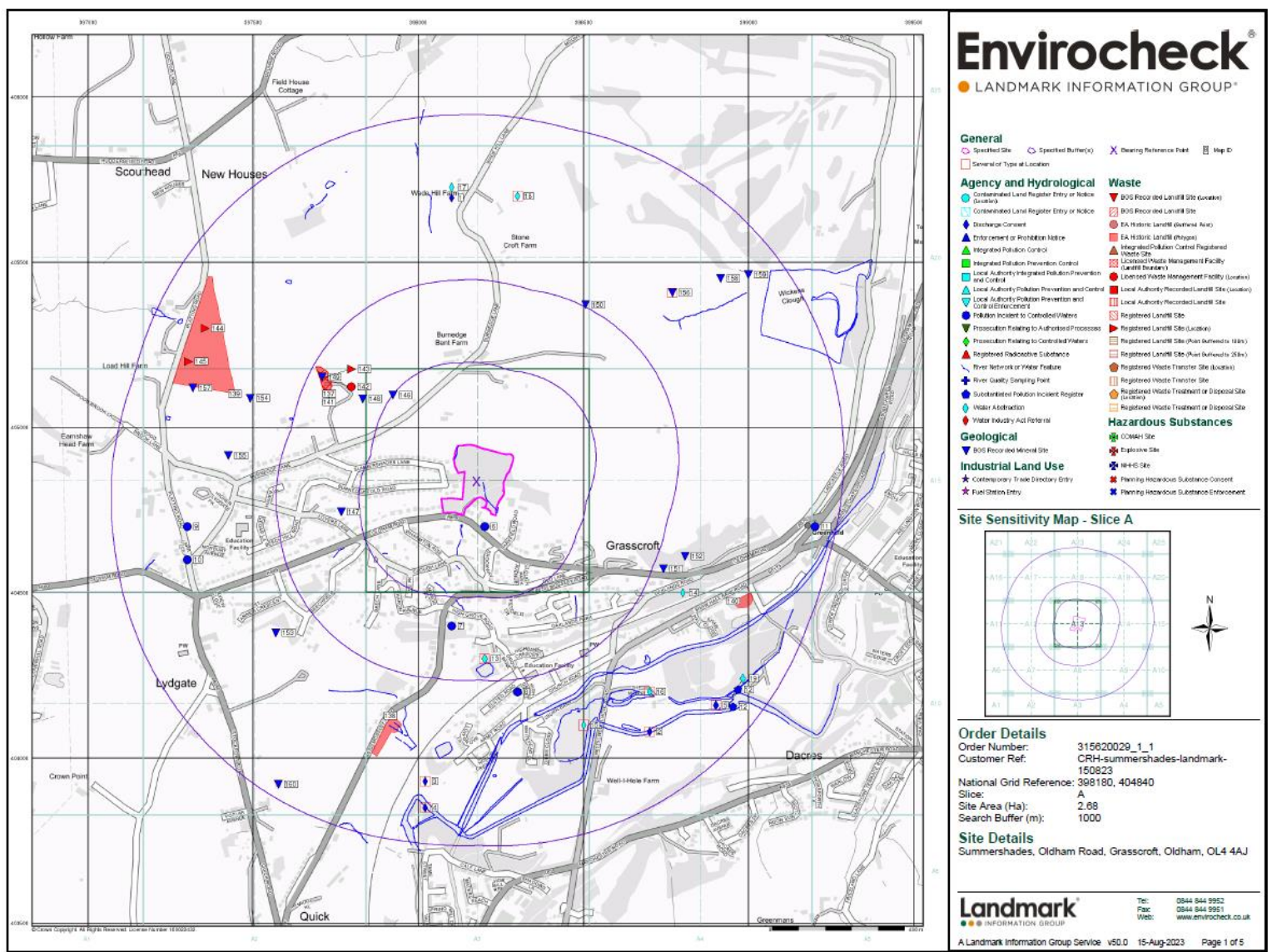
Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 100

**Site Details**

Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

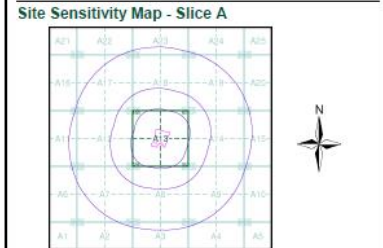
**Landmark**  
 INFORMATION GROUP  
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 Fax: 0544 844 9961  
 Web: www.envirocheck.co.uk





