Earth Environmental & Geotechnical Ltd

334 ASHBOURNE BUSINESS CENTRE LTD,
WELLINGTON ROAD NORTH,
STOCKPORT, SK4 5DA

Groundsure Reference:	GS-4424565
Your Reference:	A0697
Report Date	30 Oct 2017
Report Delivery Method:	Email - pdf

Enviro Insight

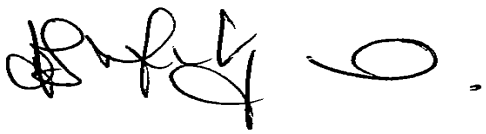
Address: 120, LAUND ROAD, SALENDINE NOOK, HUDDERSFIELD, HD3 3TY

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**120, LAUND ROAD, SALENDINE NOOK, HUDDERSFIELD, HD3 3TY**
Date:	**30 Oct 2017**
Reference:	**GS-4424565**
Client:	**Earth Environmental & Geotechnical Ltd**

NW N NE

W E

SW S SE



Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	410407,418236
Site Size:	0.24ha

Report Reference: GS-4424565
Client Reference: A0697

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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	6	14	9
1.2 Additional Information – Historical Tank Database	0	0	7	3
1.3 Additional Information – Historical Energy Features Database	0	0	7	15
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	4
1.6 Potentially Infilled Land	0	2	14	7

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	0
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	3
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	1	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	1	10
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	1
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	5	8
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	4

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	3	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	No
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	11
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	6
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
6.6 Source Protection Zones (within 500m of the study site)	1	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	1	0	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	0	0	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	3	3	5

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Negligible
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	Yes
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

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

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

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

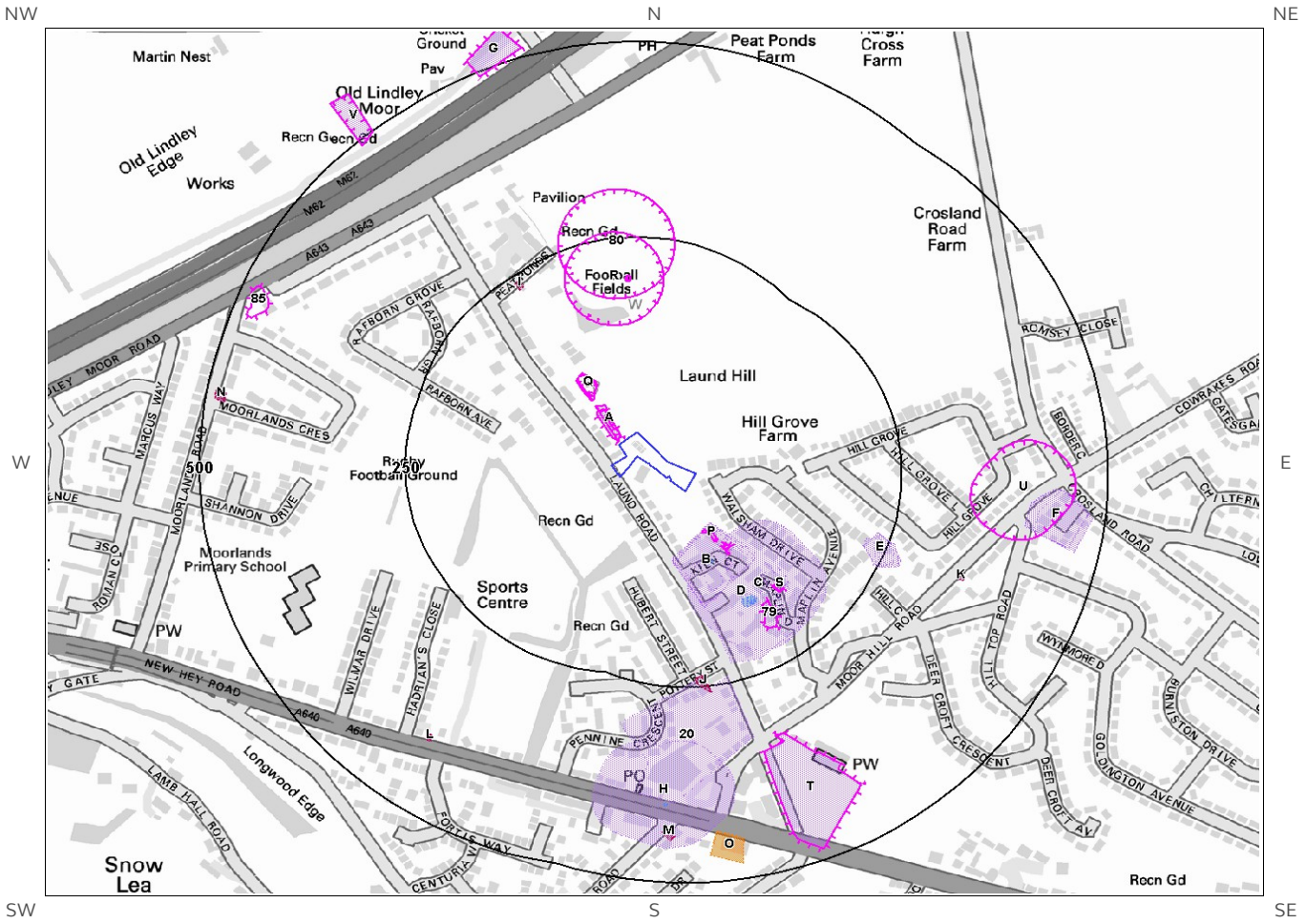
Note: Maps

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

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

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

1. Historical Land Use



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Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 29

ID	Distance [m]	Direction	Use	Date
1A	4	NW	Unspecified Ground Workings	1890
2A	5	NW	Unspecified Ground Workings	1905
3D	48	SE	Pottery	1890
4B	50	SE	Pottery	1956
5B	50	SE	Unspecified Mill	1966
6B	50	SE	Pottery	1938
7B	52	SE	Pottery	1905
8P	53	SE	Unspecified Pit	1890
9B	55	SE	Unspecified Mill	1985
10C	76	SE	Unspecified Works	1966
11B	83	SE	Unspecified Mill	1975
12C	141	SE	Unspecified Mill	1985
13D	150	SE	Unspecified Tank	1956
14D	150	SE	Unspecified Tank	1966
15E	222	SE	Unspecified Old Workhouse	1956
16E	223	SE	Unspecified Old Workhouse	1938
17E	229	E	Unspecified Old Workhouse	1905
18E	229	E	Unspecified Old Workhouse	1948
19E	232	E	Unspecified Old Workhouse	1890
20	241	S	Woollen Works	1890
21H	318	S	Woollen Works	1905
22T	330	S	Burial Ground	1905
23F	404	E	Pumping Station	1948
24F	405	E	Pumping Station	1938
25F	416	E	Unspecified Works	1966
26F	416	E	Unspecified Commercial/Industrial	1975
27V	493	NW	Cuttings	1891
28G	494	NW	Cuttings	1975
29G	494	NW	Cuttings	1985

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 10

ID	Distance (m)	Direction	Use	Date
30B	90	S	Unspecified Tank	1893
31D	153	SE	Unspecified Tank	1893
32D	153	SE	Unspecified Tank	1919
33D	153	SE	Unspecified Tank	1907
34D	153	SE	Unspecified Tank	1933
35C	153	SE	Unspecified Tank	1978
36C	158	SE	Unspecified Tank	1960
37H	399	S	Unspecified Tank	1919
38H	399	S	Unspecified Tank	1907
39H	399	S	Unspecified Tank	1933

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 22

ID	Distance (m)	Direction	Use	Date
40I	231	NW	Electricity Substation	1996
41I	231	NW	Electricity Substation	1993
42J	235	S	Electricity Substation	1996
43J	236	S	Electricity Substation	1975
44J	236	S	Electricity Substation	1969
45J	236	S	Electricity Substation	1989
46J	236	S	Electricity Substation	1987
47K	342	SE	Electricity Substation	1987
48K	343	SE	Electricity Substation	1993
49K	343	E	Electricity Substation	1980
50L	401	SW	Electricity Substation	1975
51L	401	SW	Electricity Substation	1996
52L	402	SW	Electricity Substation	1989
53L	402	SW	Electricity Substation	1987

54M	431	S	Electricity Substation	1969
55M	431	S	Electricity Substation	1996
56M	432	S	Electricity Substation	1975
57M	432	S	Electricity Substation	1989
58M	432	S	Electricity Substation	1987
59N	476	W	Electricity Substation	1975
60N	476	W	Electricity Substation	1973
61N	477	W	Electricity Substation	1984

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 4

ID	Distance (m)	Direction	Use	Date
62O	436	S	Garage	1969
63O	436	S	Garage	1975
64O	436	S	Garage	1987
65O	436	S	Garage	1989

1.6 Potentially Infilled Land

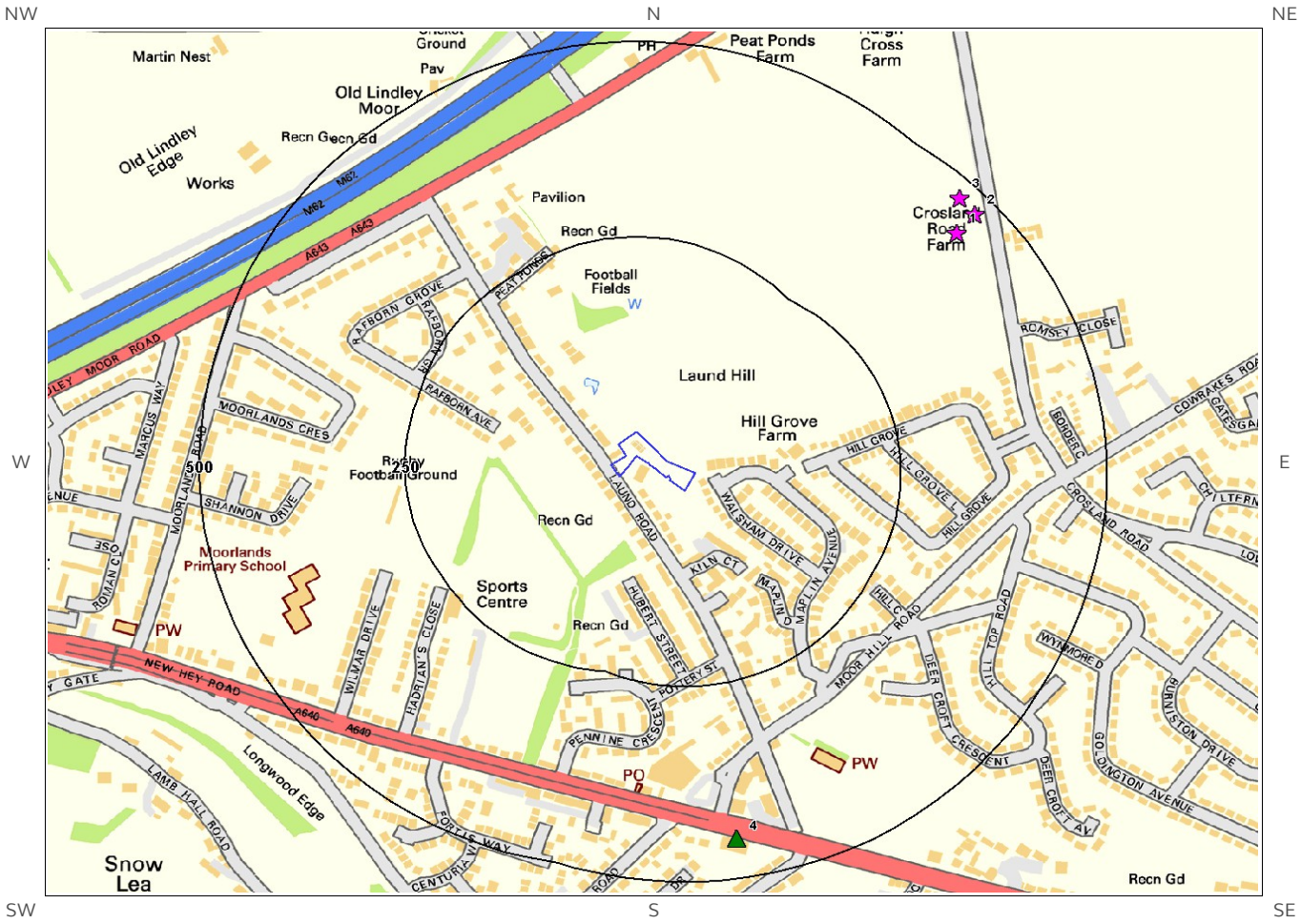
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 23

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
66A	4	NW	Unspecified Ground Workings	1890
67A	5	NW	Unspecified Ground Workings	1905
68P	53	SE	Unspecified Pit	1890
69Q	64	NW	Pond	1956
70Q	64	NW	Pond	1948

71P	81	SE	Reservoir	1956
72P	82	SE	Reservoir	1948
73P	83	SE	Reservoir	1938
74R	139	N	Ponds	1905
75R	139	N	Ponds	1948
76S	160	SE	Reservoir	1956
77S	160	SE	Reservoir	1948
78S	161	SE	Reservoir	1938
79	171	SE	Pond	1890
80	173	N	Ponds	1890
81R	194	N	Ponds	1938
82T	330	S	Burial Ground	1905
83U	335	E	Covered Reservoir	1985
84U	335	E	Covered Reservoir	1975
85	460	NW	Ponds	1890
86V	493	NW	Cuttings	1891
87G	494	NW	Cuttings	1975
88G	494	NW	Cuttings	1985

2. Environmental Permits, Incidents and Registers Map



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- Site Outline
- Search Buffers (m) — 250 — 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

1

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
4	451	S	410493 417766	Address: Salendine Service Station, New Hey Road, Huddersfield, HD3 3UZ Process: Unloading Of Petrol Into Storage At Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

0

Database searched and no data found.

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

3

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1	442	NE	410759 418543	Incident Date: 20-Nov-2015 Incident Identification: 1389399 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 1 (Major) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	474	NE	410781 418567	Incident Date: 22-Dec-2015 Incident Identification: 1396165 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3	476	NE	410762 418588	Incident Date: 30-Nov-2015 Incident Identification: 1391148 Pollutant: Contaminated Water Pollutant Description: Suspended Solids	Water Impact: Category 1 (Major) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

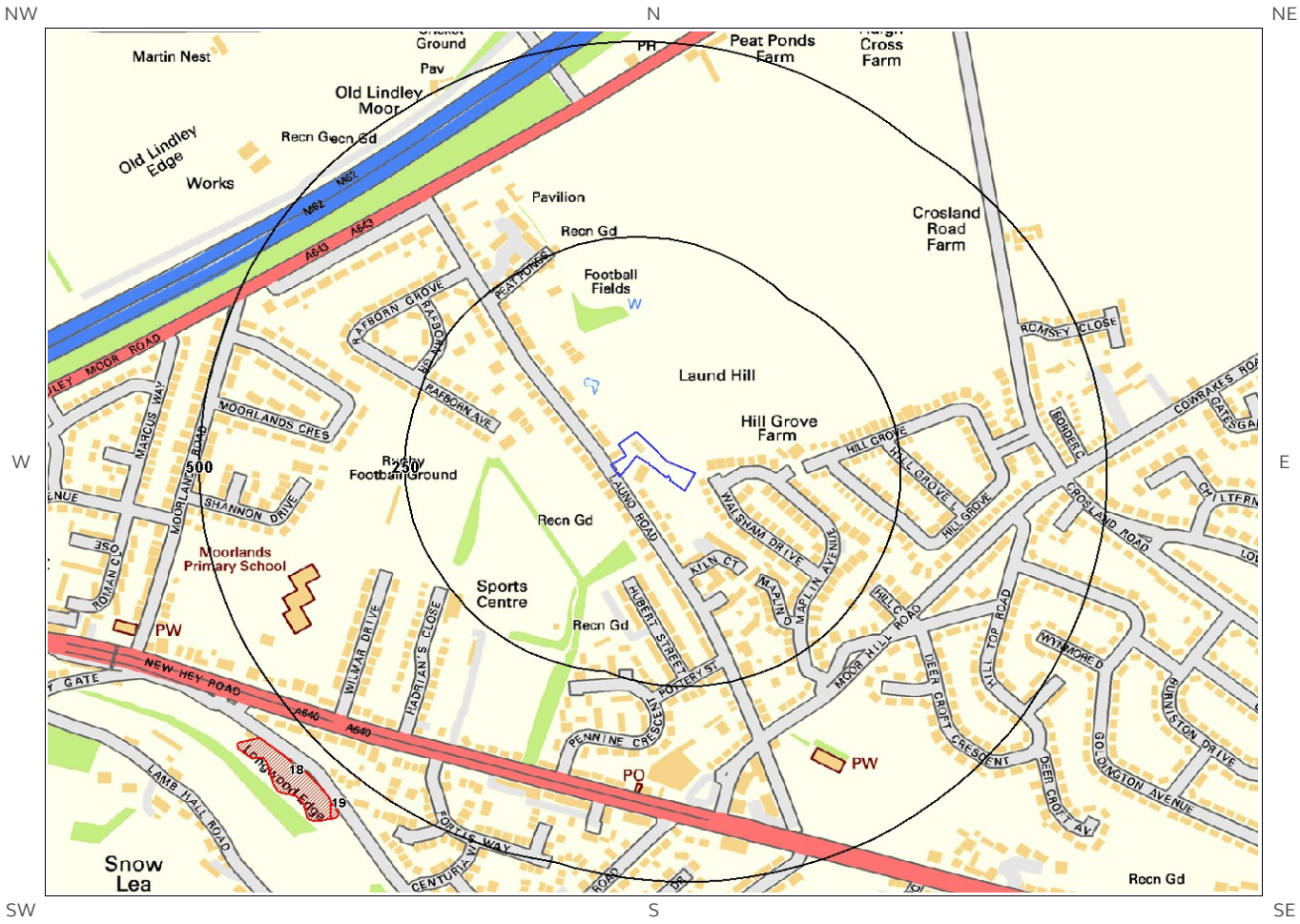
Database searched and no data found.