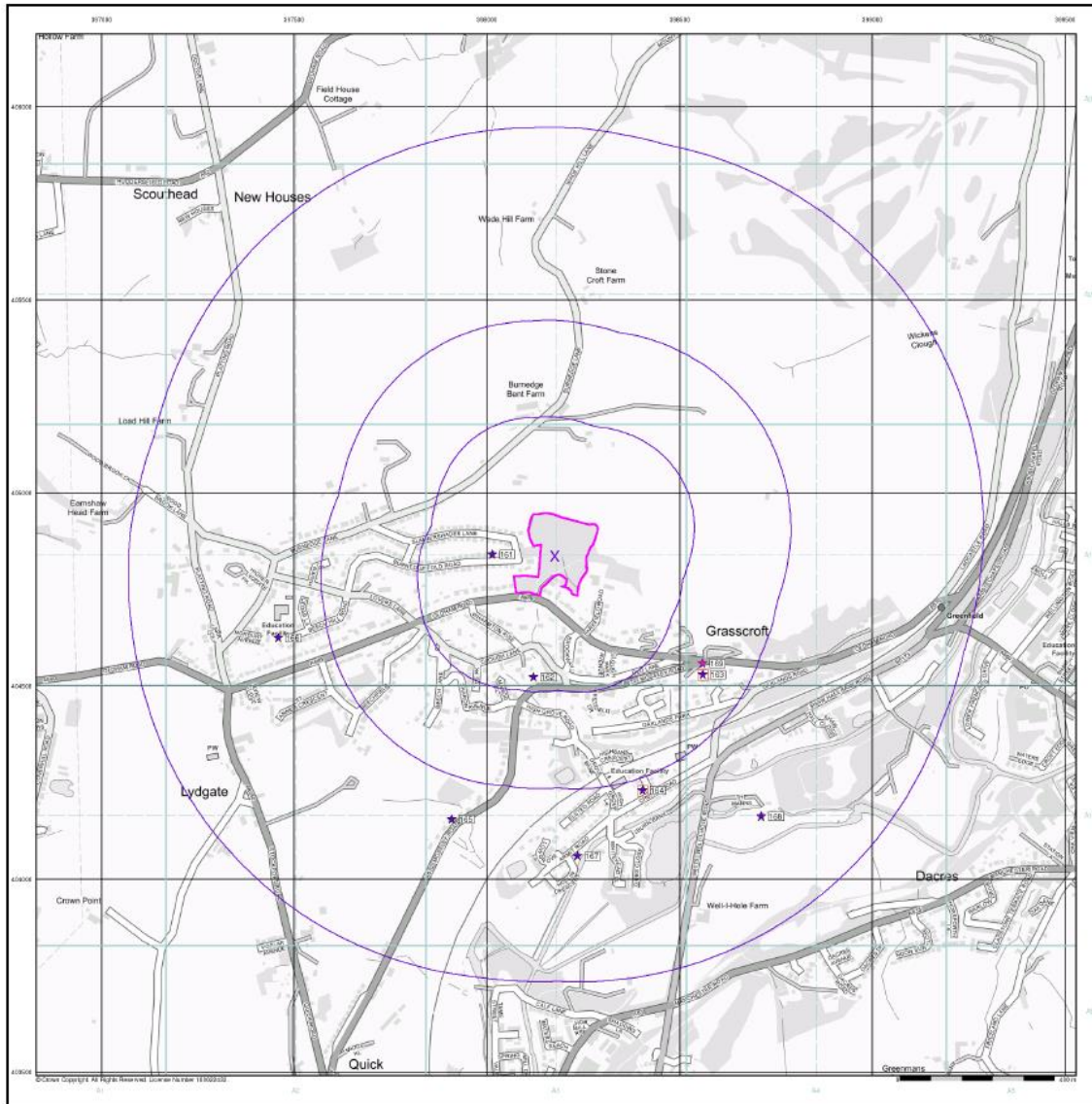
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 LANDMARK INFORMATION GROUP

- General**
- Specified Site
  - Specified Buffer(s)
  - Clearing Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Quality)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention and Control
  - Local Authority (Integrated 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**
- BOD Recorded Landfill Site (Location)
  - BOD Recorded Landfill Site
  - EA Historic Landfill (General Area)
  - EA Historic Landfill (Physical)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (General 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 (Plan boundary - 100m)
  - Registered Landfill Site (Plan boundary - 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site
- Geological**
- BOD Recorded Mineral Site
  - CO2MH Site
  - Explosive Site
  - NI-45 Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Industrial Land Use**
- Continuity Trade Directory Entry
  - Fuel Station Entry



**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ



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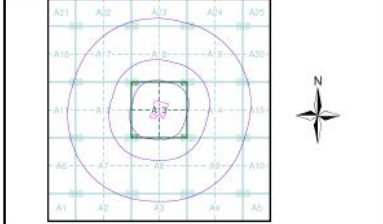
LANDMARK INFORMATION GROUP®

## Industrial Land Use Map

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

- Industrial Land Use**
- Contaminated Trade/Devoid/Duty Entry
  - Fuel Station/Sitely
  - Gas Pipeline
  - Underground Electrical Cables