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



Site Outline

250 / 500 Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

1

The following Environment Agency/Natural Resources Wales landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	969	N	410295 419870	Address: Land/premises At, Blackley Road, Blackley, Elland, West Yorkshire, HX5 0TB Landfill Reference: 60802.0 Environmental Permitting Regulations (Waste) Reference: KIR001 Landfill Type: A06: Landfill taking other wastes	Operator: Suez Recycling And Recovery Kirklees Ltd Status: Closure IPPC Reference: EPR Reference:

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

11

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	999	E	411500 418500	Site Address: Birchencliffe Tip, Huddersfield, West Yorkshire Waste Licence: - Site Reference: - Waste Type: Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Huddersfield Corp Public Cleansing and Haulage Department Licence Holder: - First Recorded: 31-Dec-1961 Last Recorded: 31-Dec-1974
Not shown	1002	NW	409400 418800	Site Address: Old Lindley Farm, Old Lindley Road, Holywell Green Waste Licence: - Site Reference: C2304 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Smith Brothers First Recorded: 01-Feb-1990 Last Recorded: 28-Feb-1990

ID	Distance (m)	Direction	NGR	Details	
Not shown	1300	E	411500 418500	Site Address: Birchencliffe Tip, Huddersfield, West Yorkshire Waste Licence: - Site Reference: - Waste Type: Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Huddersfield Corp Public Cleansing and Haulage Department Licence Holder: - First Recorded: 31-Dec-1961 Last Recorded: 31-Dec-1974
Not shown	1311	N	410300 419600	Site Address: Blackley Quarry, Blackley Road, Blackley, Elland Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1425	S	410500 416700	Site Address: Dam site off Grove Street, Longwood, Huddersfield Waste Licence: Yes Site Reference: 4700/0422 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 17-Apr-1984 Licence Surrendered: 30-Apr-1994 Licence Holder Address: Grove Street, Longwood, Huddersfield Operator: - Licence Holder: Scholes Windows Limited First Recorded: 31-Dec-1984 Last Recorded: 31-Mar-1986
Not shown	1427	NE	411700 418800	Site Address: Halifax Road, Birchencliffe, Huddersfield Waste Licence: Yes Site Reference: 4700/0293 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 03-Dec-1981 Licence Surrendered: 21-Nov-1988 Licence Holder Address: Queens Mill, Queens Mill Road, Lockwood, Huddersfield Operator: - Licence Holder: M Bevilacqua Limited First Recorded: 31-Dec-1981 Last Recorded: 31-Dec-1988
Not shown	1450	S	410000 416700	Site Address: Land at Leymoor Dyeworks, Parkwood Road, Leymoor, Huddersfield Waste Licence: Yes Site Reference: 4700/0122 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 27-Sep-1979 Licence Surrendered: 25-Apr-1994 Licence Holder Address: Parkwood Mills, Longwood, Huddersfield Operator: - Licence Holder: The Parkwood Mills Company Limited First Recorded: 01-Jan-1970 Last Recorded: 31-Dec-1992
Not shown	1466	E	411900 418500	Site Address: Hopkinson's Tip, Huddersfield, West Yorkshire Waste Licence: Yes Site Reference: 4700/WDL0086 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 20-Dec-1978 Licence Surrendered: 27-Apr-1979 Licence Holder Address: Britannia Works, Birkby, Huddersfield Operator: Hopkinsons Limited Licence Holder: Hopkinsons Limited First Recorded: 31-Dec-1942 Last Recorded: 27-Apr-1979
Not shown	1466	E	411900 418500	Site Address: Hopkinsons Tip, Halifax Road, Birchencliffe, Huddersfield Waste Licence: Yes Site Reference: 4700/0514, WD/L514 Waste Type: Inert, Commercial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 03-Jun-1985 Licence Surrendered: 30-Apr-1994 Licence Holder Address: PO Box 95, Civic Centre, Huddersfield Operator: - Licence Holder: Kirklees Metropolitan Borough Council First Recorded: 31-Dec-1985 Last Recorded: 31-Dec-1990
Not shown	1480	W	408800 418100	Site Address: New Hey Road Tip, New Hey Road, Outlane, Huddersfield Waste Licence: - Site Reference: C2302 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Gee Brothers First Recorded: 31-Dec-1920 Last Recorded: 31-Jul-1983

ID	Distance (m)	Direction	NGR	Details	
Not shown	1498	N	410400 420000	Site Address: Woodman Tip, Elland, Yorkshire Waste Licence: - Site Reference: C1817 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Marshall (Builders Elland) Limited Licence Holder: Greetland Concrete First Recorded: 01-Jun-1971 Last Recorded: 30-Jun-1976

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

1

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1435	E	411800.0 418700.0	Address: Birchencliffe Hill Rd, Huddersfield BGS Number: 1035.0	Risk: Risk to minor aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

13

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
18	536	SW	409943 417843	Refuse Tip	1974 mapping	Polygon
19	544	SW	410005 417804	Refuse Tip	1968 mapping	Polygon
Not shown	706	W	409614 418138	Refuse Tip	1961 mapping	Polygon
Not shown	994	N	410237 419411	Refuse Tip	1993 mapping	Polygon
Not shown	999	E	411555 418561	Birchencliffe Tip, Landfill Sites 177, Halifax Road, Birchencliffe, Hudersfield, HD3 3NQ	Kirklees Metropolitan Borough Council	Polygon
Not shown	1119	N	410627 419392	Refuse Tip	1961 mapping	Polygon
Not shown	1288	E	411741 418698	Landfill Sites 1, Halifax Road, Birchencliffe, Hudersfield, HD3 3NQ	Kirklees Metropolitan Borough Council	Polygon
Not shown	1319	E	411753 418699	Refuse Tip	1965 mapping	Polygon
Not shown	1427	NE	411790 418866	Landfill Site 29, Halifax Road, Birchencliffe, Hudersfield, HD3 3NQ	Kirklees Metropolitan Borough Council	Polygon

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	1451	S	409986 416810	Refuse Tip	1961 mapping	Polygon
Not shown	1465	E	411992 418601	Landfill Site 33, Halifax Road, Birchencliffe, Hudersfield, HD3 3NQ	Kirklees Metropolitan Borough Council	Polygon
Not shown	1481	S	409934 416793	Refuse Tip	1961 mapping	Polygon
Not shown	1498	E	411946 418613	Refuse Tip	1965 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

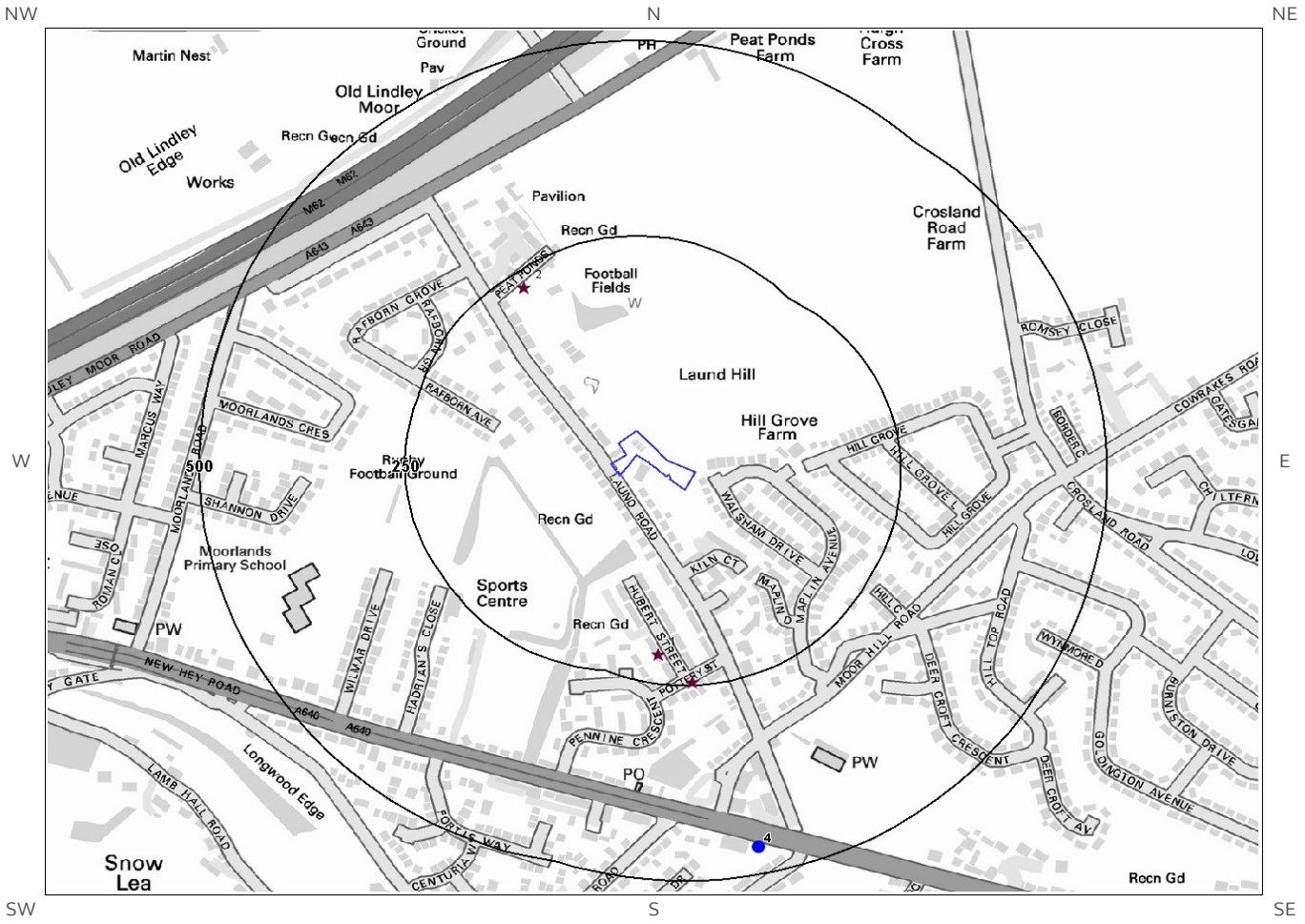
4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1415	N	410792 419640	Site Address: Land/premises At, South Lane, Elland, West Yorkshire, HX5 0TF Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR003 EPR reference: EA/EPR/CP3490LF/V003 Operator: P Casey Enviro Ltd Waste Management licence No: 65009 Annual Tonnage: 3000.0	Issue Date: 05/05/1999 Effective Date: - Modified: 07/03/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Former Atlas Works (South-Eastern Extension) Correspondence Address: -
Not shown	1415	N	410792 419640	Site Address: Horncliffe Quarry Landfill, South Lane, Elland, West Yorkshire, HX5 0TF Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR002 EPR reference: EA/EPR/CP3490SA/V008 Operator: P Casey Enviro Ltd Waste Management licence No: 60745 Annual Tonnage: 3000.0	Issue Date: 24/05/1988 Effective Date: - Modified: 07/03/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Former Atlas Works (South East Extension) Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1415	N	410792 419640	Site Address: South Lane, Blackley, Elland, West Yorkshire, HX5 0TF Type: Co-Disposal Landfill Site Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR002 EPR reference: - Operator: P Casey Enviro Ltd Waste Management licence No: 60745 Annual Tonnage: 0.0	Issue Date: 24/05/1988 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Former Atlas Works Correspondence Address: Rydings Road, Rochdale, Lancashire, OL12 9PS
Not shown	1415	N	410792 419640	Site Address: Former Atlas Works, South Lane, Blackley, Elland, West Yorkshire, HX5 0TB Type: Co-Disposal Landfill Site Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PAR003 EPR reference: - Operator: P Casey Enviro Ltd Waste Management licence No: 65009 Annual Tonnage: 0.0	Issue Date: 05/05/1999 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Former Atlas Works (South-eastern Extension) Correspondence Address: Rydings Road, Rochdale, Lancashie, OL12 9PS

4. Current Land Use Map



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Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 3

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	212	S	Huddersfield Upholstery	410396 418003	11, Hubert Street, Huddersfield, HD3 3TS	Furniture	Consumer Products
2	230	NW	Electricity Sub Station	410234 418473	HD3	Electrical Features	Infrastructure and Facilities
3	245	S	Electricity Sub Station	410438 417968	HD3	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
4	465	S	410519 417755	BP	Salendine Service Station, New Hey Road, New Hey Road, Salendine Nook, Huddersfield, West Yorkshire, HD3 3UZ	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.3 Bedrock and Solid Geology

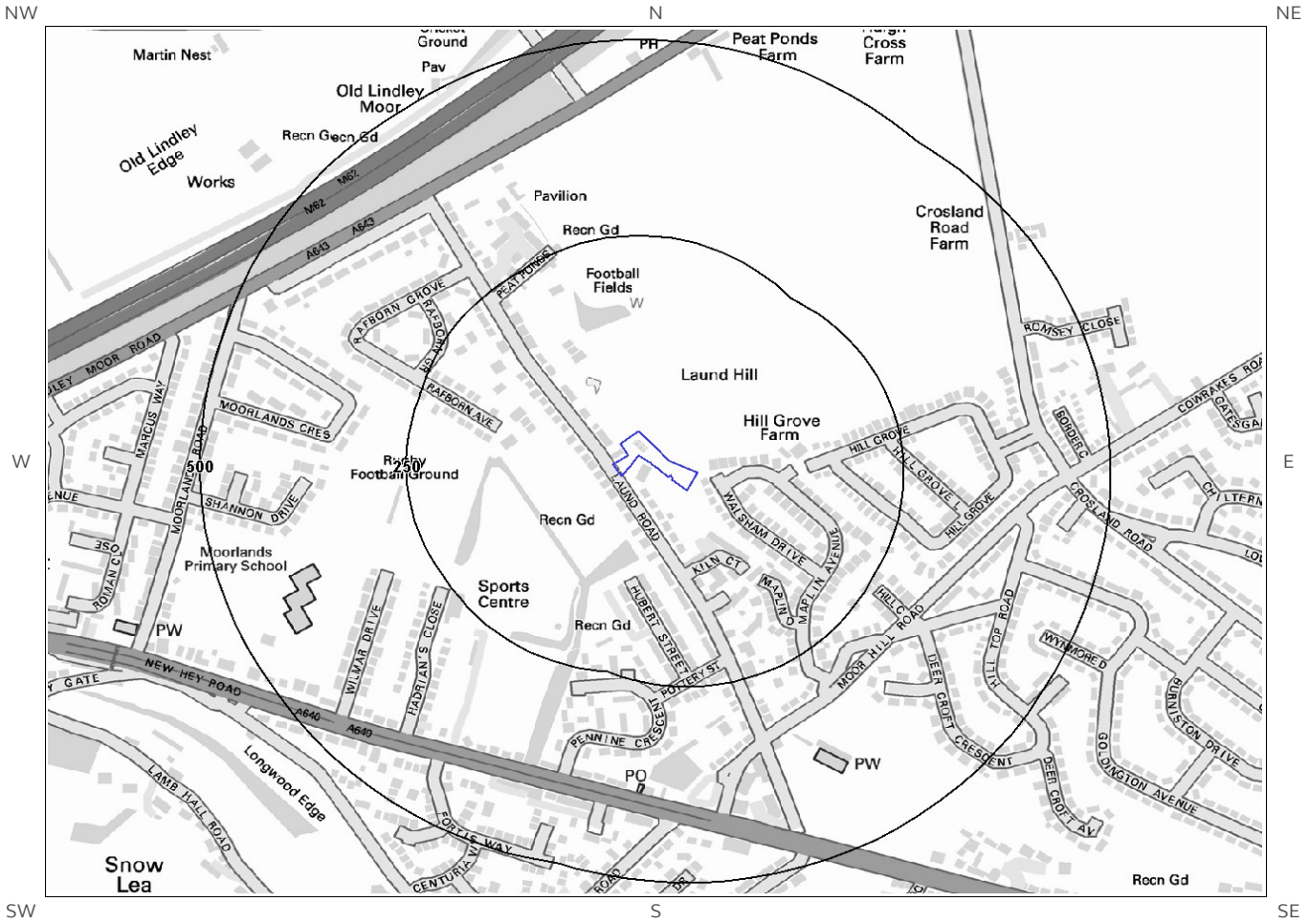
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
RR-SDST	ROUGH ROCK	SANDSTONE
SBF-SDST	SOFT BED FLAGS	SANDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



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Site Outline

250 — 500 — Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

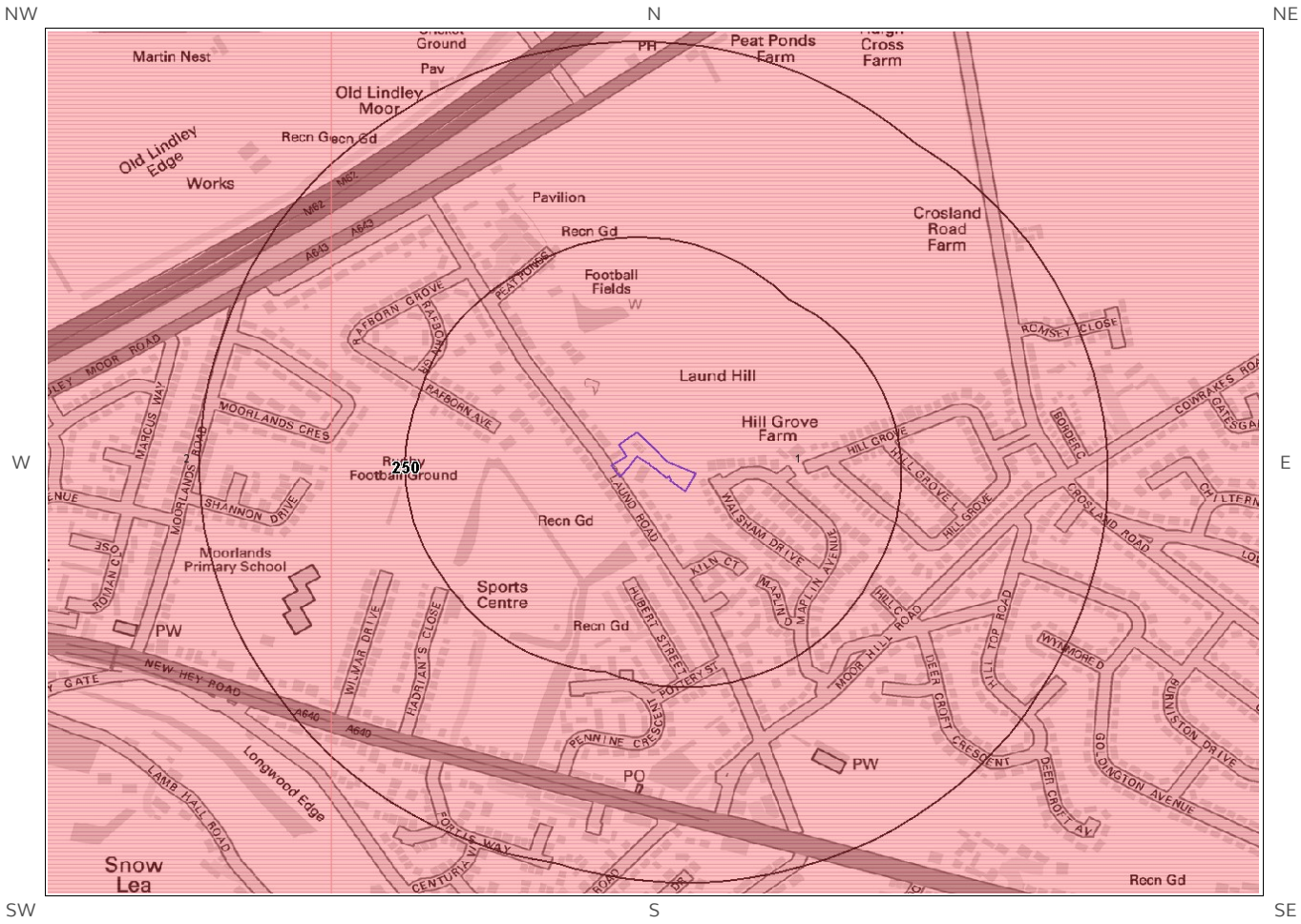
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

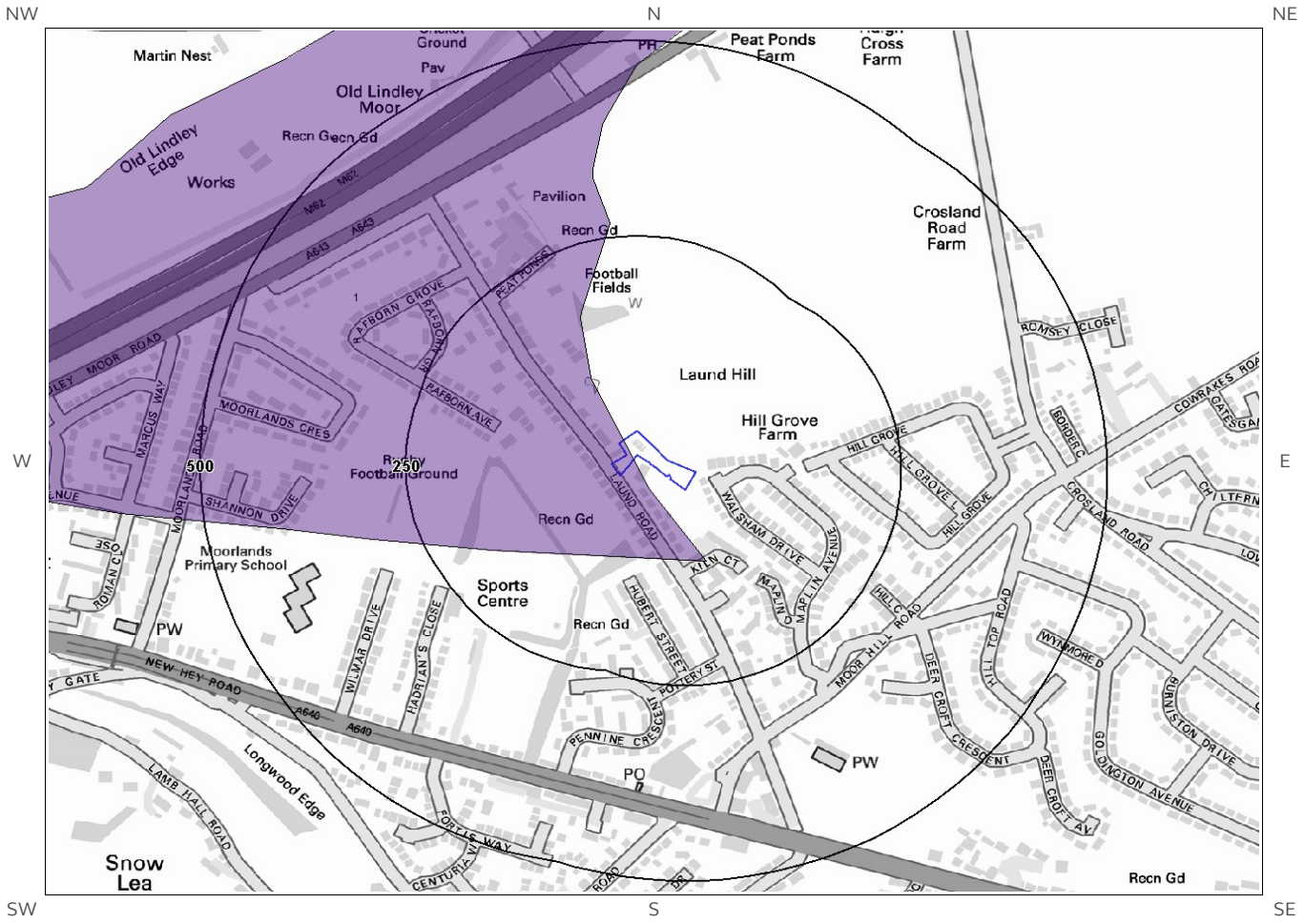
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



Site Outline

250 / 500 Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

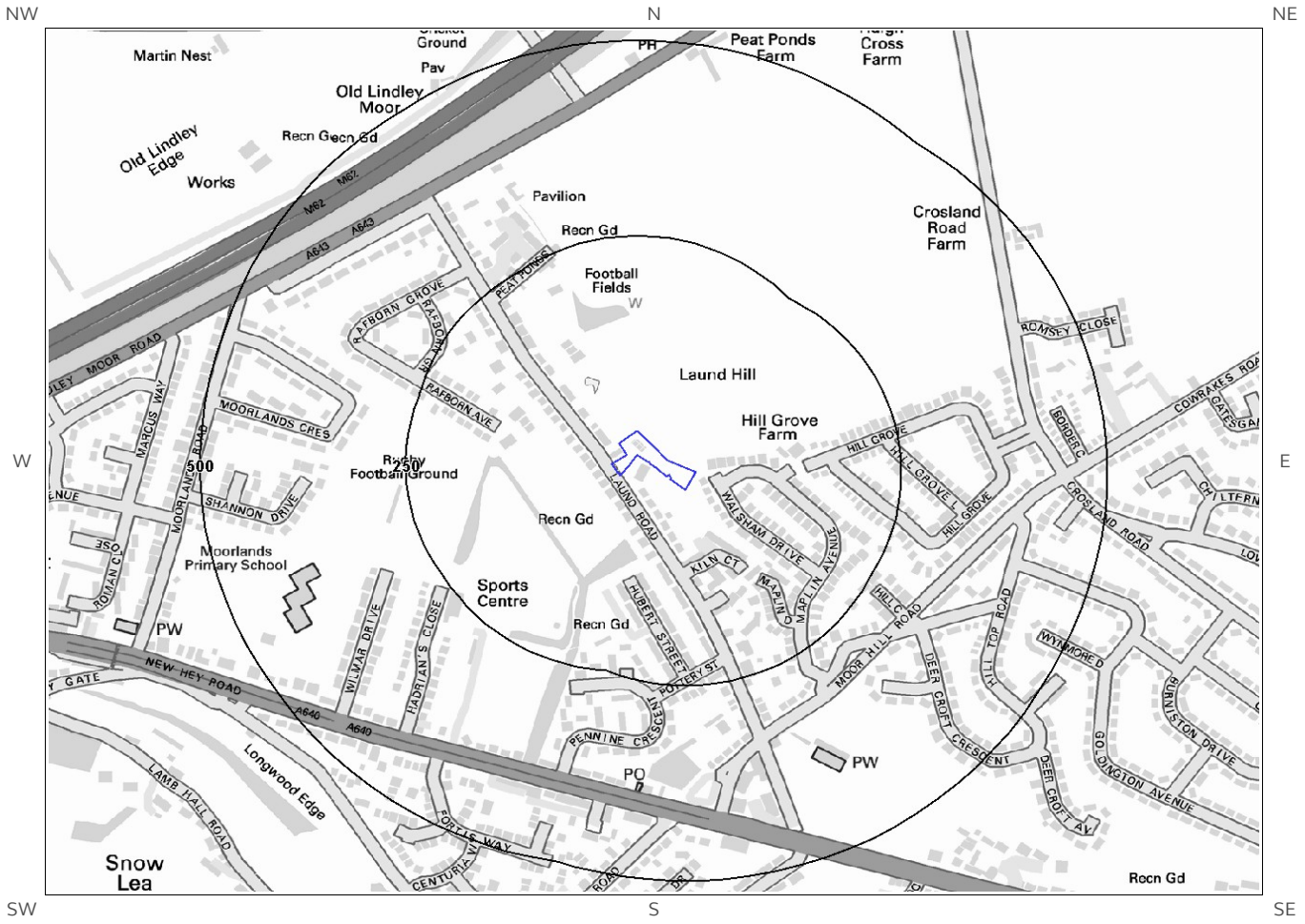
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



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Site Outline

250 — 500 Search Buffers (m)

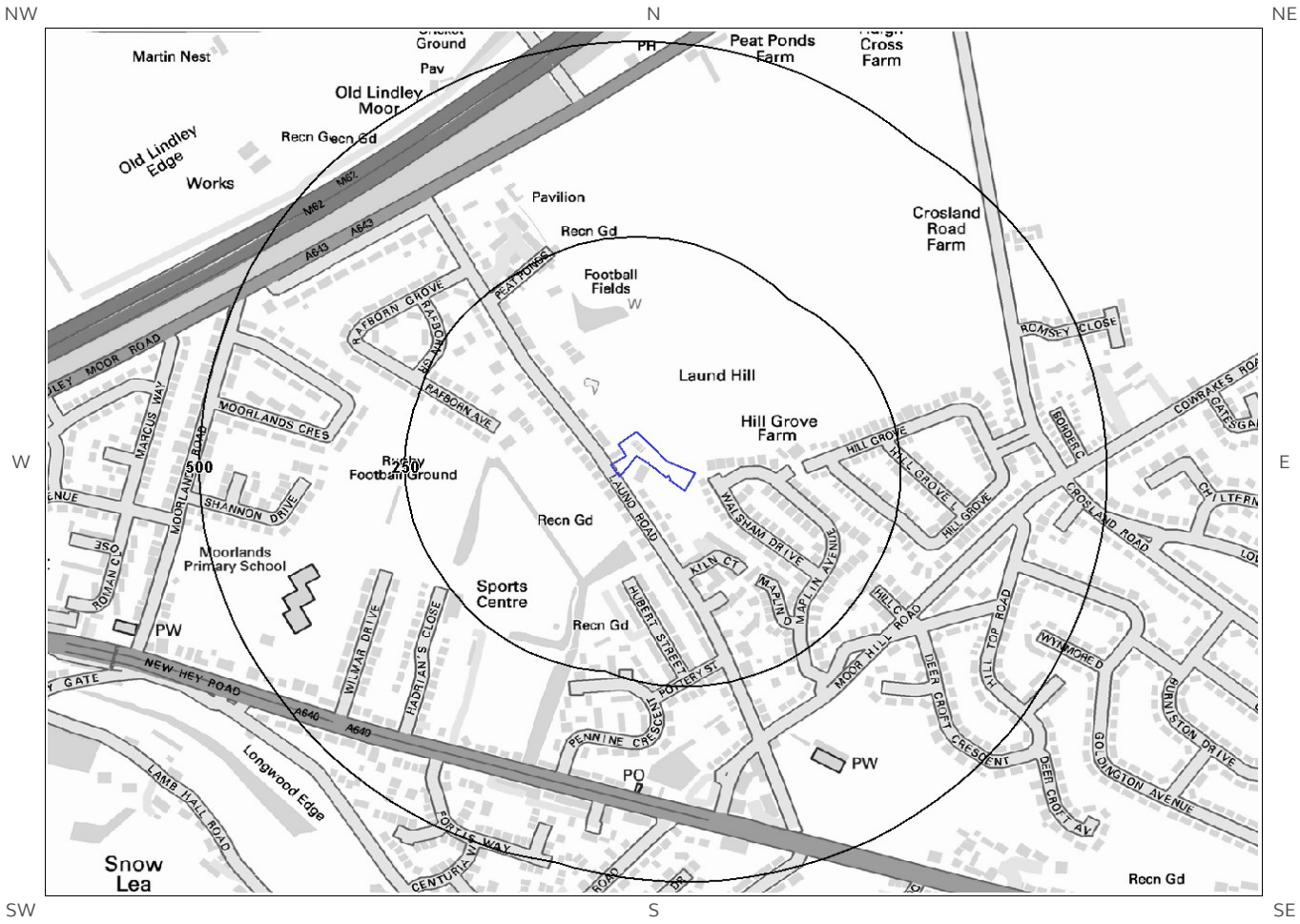
Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

6e. Hydrology – Detailed River Network and River Quality



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Site Outline

250 — 500 — Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? No

Database searched and no data found.

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	340	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	594	N	410250 418870	Status: Historical Licence No: 2/27/12/191 Details: General Farming & Domestic Direct Source: Groundwaters Point: Spring Data Type: Point Name: BAIRSTOW	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 798 Original Start Date: 28/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/4/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	594	N	410250 418870	Status: Historical Licence No: 2/27/12/191 Details: General Farming & Domestic Direct Source: Groundwaters Point: Spring - Holywell Green Data Type: Point Name: BAIRSTOW	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 00798 Original Start Date: 28/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/4/1966 Version End Date:
Not shown	1015	E	411400 417900	Status: Historical Licence No: 2/27/11/058 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Springcatchment Area Data Type: Point Name: JOSEPH SYKES BROTHERS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 2413 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/1/1966 Version End Date:
Not shown	1015	E	411400 417900	Status: Historical Licence No: 2/27/11/058 Details: Boiler Feed Direct Source: Groundwaters Point: Springcatchment Area Data Type: Point Name: JOSEPH SYKES BROTHERS	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 2413 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/1/1966 Version End Date:
Not shown	1015	E	411400 417900	Status: Active Licence No: 2/27/11/058 Details: Boiler Feed Direct Source: Groundwaters Point: Spring - Lindley Data Type: Point Name: CALDERDALE & HUDDERSFIELD NHS TRUST	Annual Volume (m^3): 24094 Max Daily Volume (m^3): 65.5 Original Application No: 2413 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:
Not shown	1015	E	411400 417900	Status: Active Licence No: 2/27/11/058 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Spring - Lindley Data Type: Point Name: CALDERDALE & HUDDERSFIELD NHS TRUST	Annual Volume (m^3): 24094 Max Daily Volume (m^3): 65.5 Original Application No: 2413 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:
Not shown	1321	SE	411600 417600	Status: Historical Licence No: 2/27/10/120 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Borehole Data Type: Point Name: JOHN GLADSTONE & COMPANY LIMITED	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6786 Original Start Date: 21/1/1997 Expiry Date: 31/12/2001 Issue No: 100 Version Start Date: 21/1/1997 Version End Date:
Not shown	1354	S	410100 416900	Status: Historical Licence No: 2/27/11/117 Details: General Farming & Domestic Direct Source: Groundwaters Point: Spring Data Type: Point Name: SHEARD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 1444 Original Start Date: 28/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/4/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1354	S	410100 416900	Status: Historical Licence No: 2/27/11/117 Details: General Farming & Domestic Direct Source: Groundwaters Point: Spring - Longwood Data Type: Point Name: SHEARD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 01444 Original Start Date: 28/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/4/1966 Version End Date:
Not shown	1705	SE	411940 417420	Status: Historical Licence No: 2/27/11/186 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Borehole-millstone Grit-oakes-huddersfield Data Type: Point Name: T E NEWSHOLME LIMITED	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6957 Original Start Date: 10/6/2000 Expiry Date: 31/12/2009 Issue No: 1 Version Start Date: 10/6/2000 Version End Date:
Not shown	1705	SE	411940 417420	Status: Historical Licence No: 2/27/11/186 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Borehole - Millstone Grit- Oakes Data Type: Point Name: T E NEWSHOLME LTD	Annual Volume (m^3): 35000 Max Daily Volume (m^3): 96 Original Application No: 6957 Original Start Date: 10/6/2000 Expiry Date: 31/12/2009 Issue No: 1 Version Start Date: 10/6/2000 Version End Date:
Not shown	1965	NW	408900 419600	Status: Historical Licence No: 2/27/12/273 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Borehole Data Type: Point Name: CLARIANT UK LIMITED	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 5246 Original Start Date: 19/9/1973 Expiry Date: - Issue No: 100 Version Start Date: 22/1/1999 Version End Date:
Not shown	1965	NW	408900 419600	Status: Active Licence No: 2/27/12/273 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Groundwaters Point: Borehole - Millstone Grit - Stainland Data Type: Point Name: RHODIA UK LTD	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 818 Original Application No: NPS/WR/007655 Original Start Date: 19/9/1973 Expiry Date: - Issue No: 104 Version Start Date: 15/8/2011 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1307	S	410330 416910	Status: Historical Licence No: 2/27/11/123 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface Water Point: Clay Wood Brook-parkwood Road-longwood Data Type: Point Name: PARKWOOD MILLS CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 0158902 Original Start Date: 26/5/1966 Expiry Date: - Issue No: 102 Version Start Date: 30/8/2002 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1311	S	409700 417000	Status: Historical Licence No: 2/27/11/066 Details: Potable Water Supply - Direct Direct Source: Surface Water Point: Longwood Upper And Lower Reservoirs Data Type: Line Name: YORKSHIRE WATER SERVICES LTD	Annual Volume (m^3): 818297.12 Max Daily Volume (m^3): 2241.91 Application No: 2249 Original Start Date: 27/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/1/1966 Version End Date:
Not shown	1313	S	410400 416900	Status: Historical Licence No: 2/27/11/115 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface Water Point: Clay Wood Brook/oakscar Reservoir Data Type: Point Name: PARKWOOD MILLS CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 01588 Original Start Date: 28/4/1966 Expiry Date: - Issue No: 101 Version Start Date: 22/4/2002 Version End Date:
Not shown	1474	S	410000 416800	Status: Historical Licence No: 2/27/11/123 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface Water Point: Claywood Brook Data Type: Point Name: PARKWOOD MILLS CO LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 158902 Original Start Date: 26/5/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/5/1966 Version End Date:
Not shown	1965	NW	408900 419600	Status: Historical Licence No: 2/27/12/125 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface Water Point: Stream Data Type: Point Name: CLARIANT UK LIMITED	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 853 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 100 Version Start Date: 22/1/1999 Version End Date:
Not shown	1965	NW	408900 419600	Status: Active Licence No: 2/27/12/125 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Surface Water Point: Stream - Stainland Data Type: Point Name: RHODIA UK LTD	Annual Volume (m^3): 182000 Max Daily Volume (m^3): 818 Application No: NPS/WR/007654 Original Start Date: 20/1/1966 Expiry Date: - Issue No: 104 Version Start Date: 15/8/2011 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1311	S	409700 417000	Status: Historical Licence No: 2/27/11/066 Details: Potable Water Supply - Direct Direct Source: Surface Water Point: Longwood Upper And Lower Reservoirs Data Type: Line Name: YORKSHIRE WATER SERVICES LTD	Annual Volume (m^3): 818297.12 Max Daily Volume (m^3): 2241.91 Original Application No: 2249 Original Start Date: 27/1/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	0	On Site	2	Outer catchment