## Industrial Land Use Map - Slice A

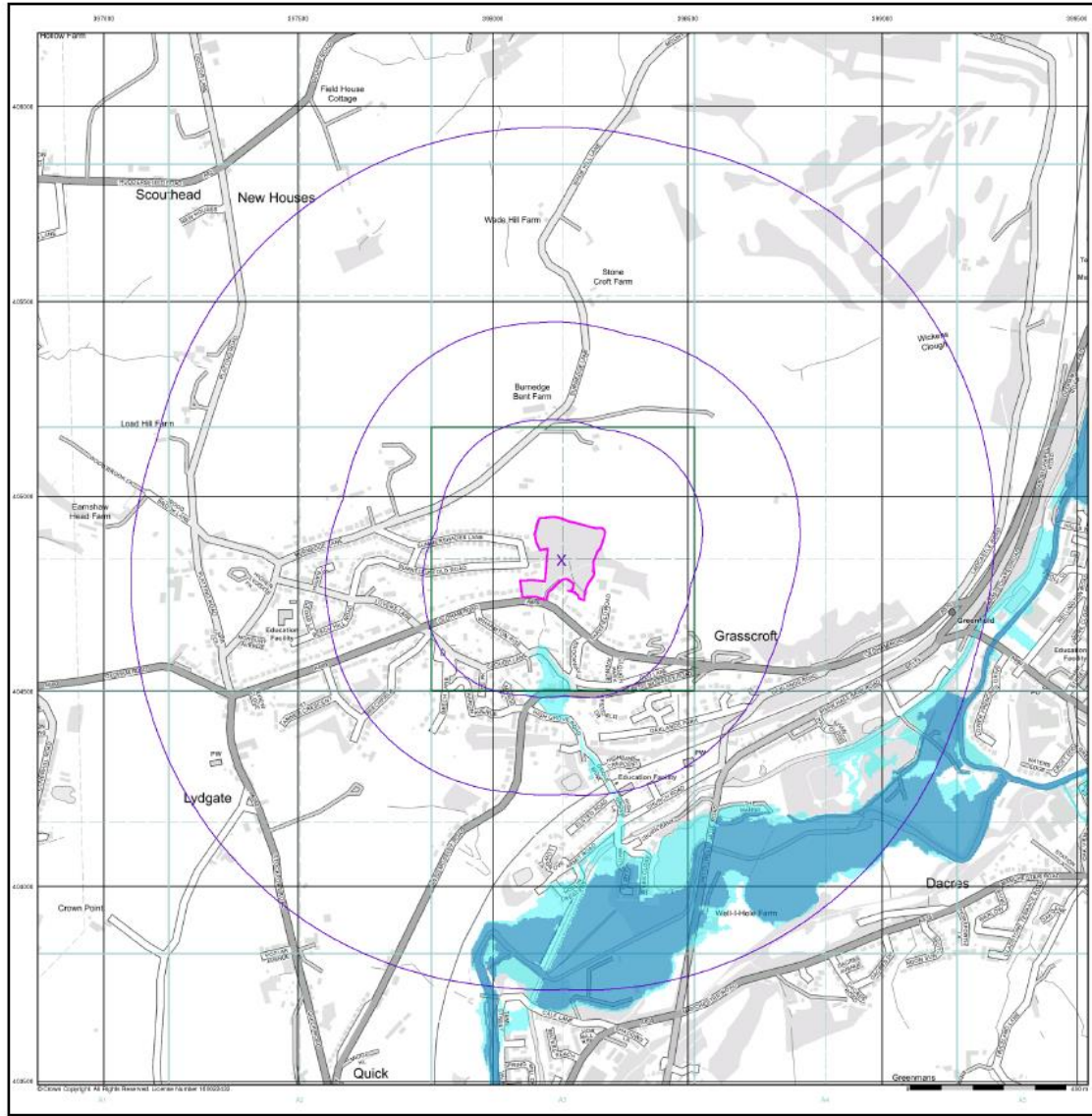


**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.88  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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**General**  
 ○ Specified Site  
 ○ Specified Burial(s)  
 X 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

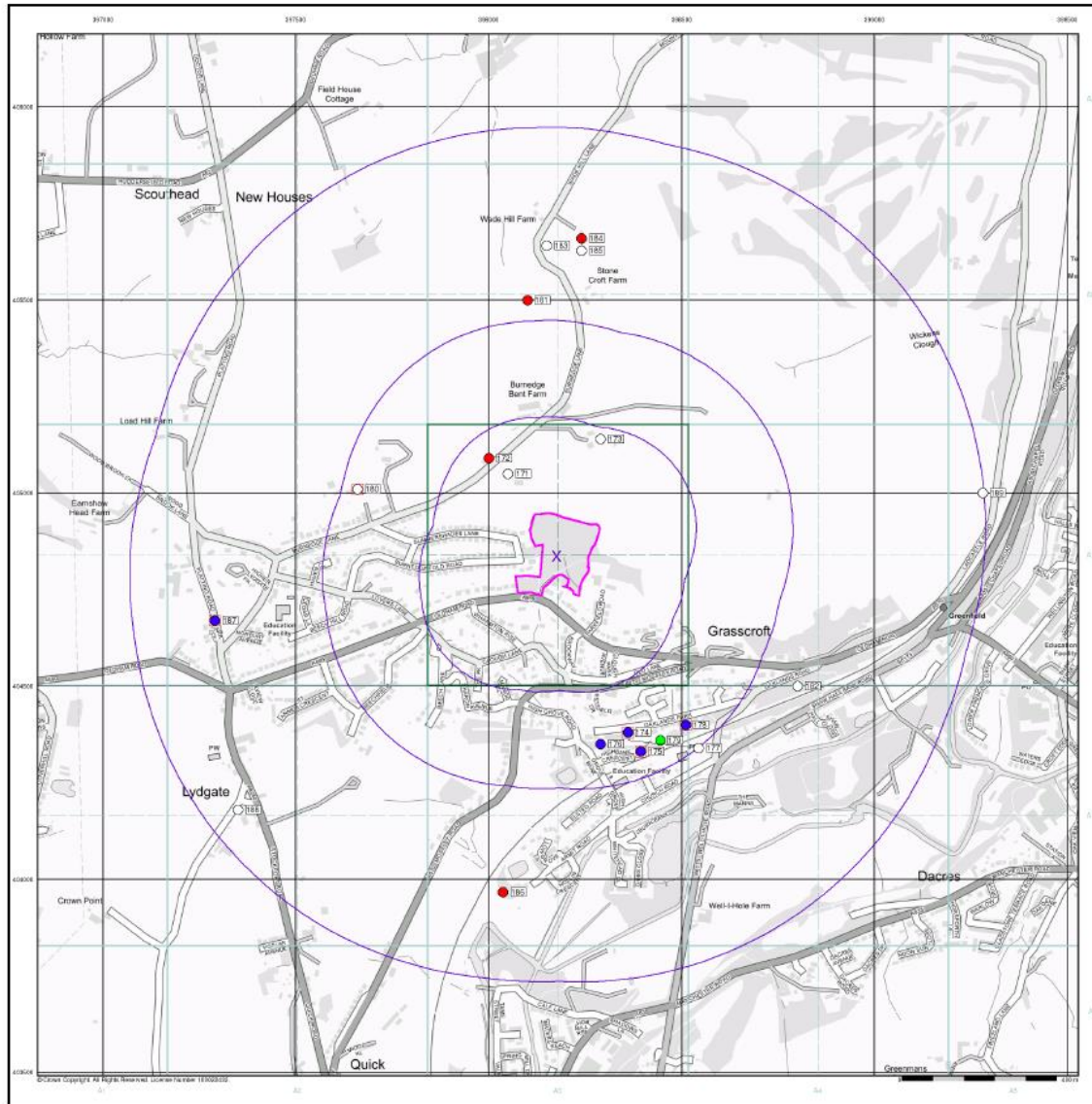
**Flood Map - Slice A**

**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 998180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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# Envirocheck®

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### General

- Specified Site
- Specified Borehole
- X Design Reference Point
- Misc. O
- Several of Type at Location

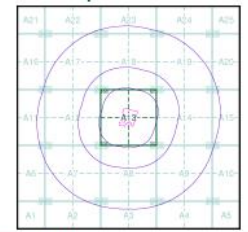
### Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Comberford
- 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: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 308180, 404940  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

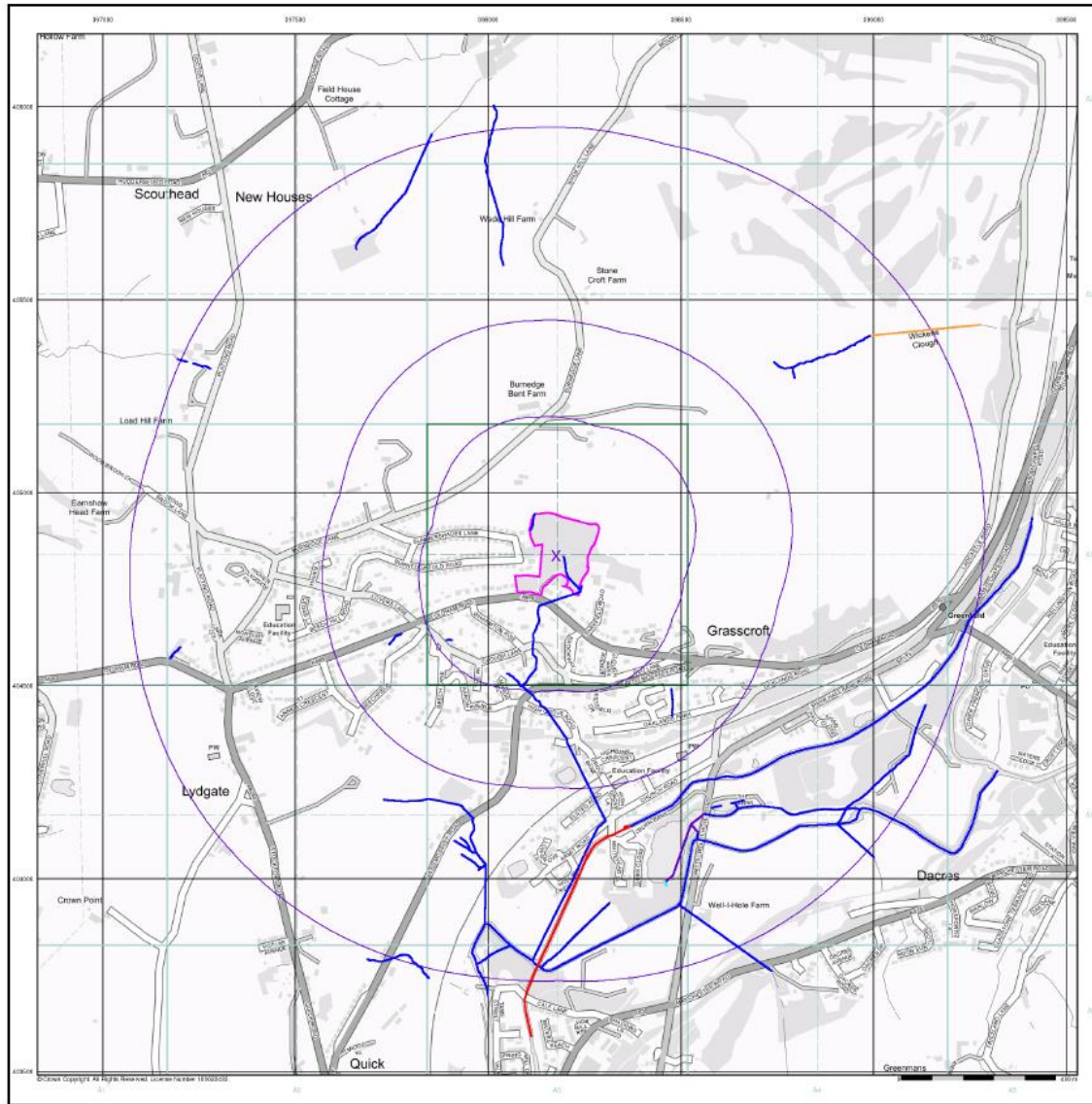
### Site Details

Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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 Fax: 0844 844 9951  
 Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



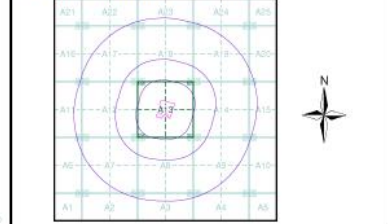


# Envirocheck®

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- General**
- Specified Site
  - Specified Buffer(s)
  - X 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                     |