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
28	NE	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
340	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? No

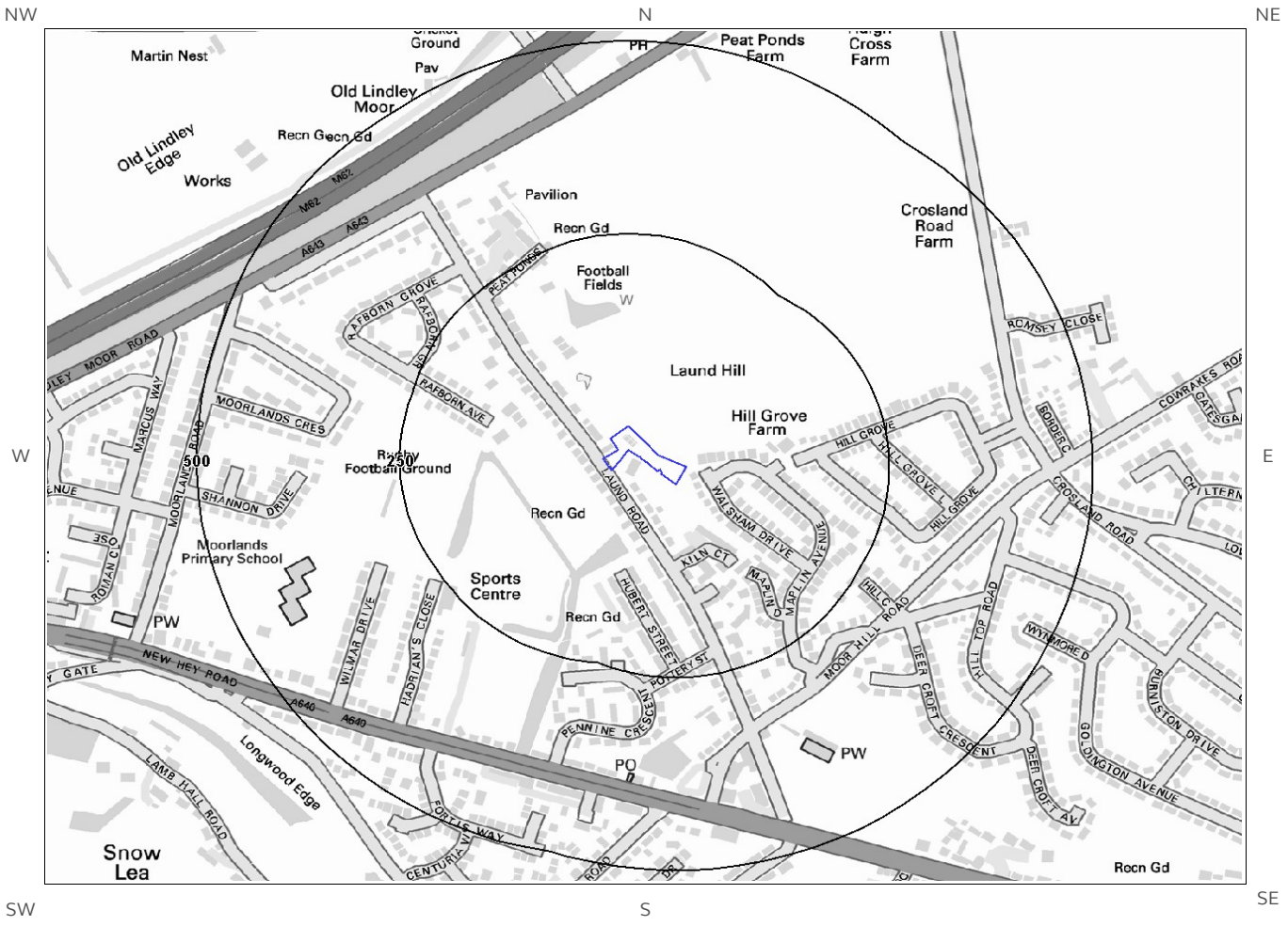
Database searched and no data found.

6.11 Surface Water Features

Are there any surface water features within 250m of the study site? No

Database searched and no data found.

7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



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Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

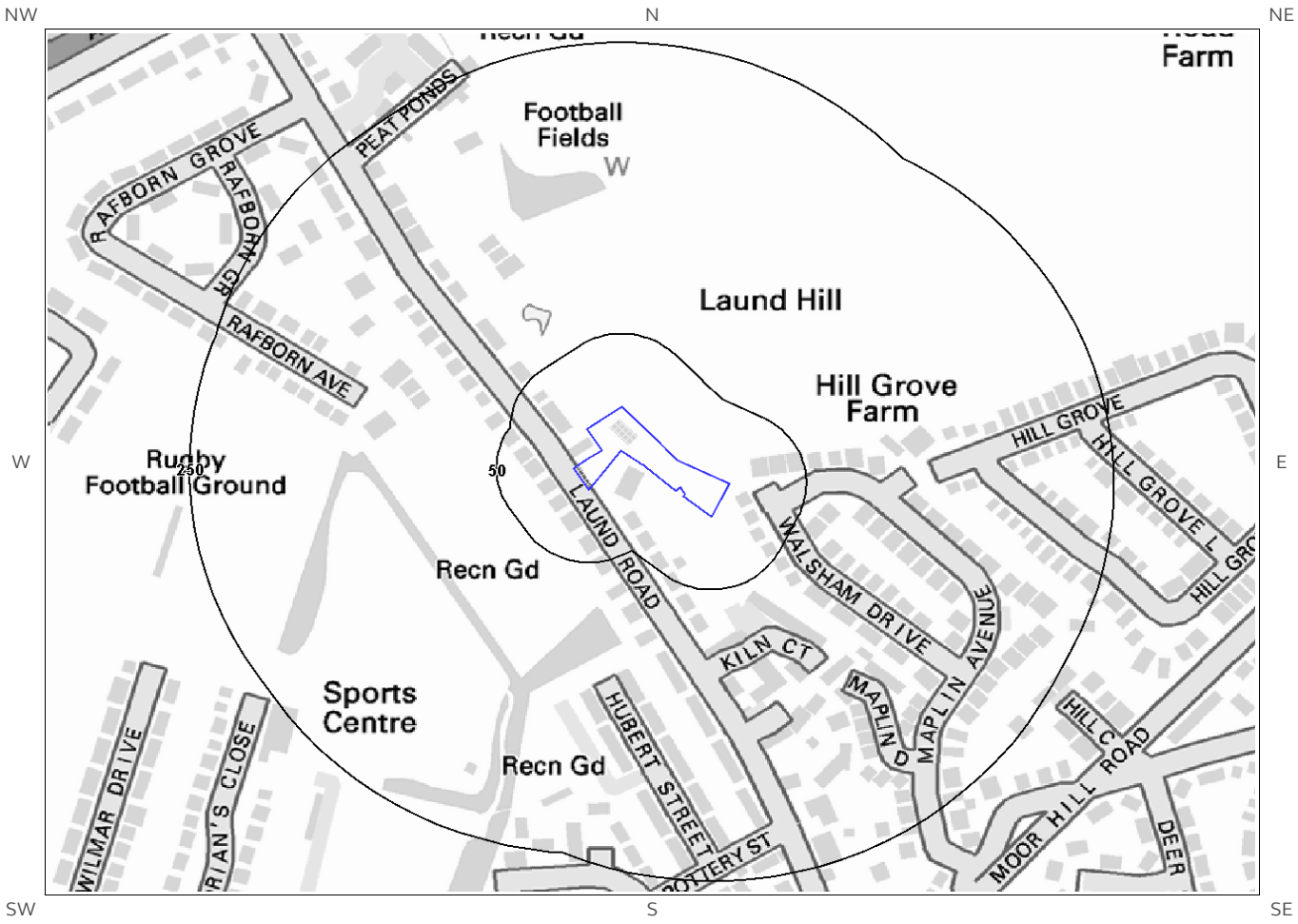
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? No

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

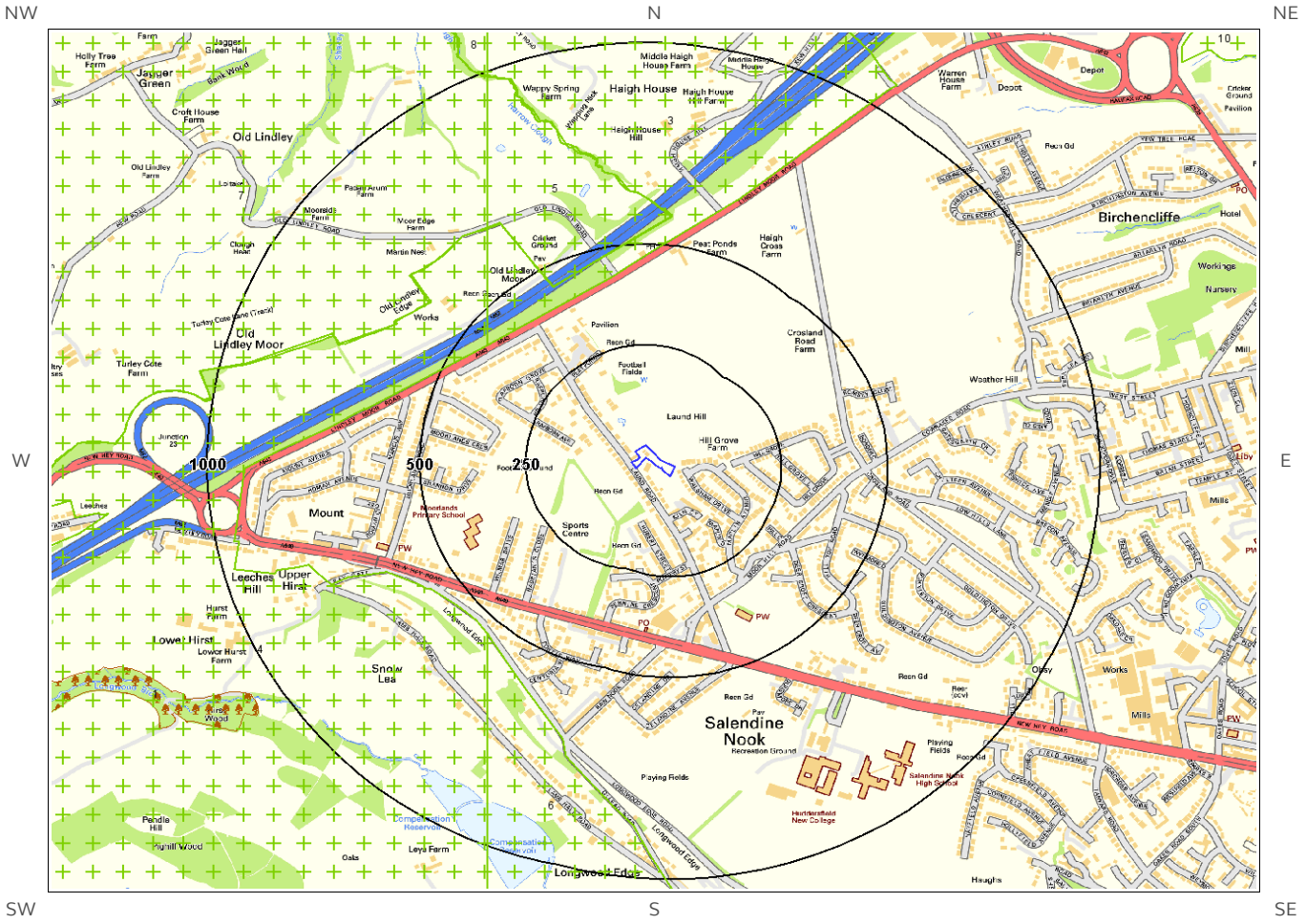
7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Low

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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Site Outline

100
250
Search Buffers (m)

AONB

National Park

SSSI

Special Protection Areas

Nitrate Vulnerable Zones

Green Belt

Environmentally Sensitive Areas

Special Areas of Conservation

World Heritage Sites

Nitrate Sensitive Areas

Ancient Woodland

National Nature Reserve

Local Nature Reserves

Ramsar Sites

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?	Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

2

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
1	1065	SW	UNKNOWN	Ancient Replanted Woodland
Not shown	1779	W	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

0

Database searched and no data found.

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

11

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
3	401	NW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
4	438	NW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
5	450	NW	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)
6	539	SW	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
7	612	NW	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)
8	990	N	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
9	1111	NE	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)
10	1561	NE	Liverpool, Manchester and West Yorks Greenbelt	Kirklees District (B)
Not shown	1712	N	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)
Not shown	1751	N	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)
Not shown	1868	NE	Liverpool, Manchester and West Yorks Greenbelt	Calderdale District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure Geo Insight, available from our website. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property no significant increase in insurance risk due to natural slope instability problems.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing
ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? Yes

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

Past underground mine workings are uncommon, localised and of limited area. The rock types present in this area are such that minor mineral veins may be present within them on which it is possible that there have been attempts to work these by underground methods and/or it is possible that small scale underground extraction of other materials may have occurred. All such occurrences are likely to be restricted in size and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: **www.environment-agency.gov.uk**
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Kirklees Council
Phone: 01484 221 000
Web: http://www.kirklees.gov.uk/
Address: Civic Centre 3, Market Street, Huddersfield, HD1 1WG

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.
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https://www.groundsure.com/terms-and-conditions-sept-2016

Groundsure
LOCATION INTELLIGENCE

Earth Environmental & Geotechnical Ltd

334 ASHBOURNE BUSINESS CENTRE LTD,
WELLINGTON ROAD NORTH,
STOCKPORT, SK4 5DA

Groundsure Reference:	GS-4424566
Your Reference:	A0697
Report Date	30 Oct 2017
Report Delivery Method:	Email - pdf

Geo Insight

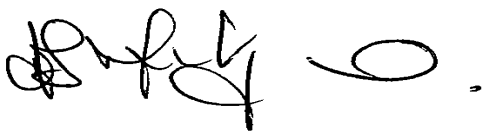
Address: 120, LAUND ROAD, SALENDINE NOOK, HUDDERSFIELD, HD3 3TY

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Geo Insight

Address:	**120, LAUND ROAD, SALENDINE NOOK, HUDDERSFIELD, HD3 3TY**
Date:	**30 Oct 2017**
Reference:	**GS-4424566**
Client:	**Earth Environmental & Geotechnical Ltd**

NW N NE

W E



SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	410407,418236
Site Size:	0.24ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?	Yes
	2.3.3 Are there any records of faults within 500m of the study site boundary?	Yes

Section 3: Radon

3. Radon	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
	3.2Radon Protection	No radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	2	8	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	1	0	16

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	1	0	1	2	3
5.5 Non–Coal Mining Cavities	0	0	0	0	2
5.5 Natural Cavities	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

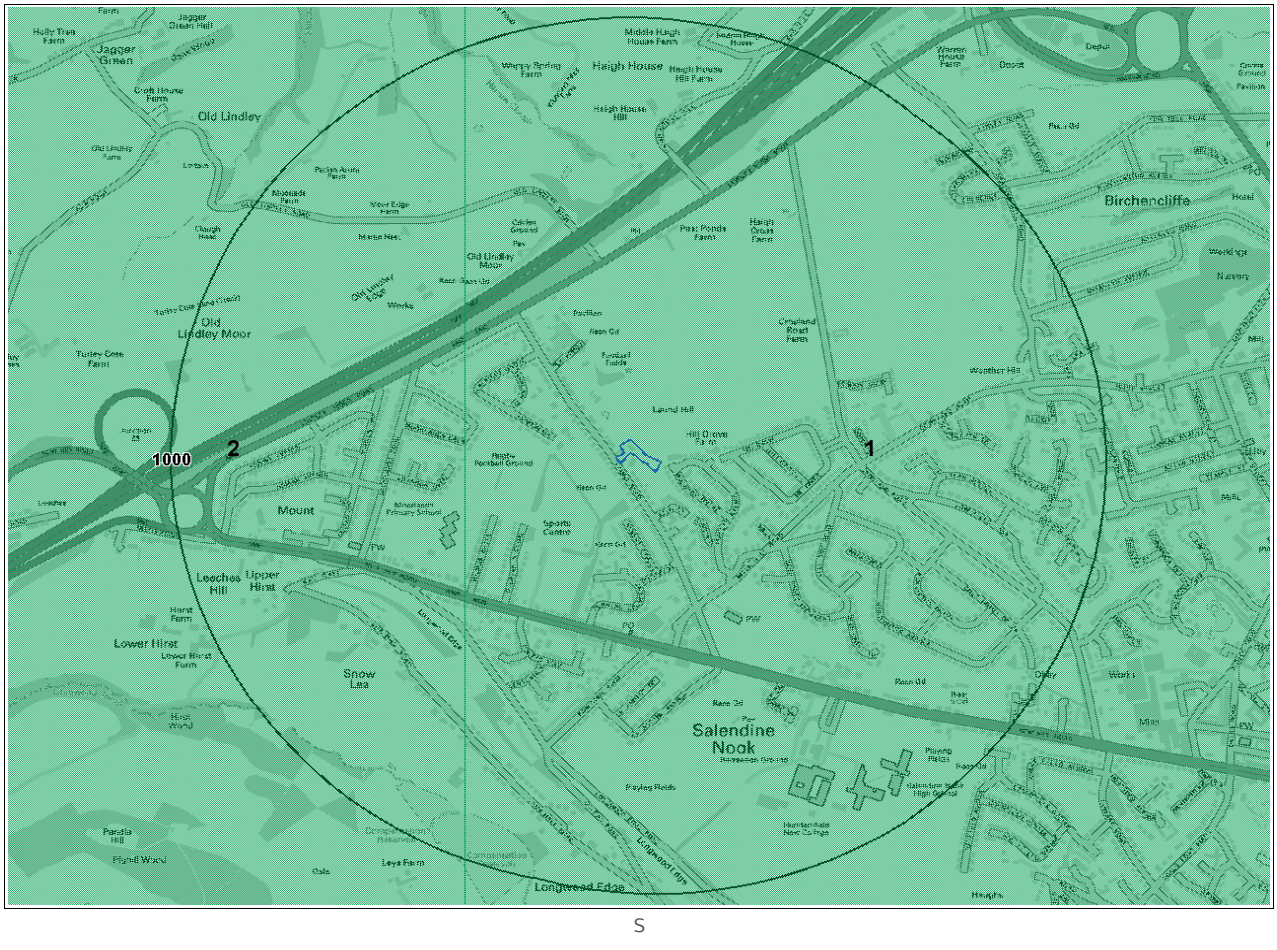
Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Very Low
6.2 Landslides	Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Negligible