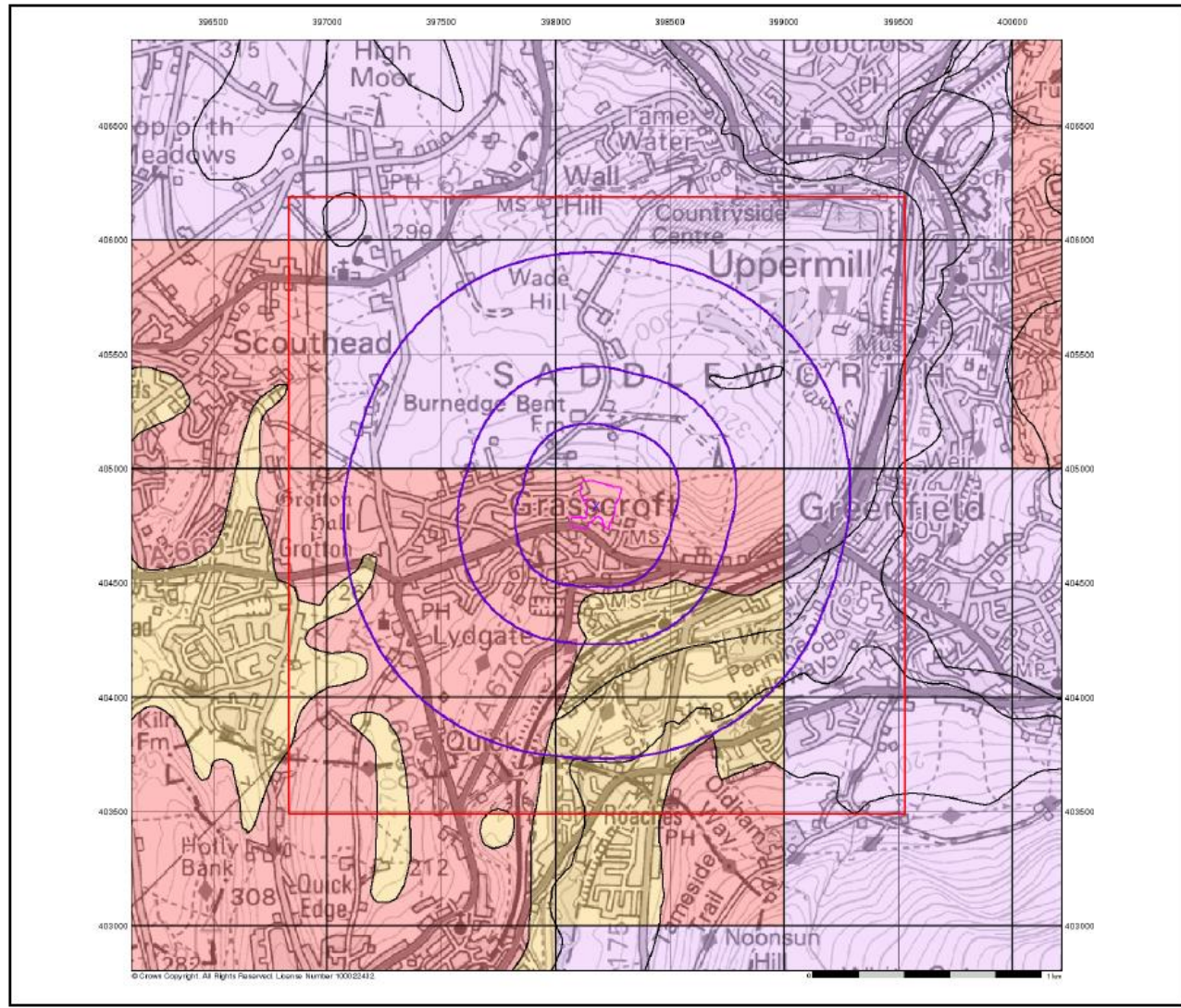
## OS Water Network Map - Slice A



**Order Details**  
 Order Number: 315620020\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ





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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, Secondary Aquifer	High Vulnerability, Principal Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Secondary Aquifer	Low Vulnerability, Principal Aquifer	Low Vulnerability, Secondary Aquifer
Unproductive Aquifer	Soluble Rock		

**Site Sensitivity Context Map - Slice A**

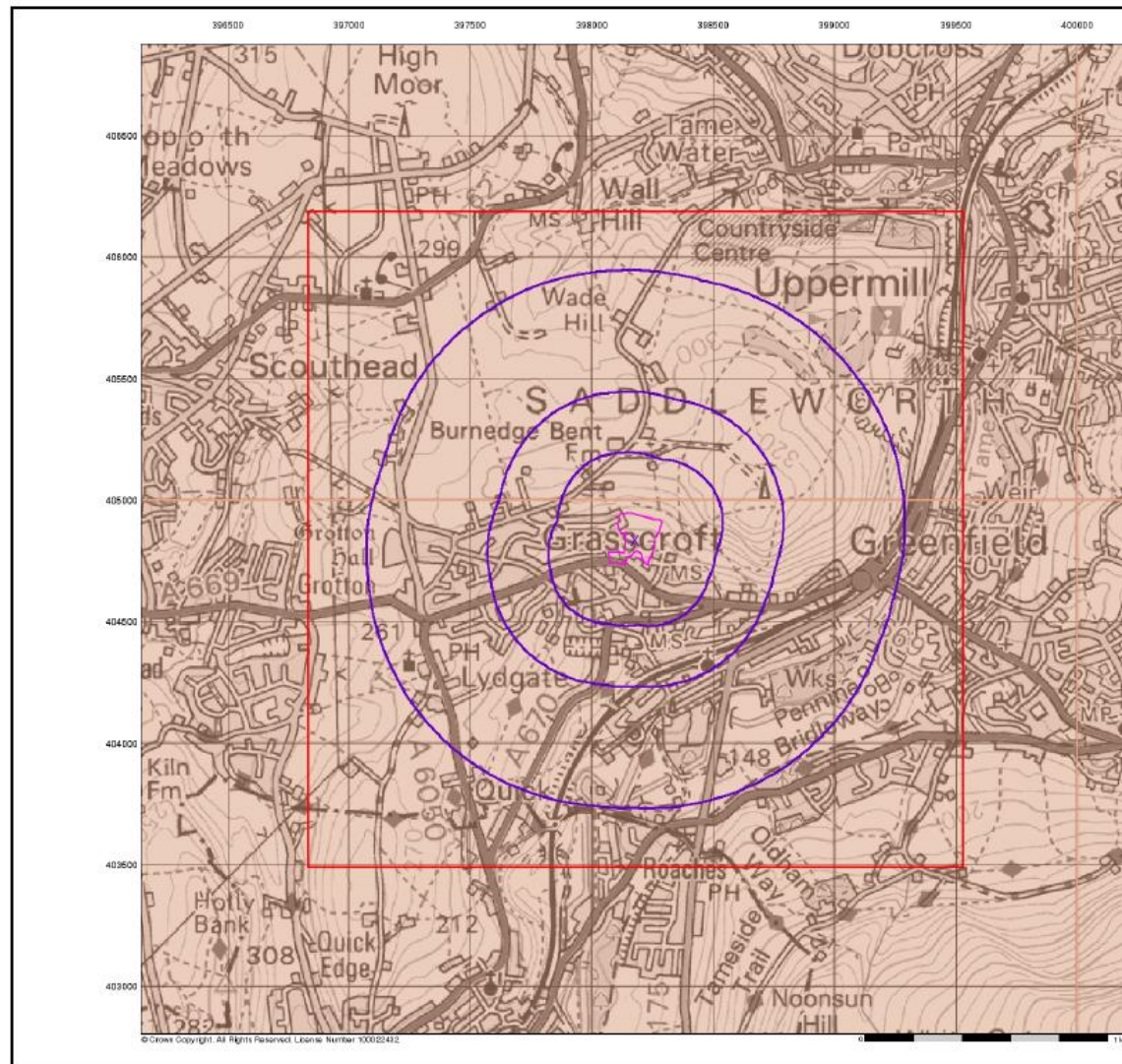
**Order Details**  
 Order Number: 315620029\_1\_1  
 Customer Ref: CRH-summer-shades-landmark-150823  
 National Grid Reference: 396180, 404840  
 Slice: A  
 Site Area (Ha): 2.66  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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**Bedrock Aquifer Designation**

**General**  
 Specified Site, Specified Buffer(s), Draining 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: 315620029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

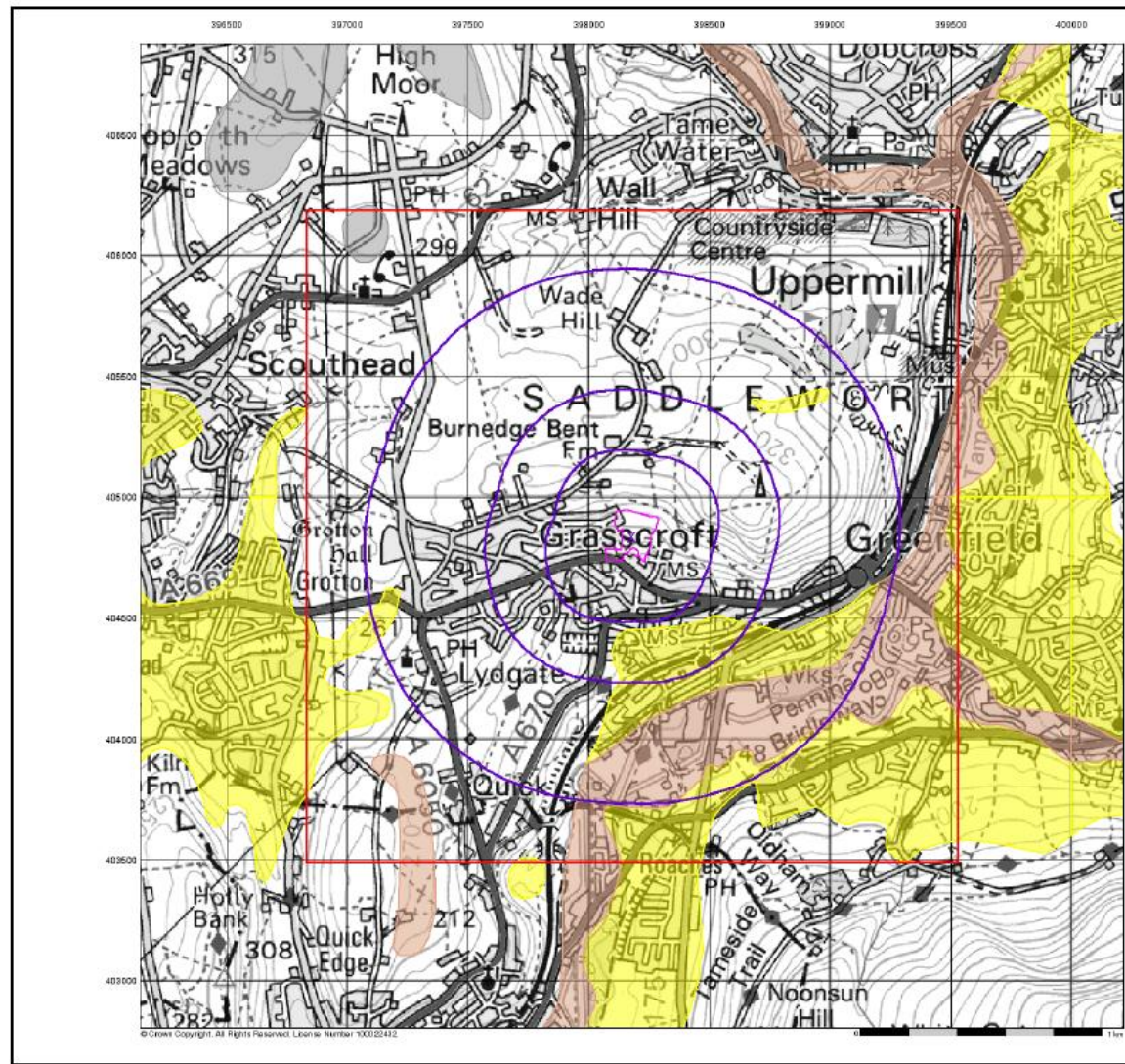
**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AU

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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:	315620029_1_1
Customer Ref:	CRH-summershades-landmark-150823
National Grid Reference:	398180, 404840
Slice:	A
Site Area (Ha):	2.68
Search Buffer (m):	1000