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	0	0

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	2	1	0

Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	0	0	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability



1_10,000 Availability Legend

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Site Outline

Full Coverage

Partial Coverage

No Coverage

50
250
Search Buffers (m)

Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	340.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1712.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1751.0	Some deposits are mapped	Full	Full	Some deposits are mapped

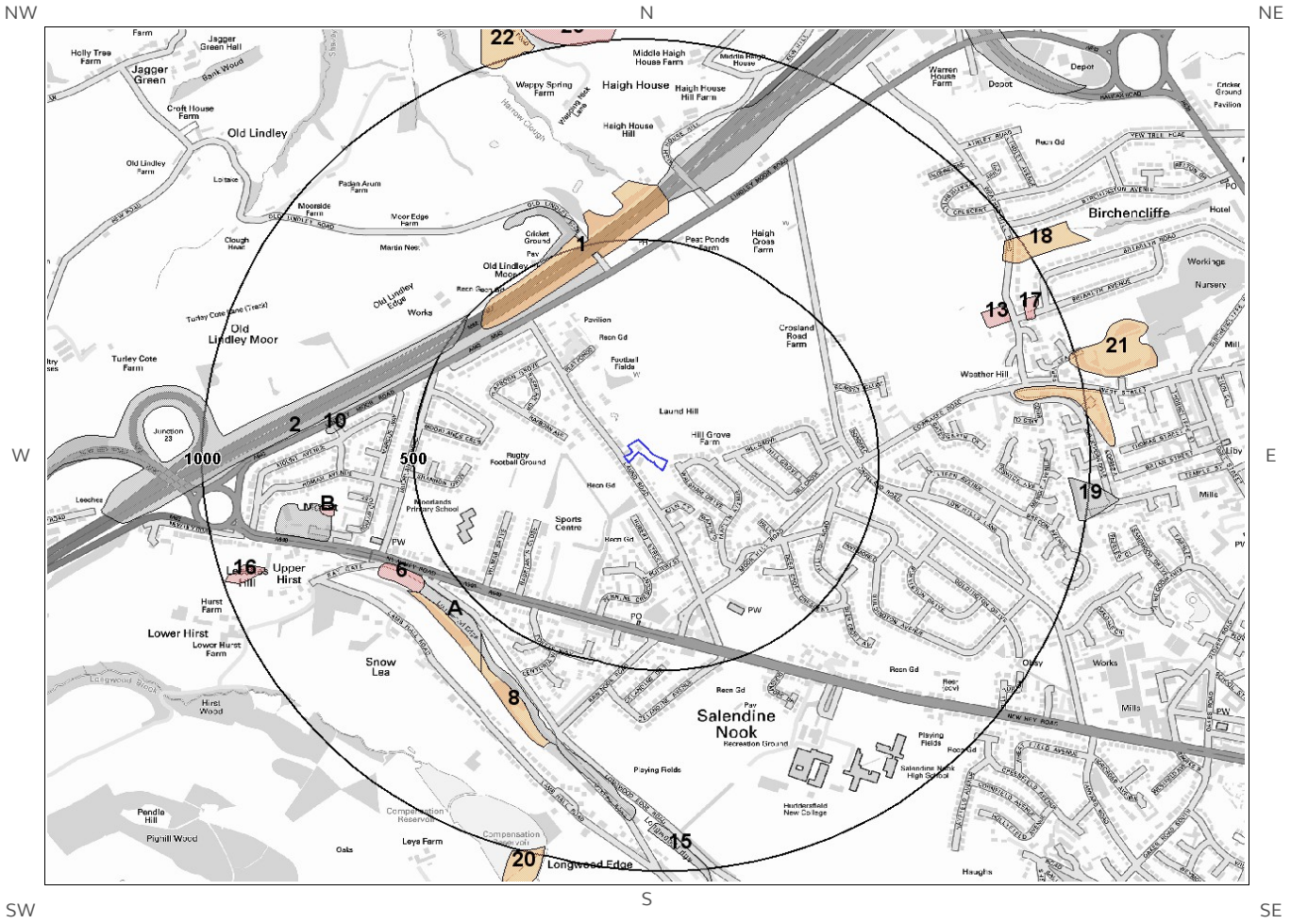
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground Map (1:10,000 scale)



Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

1. Geology 1:10,000 scale

1.1 Artificial Ground

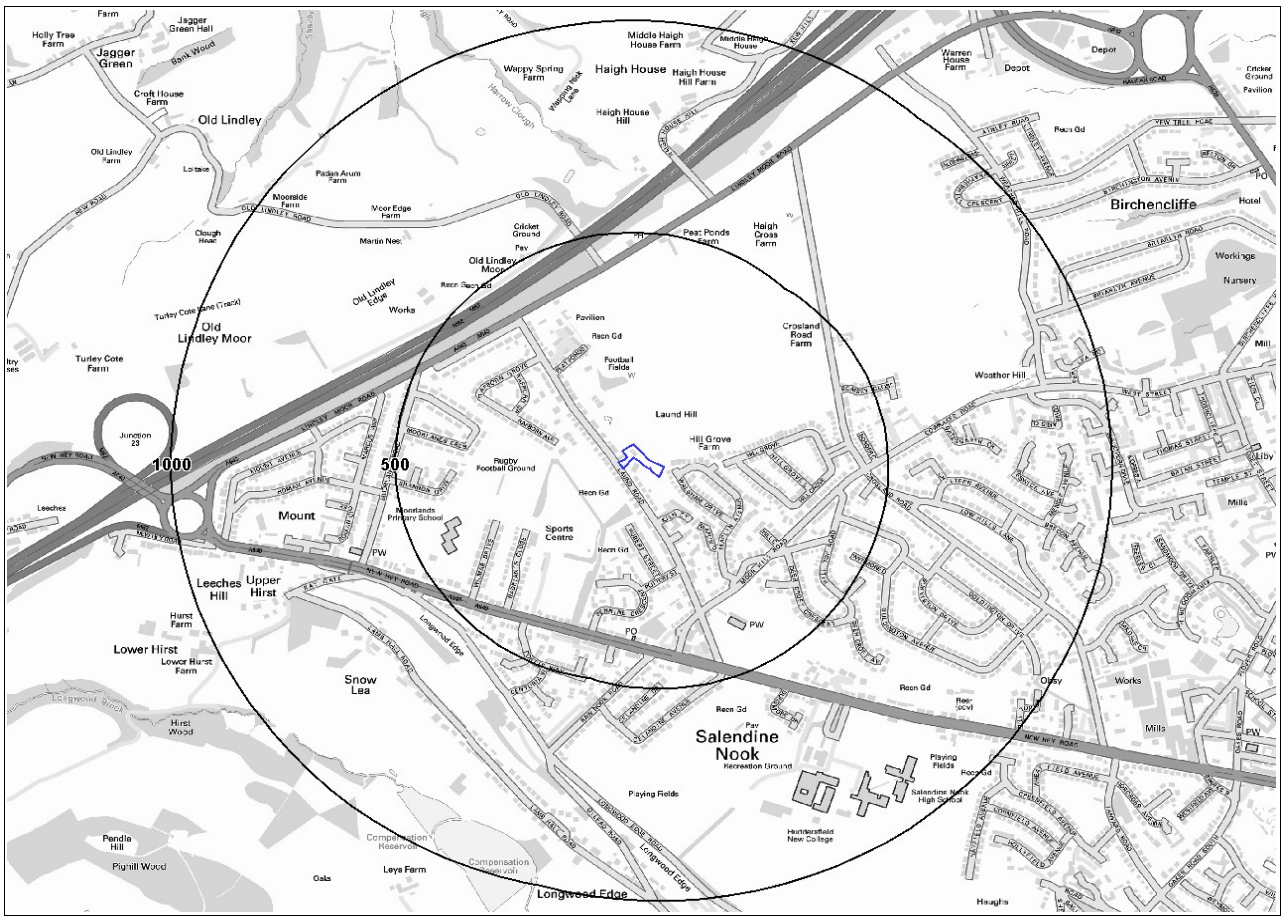
The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	419.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	483.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
3	493.0	NW	WGR-VOID	Worked Ground (Undivided)	Void

1.2 Superficial Deposits and Landslips Map (1:10,000 scale)

NW N NE



W E

SW S SE

Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

No

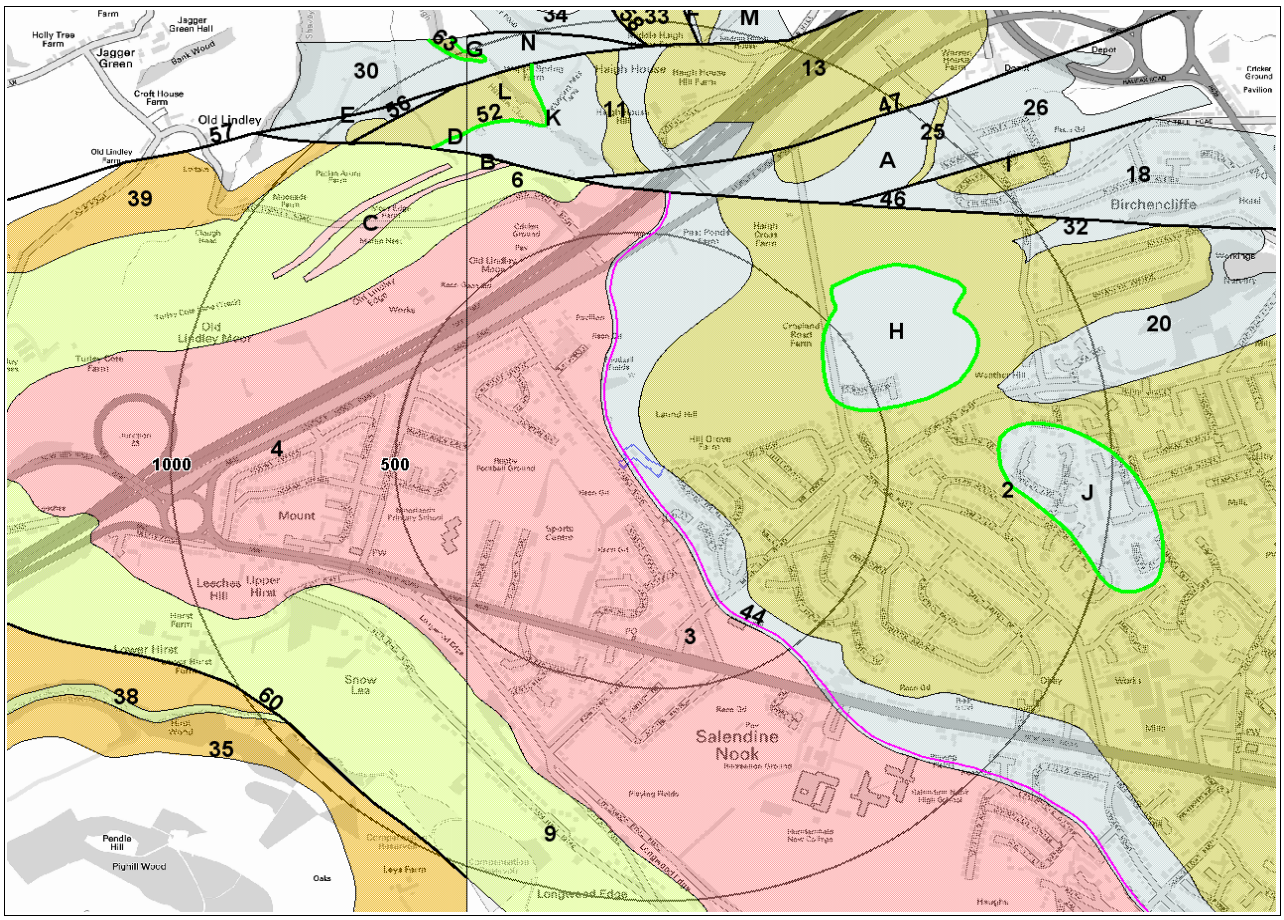
Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and Faults Map (1:10,000 scale)

NW N NE



W E

SW S SE

Bedrock and Faults Legend

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Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and Faults

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	0.0	On Site	SBF-SDST	Soft Bed Flags - Sandstone	Langsettian Sub-age
3	0.0	On Site	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age
4	340.0	W	RR-SDST	Rough Rock - Sandstone	Yeadonian Sub-age
5H	409.0	NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

1.3.2 Faults

Are there any records of Faults within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
44	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band
45H	409.0	NE	ROCK	Coal seam, inferred

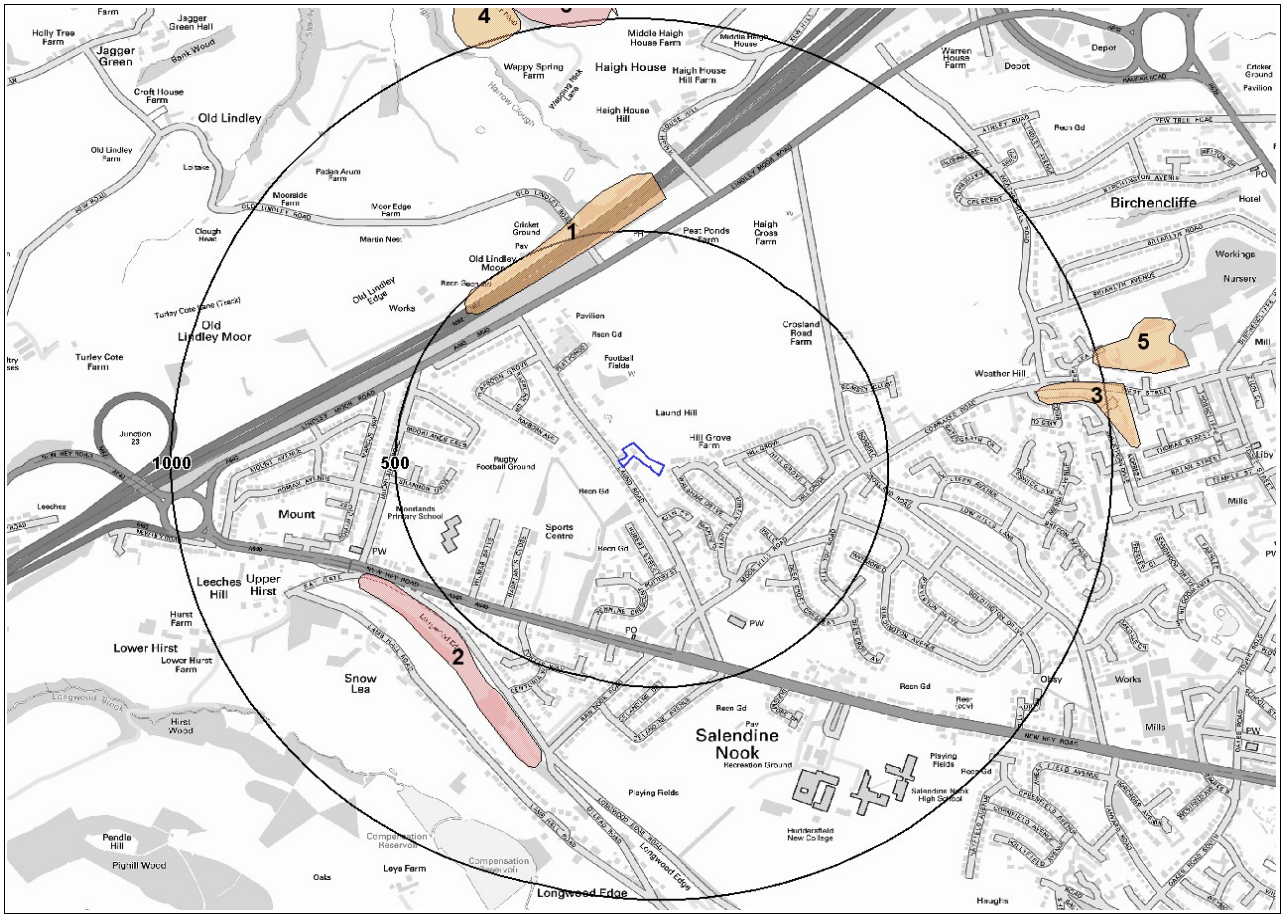
The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground Map

NW N NE



W E

SW S SE

Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 077

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	437.0	NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

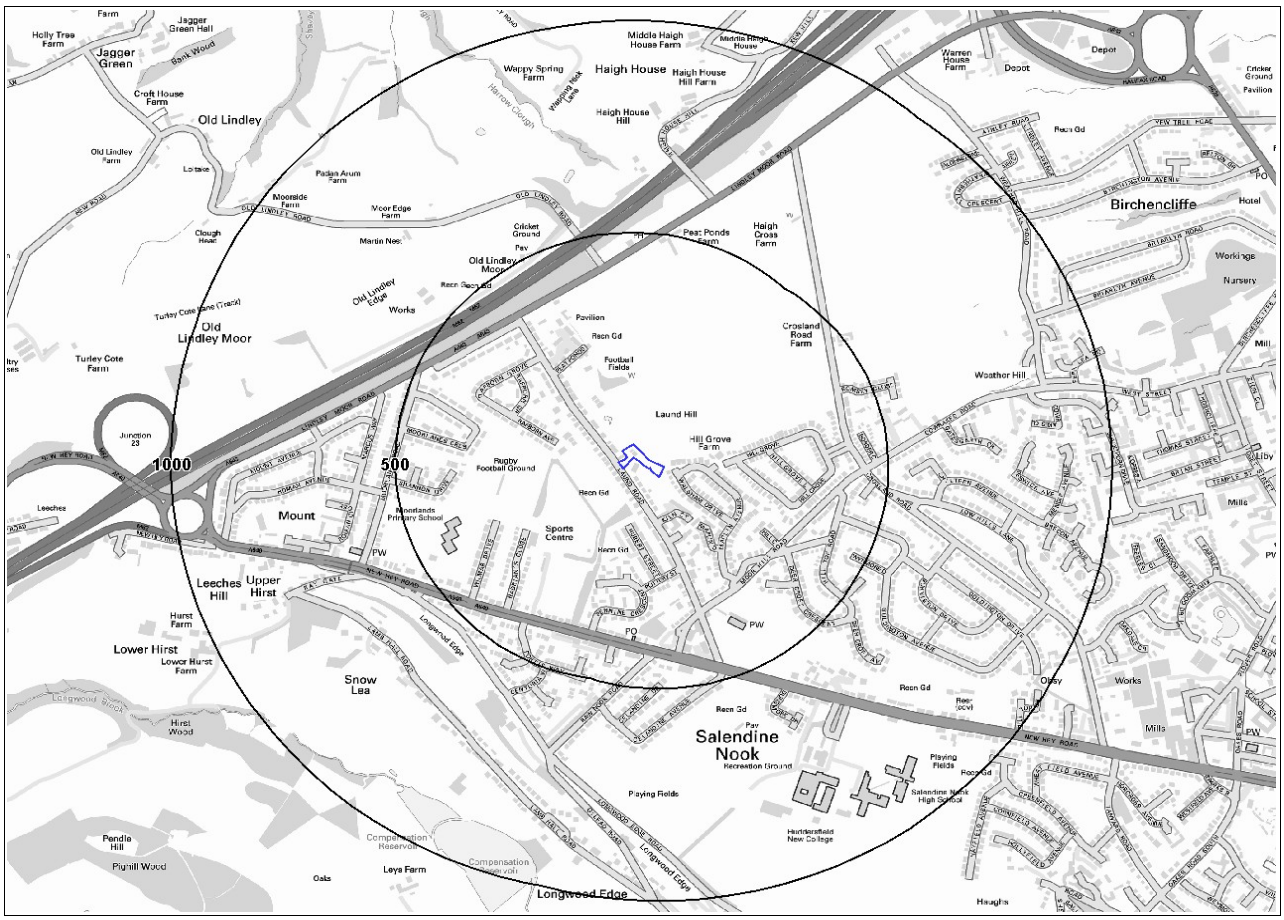
2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

2.2 Superficial Deposits and Landslips Map (1:50,000 scale)

NW N NE



W E

SW S SE

Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? No

Database searched and no data found.

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? No

Database searched and no data found.

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

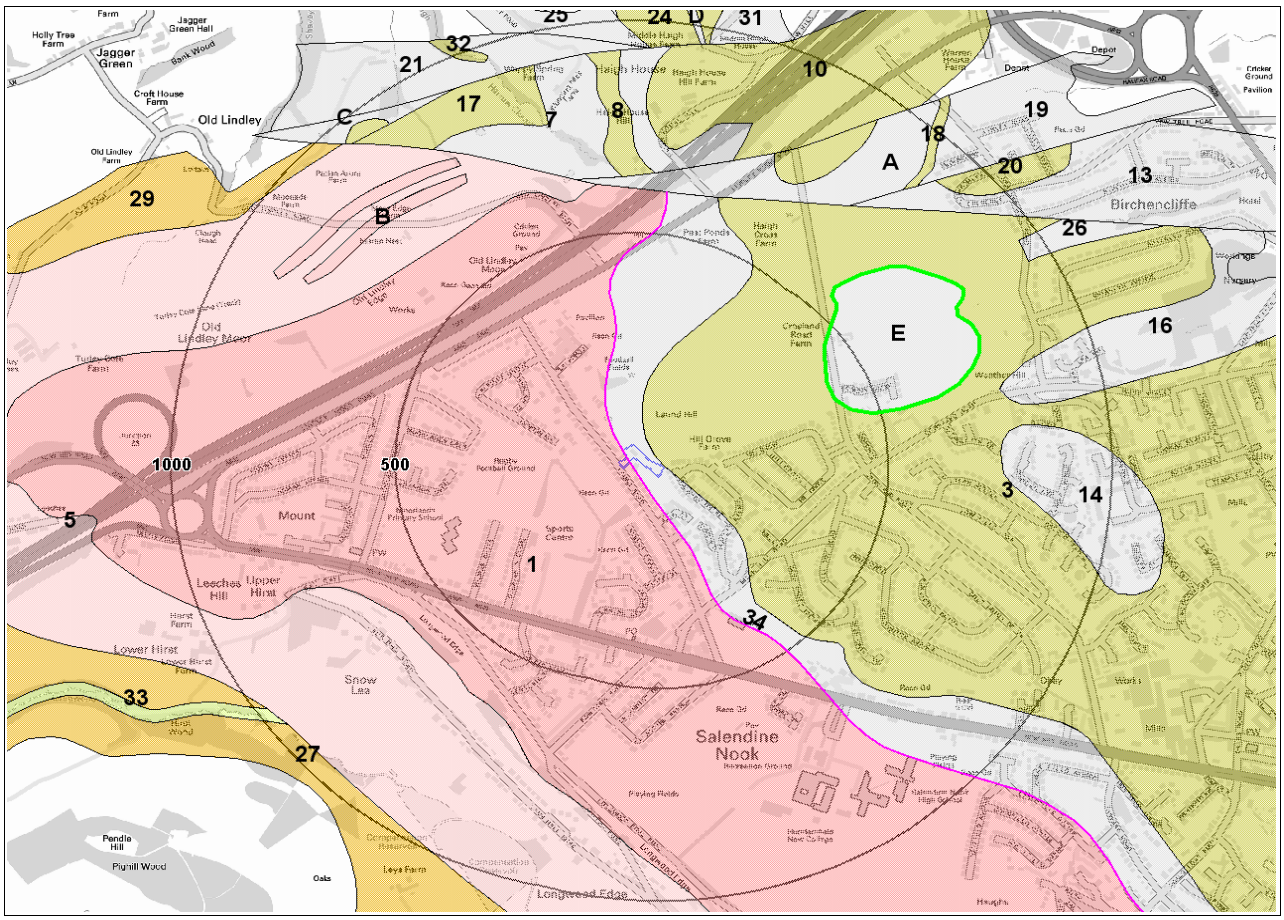
Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)

NW N NE

W E

SW S SE



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 077

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	RR-SDST	ROUGH ROCK - SANDSTONE	NAMURIAN
2	0.0	On Site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	1.0	NE	SBF-SDST	SOFT BED FLAGS - SANDSTONE	WESTPHALIAN
4E	413.0	NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	High	Moderate
0.0	On Site	Fracture	High	Low
1.0	NE	Fracture	High	Moderate

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
34	0.0	On Site	FOSSIL_HORIZON	Marine band
35E	413.0	NE	ROCK	Coal seam, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

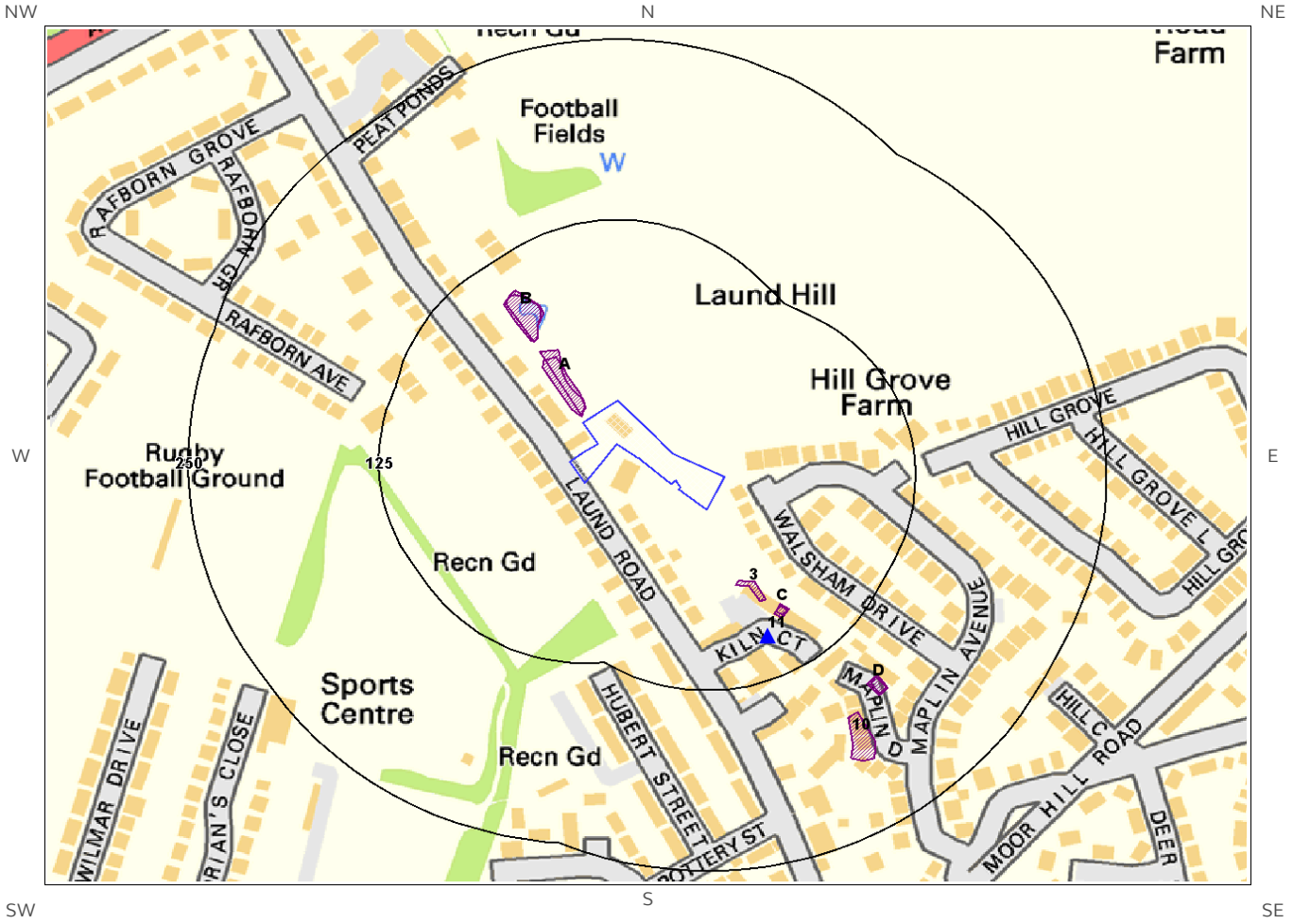
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

---

4 Ground Workings Map



Ground Workings Legend

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Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1A	4.0	NW	410336 418300	Unspecified Ground Workings	1890
2A	5.0	NW	410337 418298	Unspecified Ground Workings	1905
3	53.0	SE	410463 418157	Unspecified Pit	1890
4B	64.0	NW	410311 418347	Pond	1951
5B	64.0	NW	410310 418345	Pond	1948
6C	81.0	SE	410480 418144	Reservoir	1951
7C	82.0	SE	410479 418142	Reservoir	1948
8D	160.0	SE	410543 418092	Reservoir	1951
9D	160.0	SE	410542 418091	Reservoir	1948
10	171.0	SE	410532 418056	Pond	1890

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

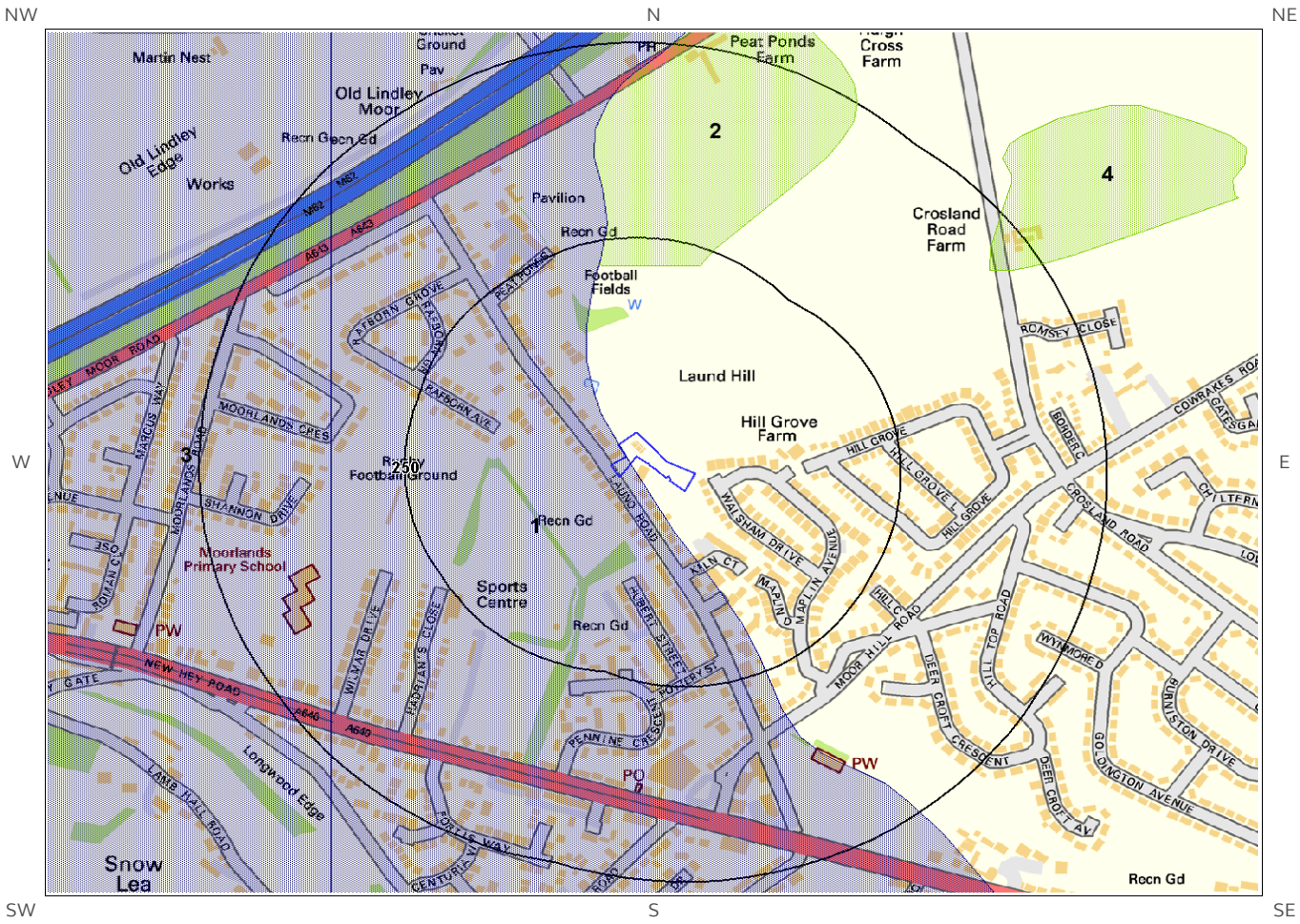
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
11	96.0	SE	410470 418125	Fireclay	Lindley Moor Pottery	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	572.0	SW	409920 417855	Sandstone	Longwood Edge Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	581.0	SW	410012 417759	Sandstone	Longwood Edge Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	583.0	SE	410695 417693	Sandstone	Nook	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	589.0	N	410167 418841	Sandstone	Wapping Nick	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	617.0	SW	409799 417950	Sandstone	Longwood Edge Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	653.0	SW	410095 417630	Sandstone	Longwood Edge	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	668.0	NW	409765 418598	Sandstone	Old Lindley Edge	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	701.0	W	409642 418310	Sandstone	Old Lindley Moor	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	762.0	W	409590 418115	Sandstone	Mount Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	804.0	W	409558 418062	Sandstone	Mount Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	812.0	S	410321 417408	Sandstone	Longwood Edge	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	836.0	W	409540 418005	Sandstone	New Hey Road	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	841.0	NE	411207 418585	Sandstone	Weather Hill Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	931.0	NE	411300 418596	Sandstone	Weather Hill Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	941.0	NE	411302 418618	Sandstone	Weather Hill Quarries	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

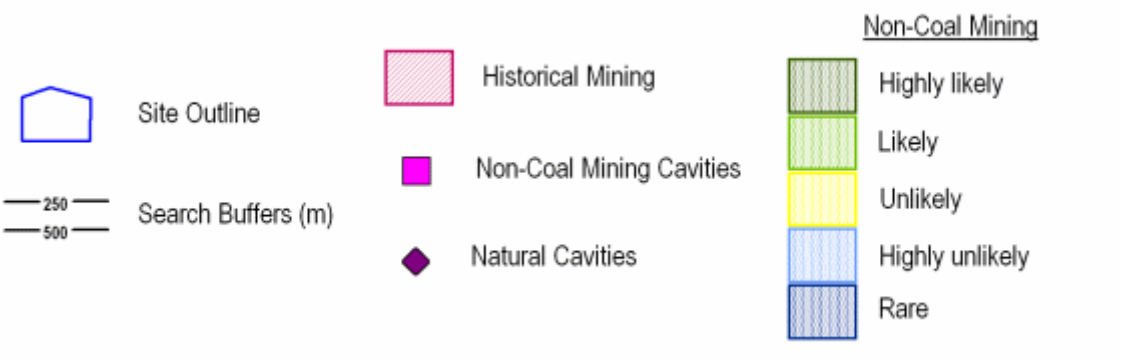
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	945.0	W	409447 417937	Sandstone	Leeches Hill	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
2	214.0	N	Elland Flag Mines	Sandstone - Elland Flags	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
3	340.0	W	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
4	442.0	NE	Elland Flag Mines	Sandstone - Elland Flags	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	780.0	NW	Elland Flag Mines	Sandstone - Elland Flags	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	927.0	NW	Elland Flag Mines	Sandstone - Elland Flags	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered
Not shown	927.0	NW	Elland Flag Mines	Sandstone - Elland Flags	Underground mining is known or considered likely to have occurred within or close to the area. Potential for difficult ground conditions are at a level where they should be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
Not shown	893.0	SE	410800 417400	LANDS HEAD, West Yorkshire	-	-	Flagstone
Not shown	893.0	SE	410800 417400	LANDS HEAD, West Yorkshire	-	-	Flagstone