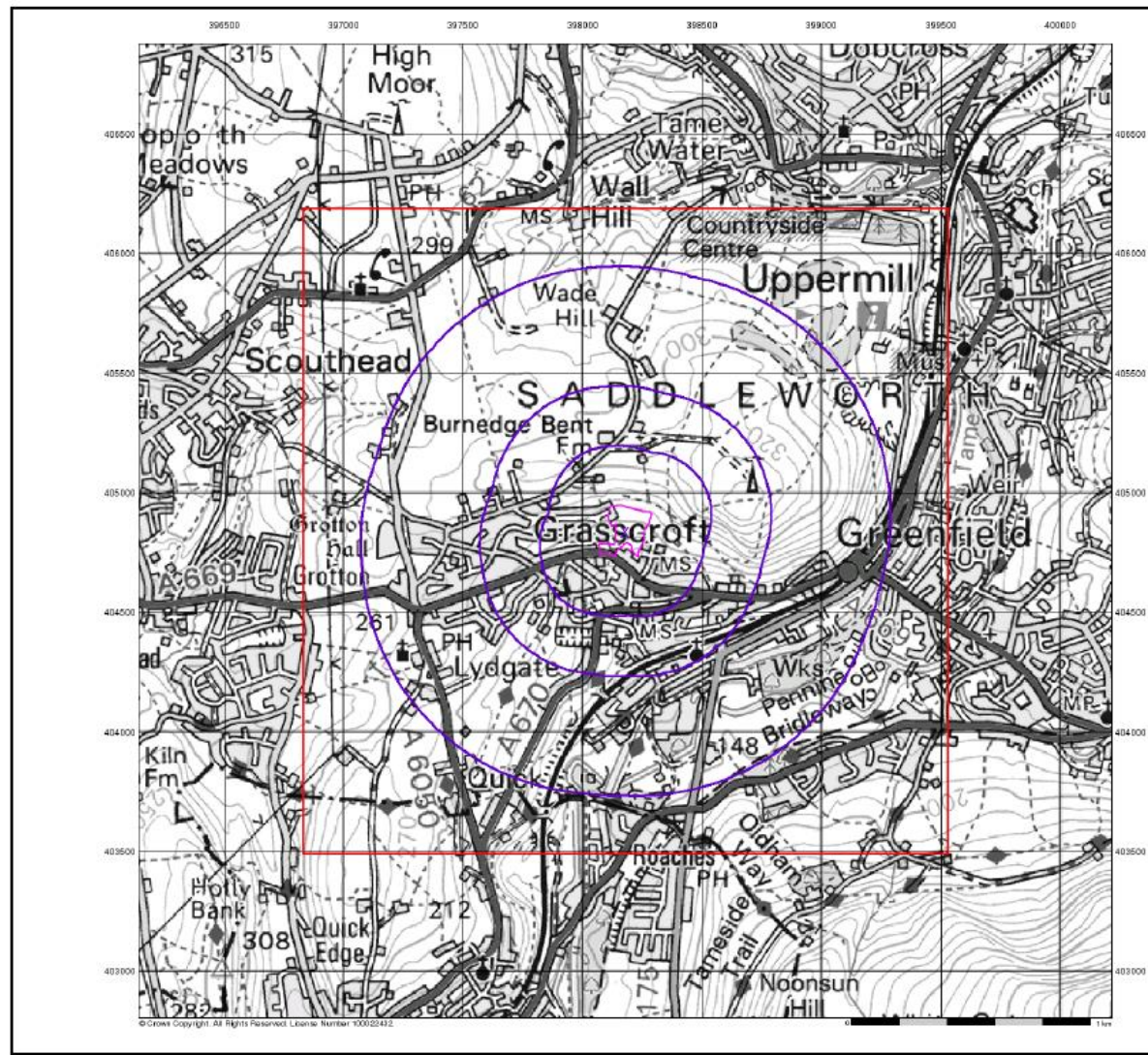
**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

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 Fax: 0844 844 0951  
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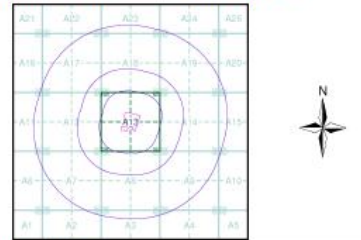
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**Source Protection Zones**

**General**  
 Specified Site (pink circle), Specified Buffer(s) (purple circle), Bearing Reference Point (X), Slice (red rectangle), Wse ID (square with 'W')

**Agency and Hydrological**  
 Inner zone (Zone 1) (red square), Inner zone - subsurface activity only (Zone 1c) (red hatched square), Outer zone (Zone 2) (green square), Outer zone - subsurface activity only (Zone 2c) (green hatched square), Total catchment (Zone 3) (blue square), Total catchment - subsurface activity only (Zone 3c) (blue hatched square), Special interest (Zone 4) (yellow square)

**Site Sensitivity Context Map - Slice A**



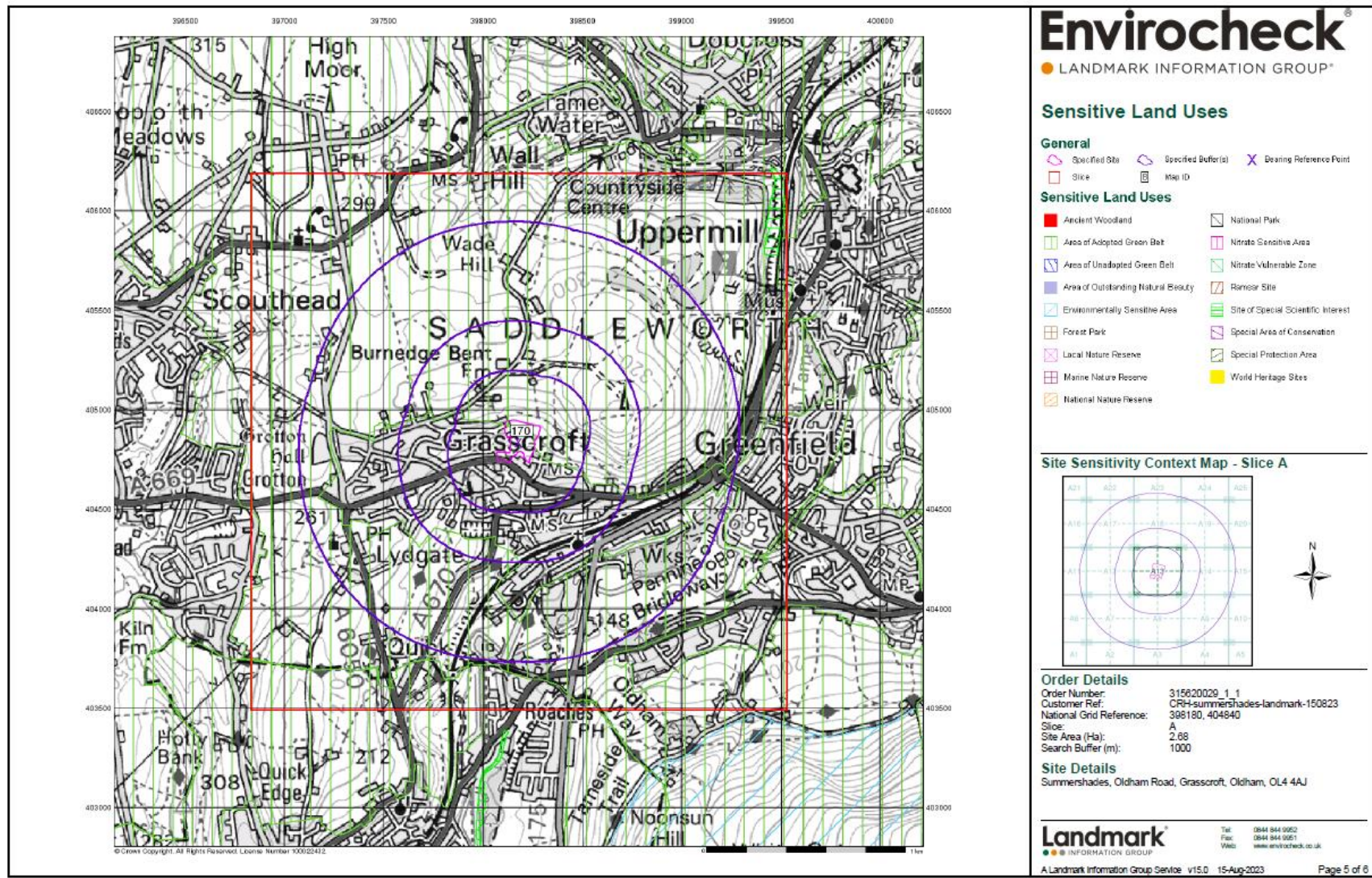
**Order Details**  
 Order Number: 315820029\_1\_1  
 Customer Ref: CRH-summershades-landmark-150823  
 National Grid Reference: 398180, 404840  
 Slice: A  
 Site Area (Ha): 2.68  
 Search Buffer (m): 1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AJ

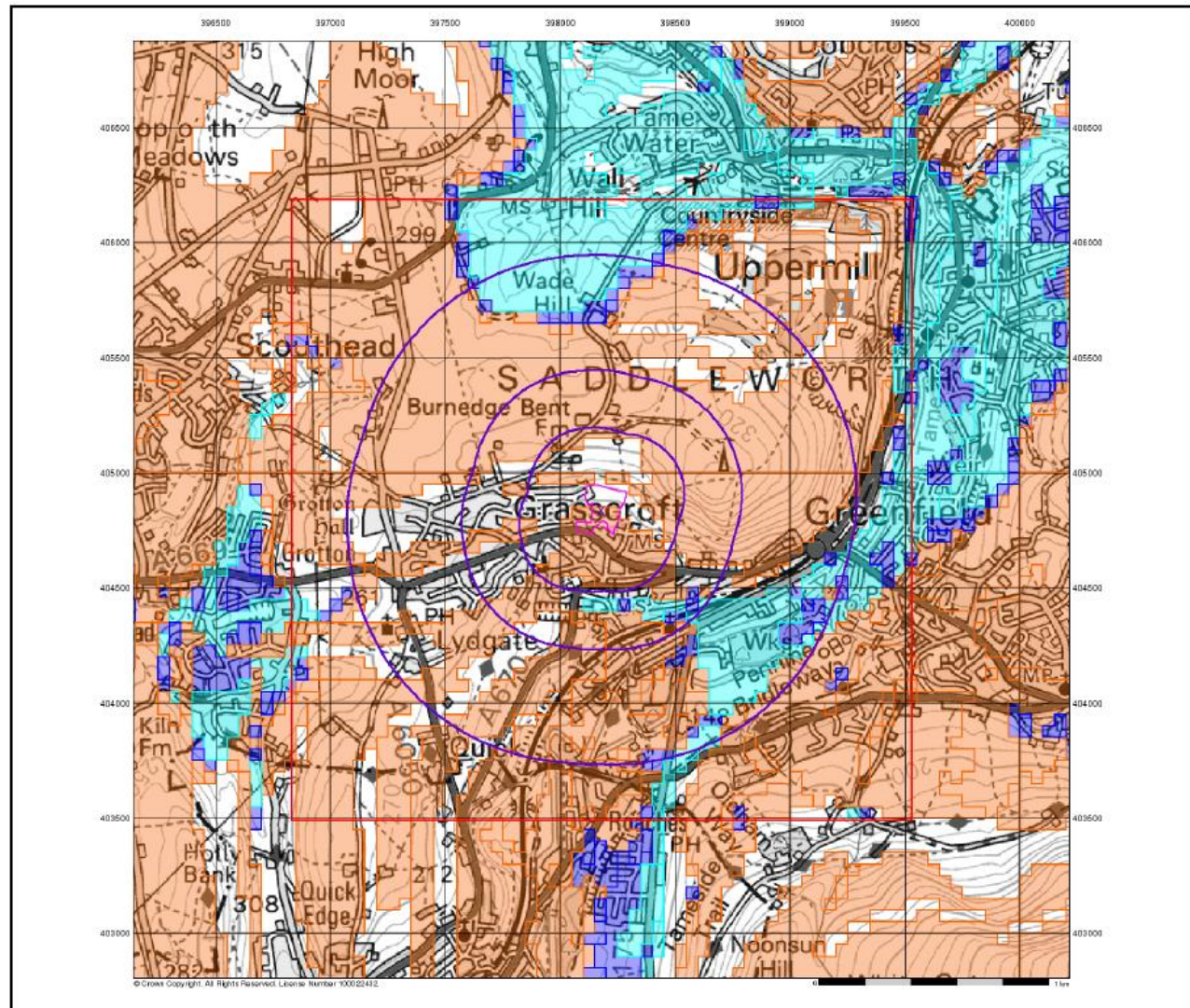
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**BGS Flood GFS Data**

**General**

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

**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:	315620029_1_1
Customer Ref:	CRH-summershades-landmark-150823
National Grid Reference:	398180, 404840
Site:	A
Site Area (Ha):	2.68
Search Buffer (m):	1000

**Site Details**  
 Summershades, Oldham Road, Grasscroft, Oldham, OL4 4AU

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