5.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

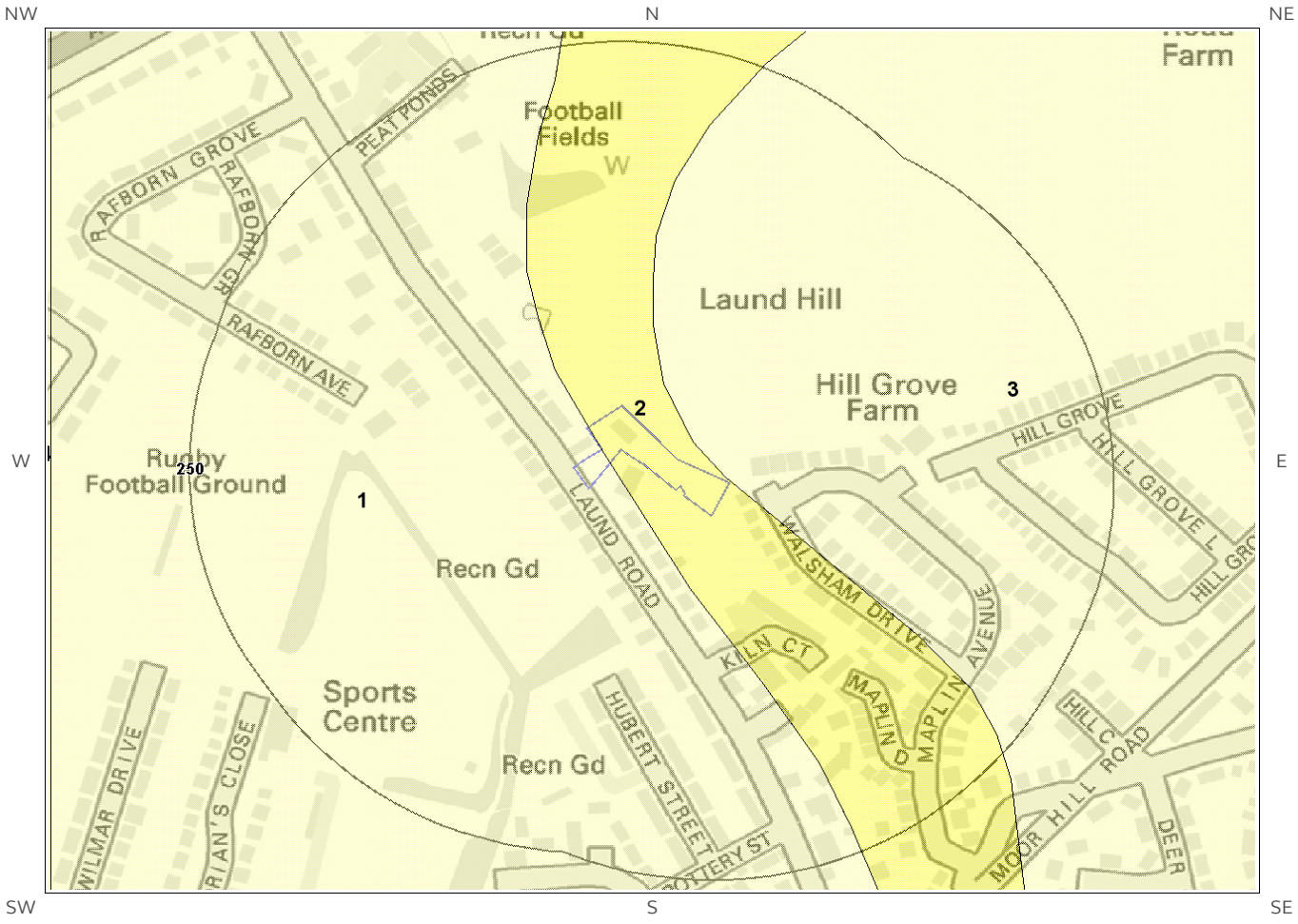
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map

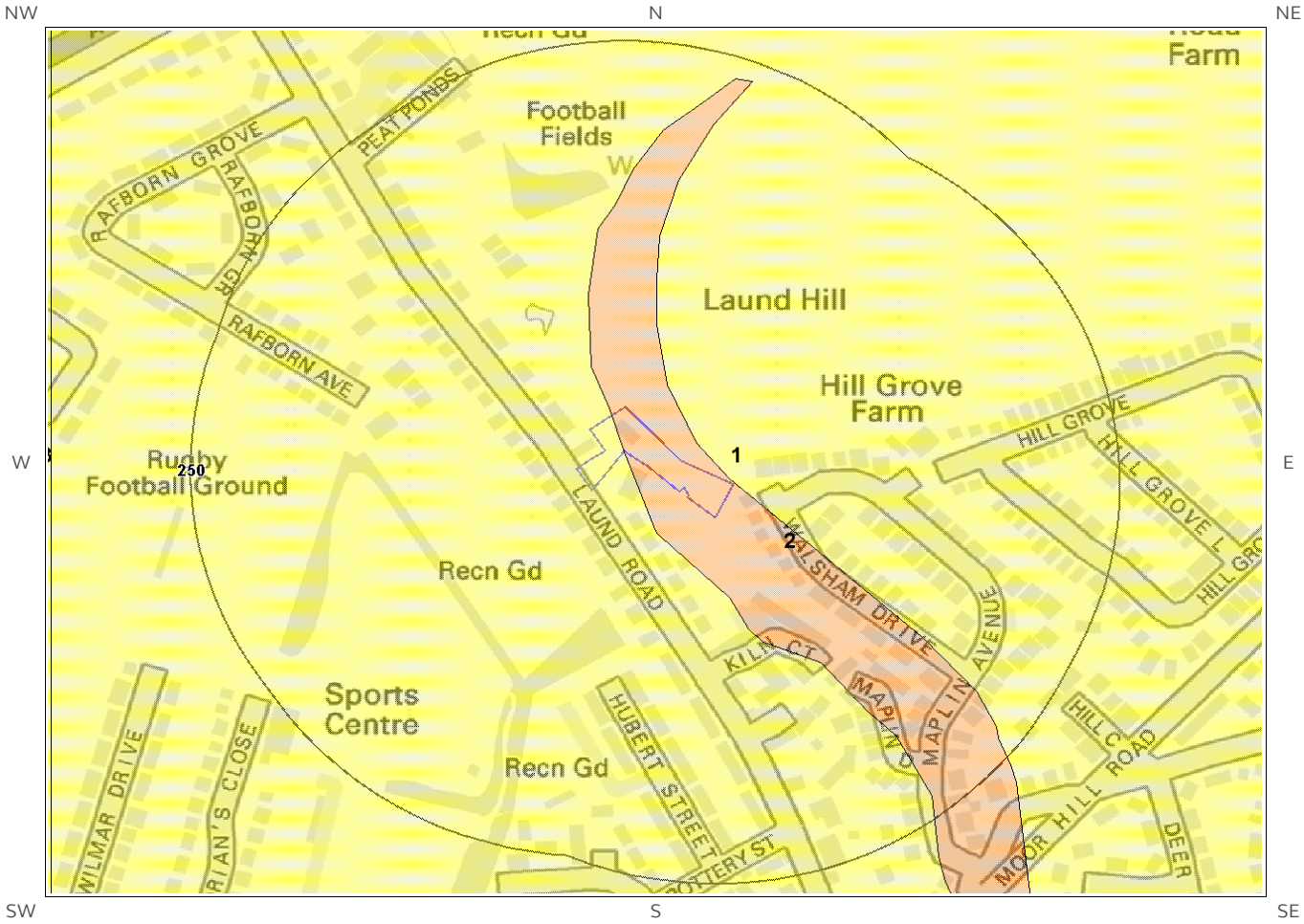


Shrink Swell Clay Legend

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6.2 Landslides Map

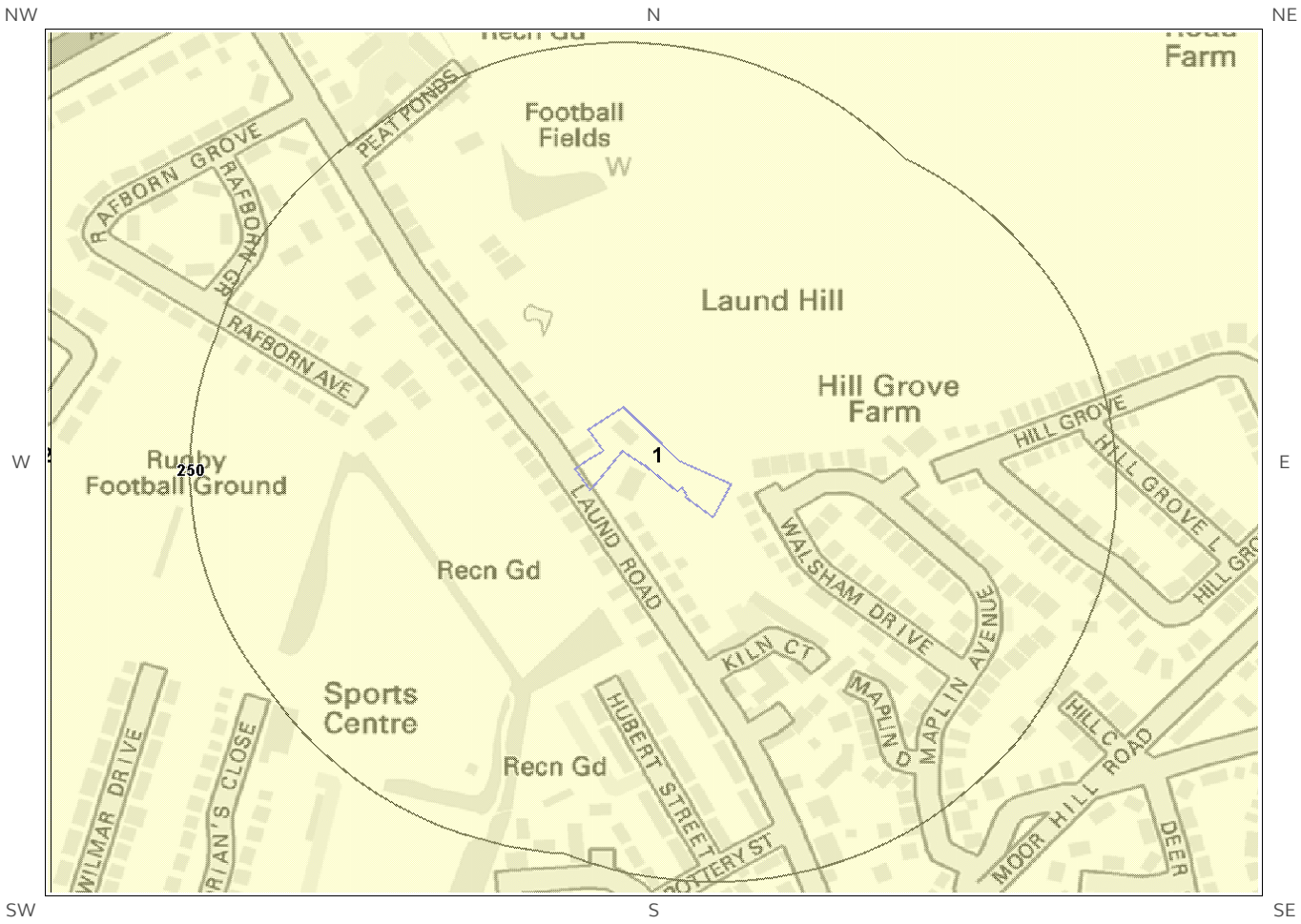


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks Map

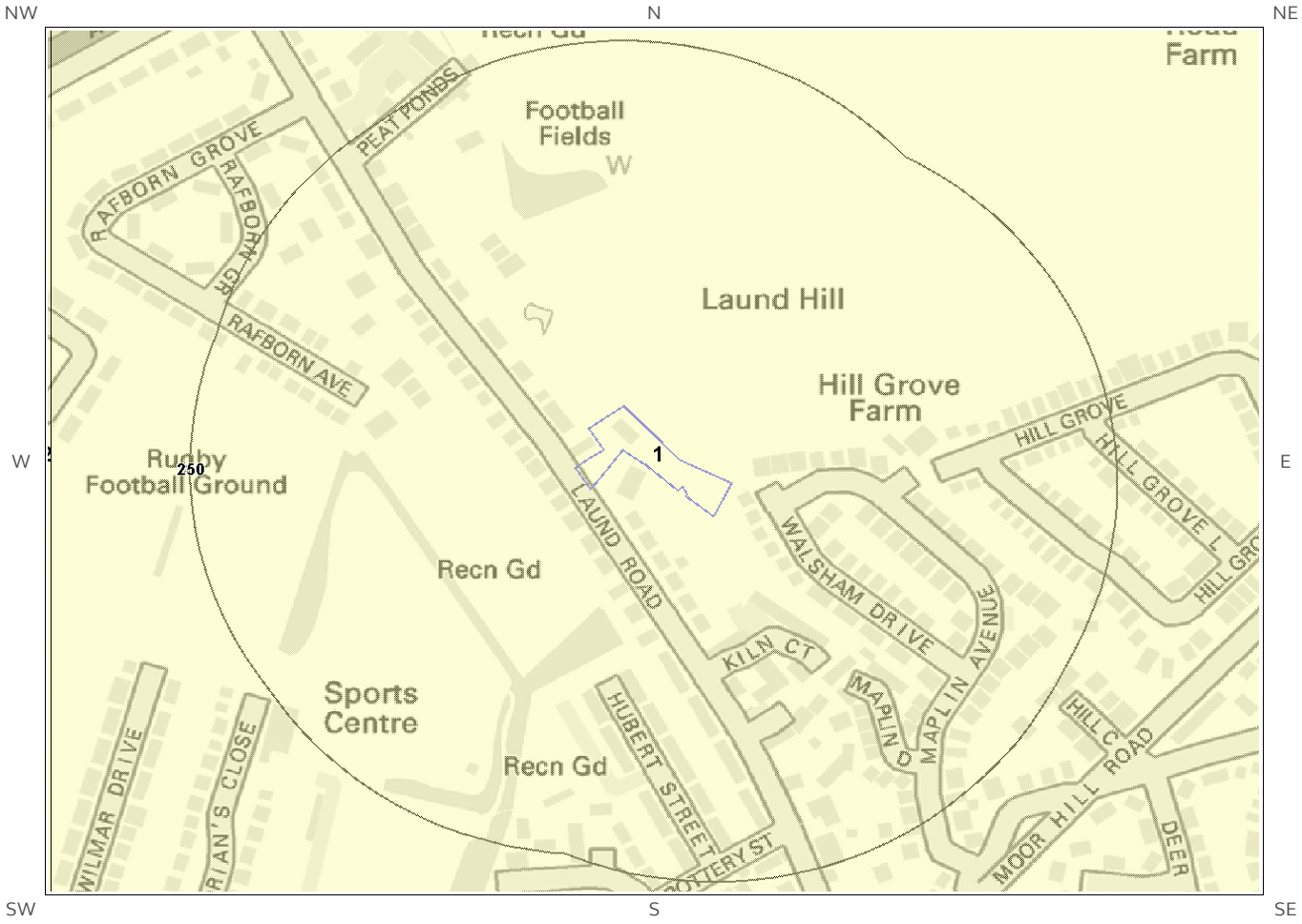


Ground Dissolution Soluble Rocks Legend

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6.4 Compressible Deposits Map

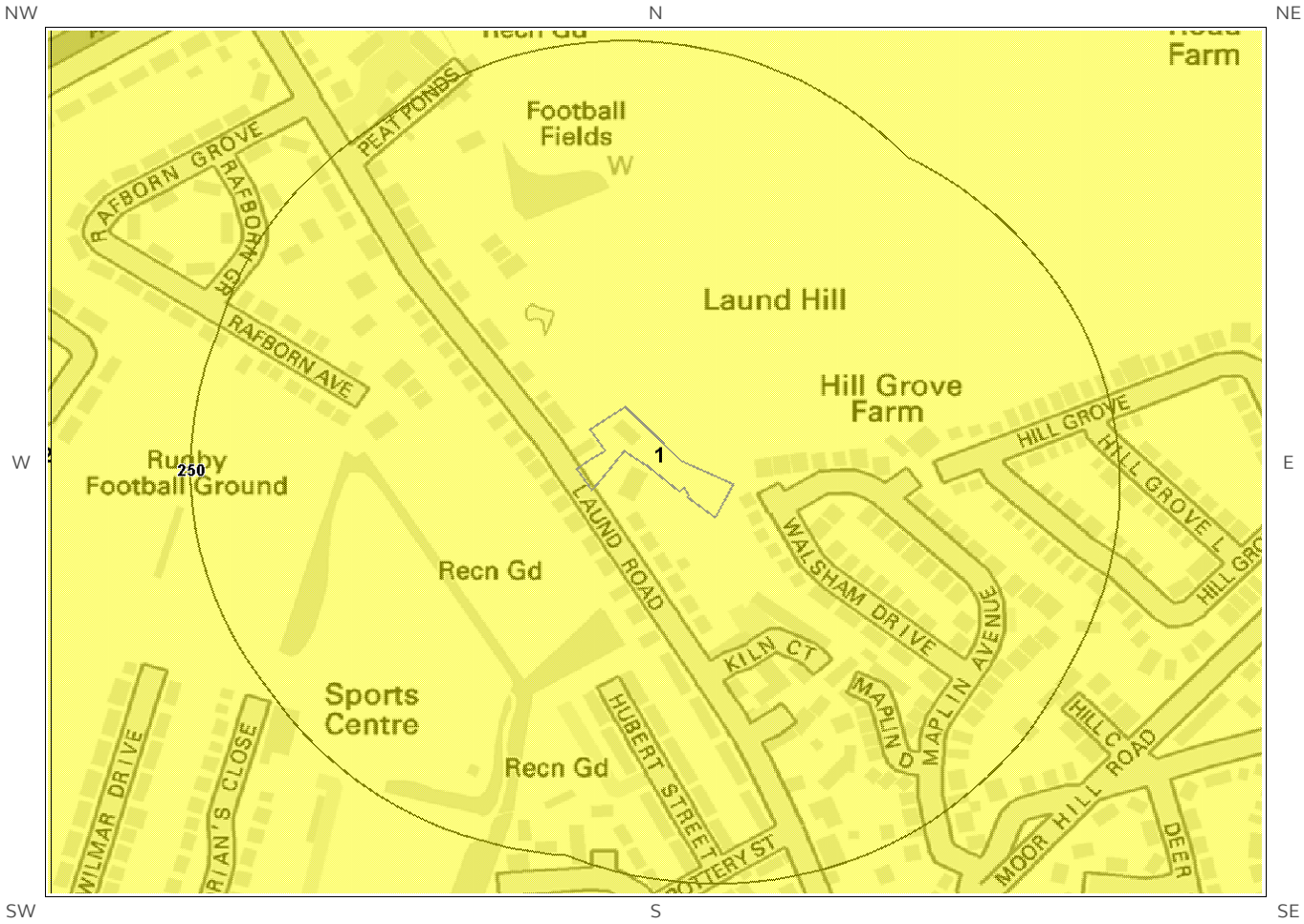


Compressible Deposits Legend

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6.5 Collapsible Deposits Map

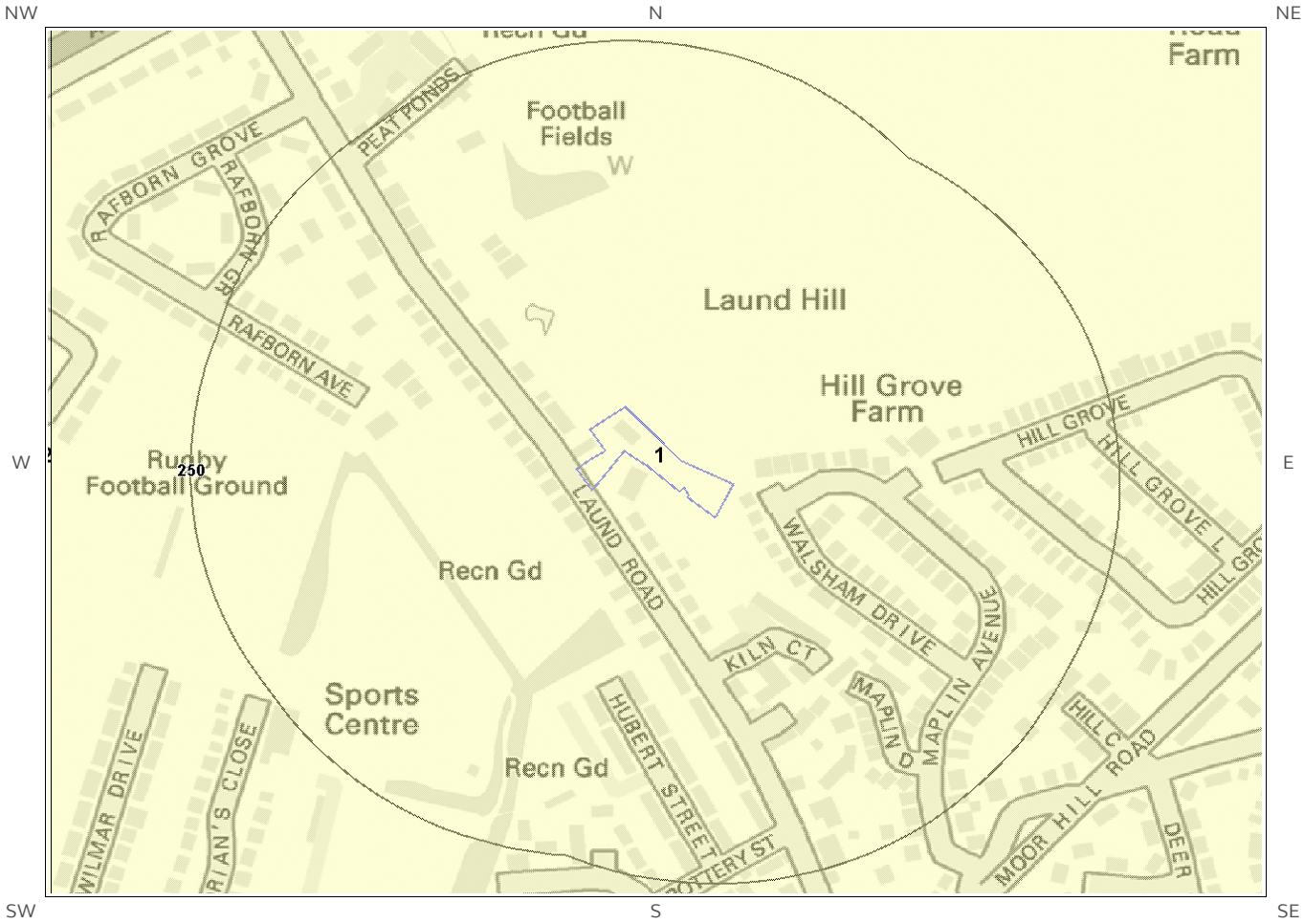


Collapsible Deposits Legend

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6.6 Running Sand Map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site*[*] boundary? Low

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	1.0	NE	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Hazard Rating	Details
2	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records Map



Borehole Records Legend

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Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary: 0

Database searched and no data found.

8 Estimated Background Soil Chemistry

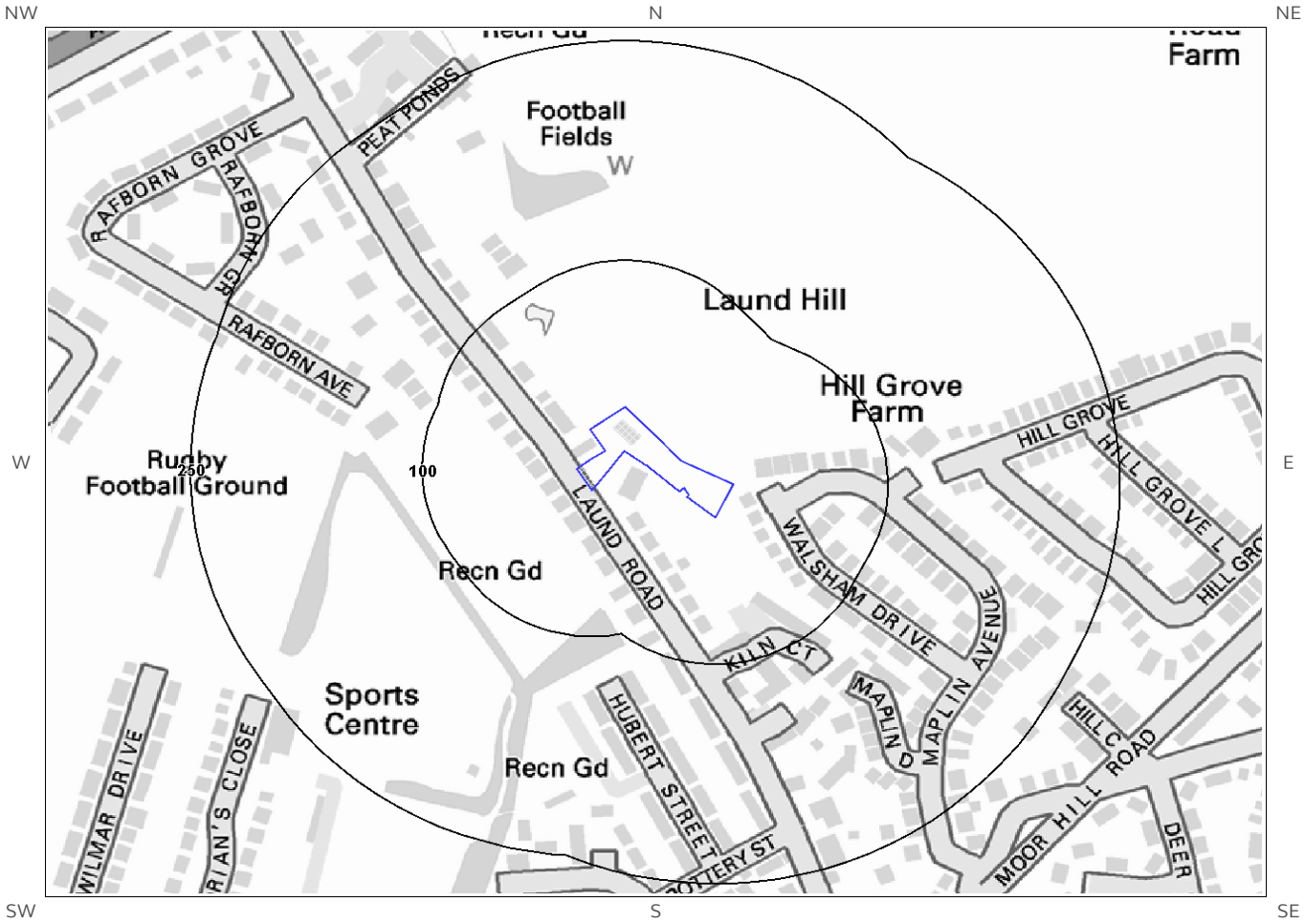
Records of background estimated soil chemistry within 250m of the study site boundary: 3

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	>180 mg/kg	30 - 45 mg/kg	200 - 300 mg/kg
0.0	On Site	RuralSoil	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	<15 mg/kg	200 - 300 mg/kg
1.0	NE	RuralSoil	25 - 35 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	200 - 300 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

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- Site Outline
- 250 / 500 Search Buffers (m)
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- High Speed 2 Revised Proposed Route
- Crossrail 1
- Railway and/or Tunnel Feature from Historical Mapping

9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary?	No
Have any underground railway lines been identified within 250m of the study site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary?	No
Have any other railway tunnels been identified within 250m of the site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary?	No
Have any historical railway or tunnel features been identified within 250m of the study site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

Groundsure Helpline

Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

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Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

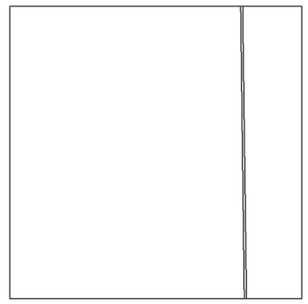
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Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1893
Edition N/A
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Revised 1893
Edition N/A
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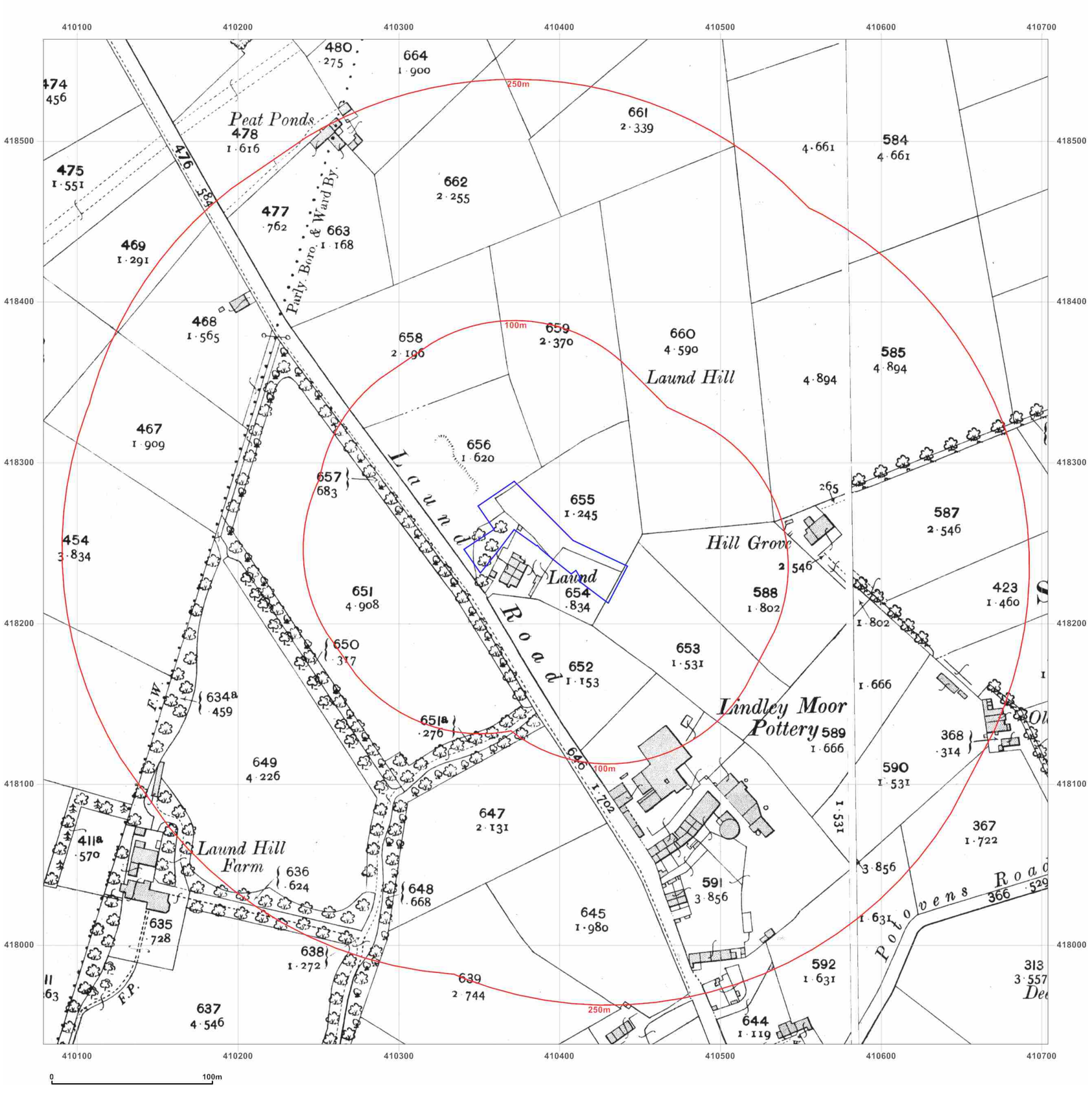
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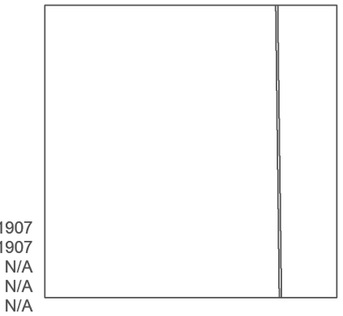
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Edition N/A
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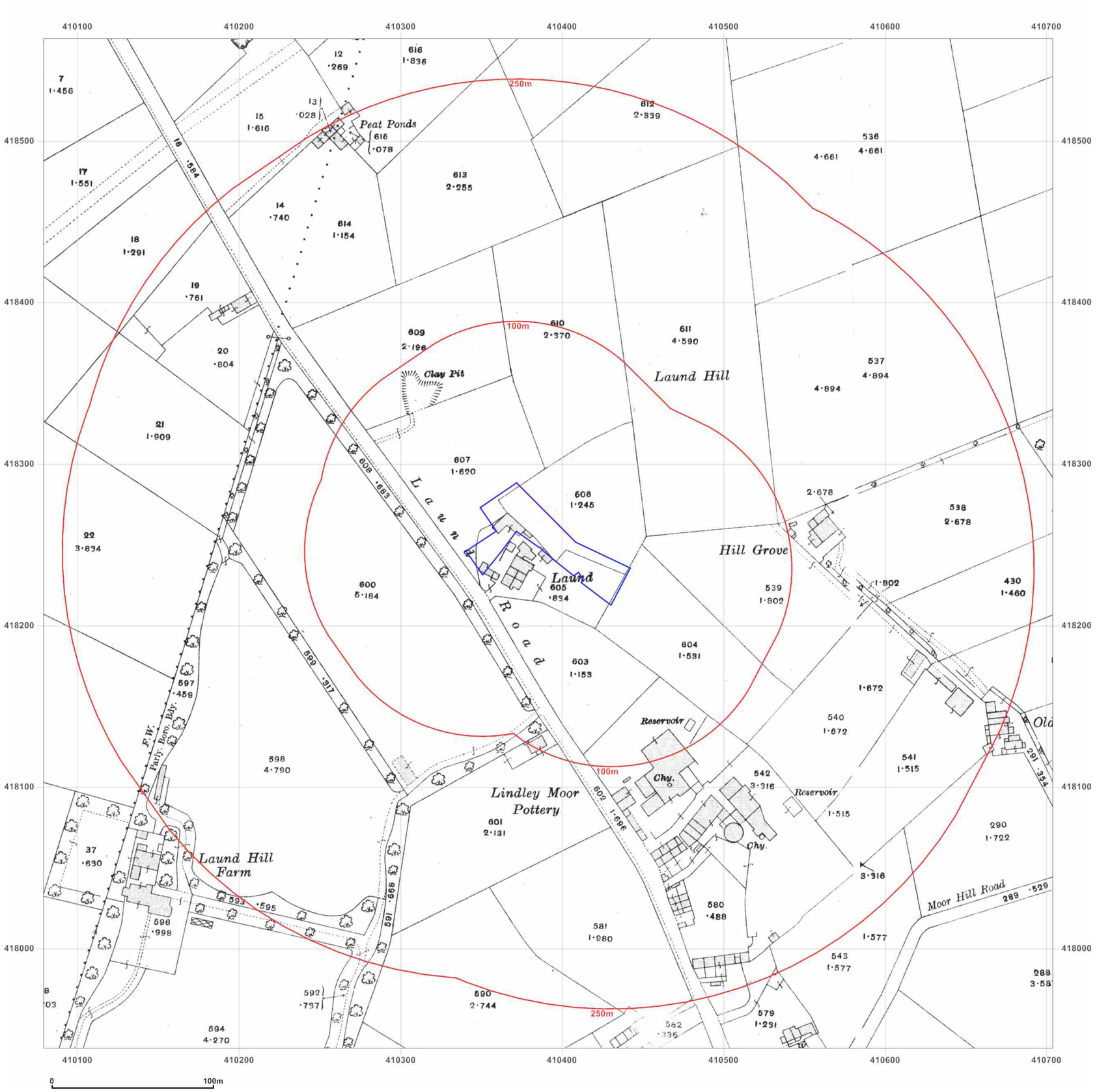
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Client Ref: A0697
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Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1918-1919**

Scale: 1:2,500

Printed at: 1:2,500

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Edition N/A
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Revised 1918
Edition N/A
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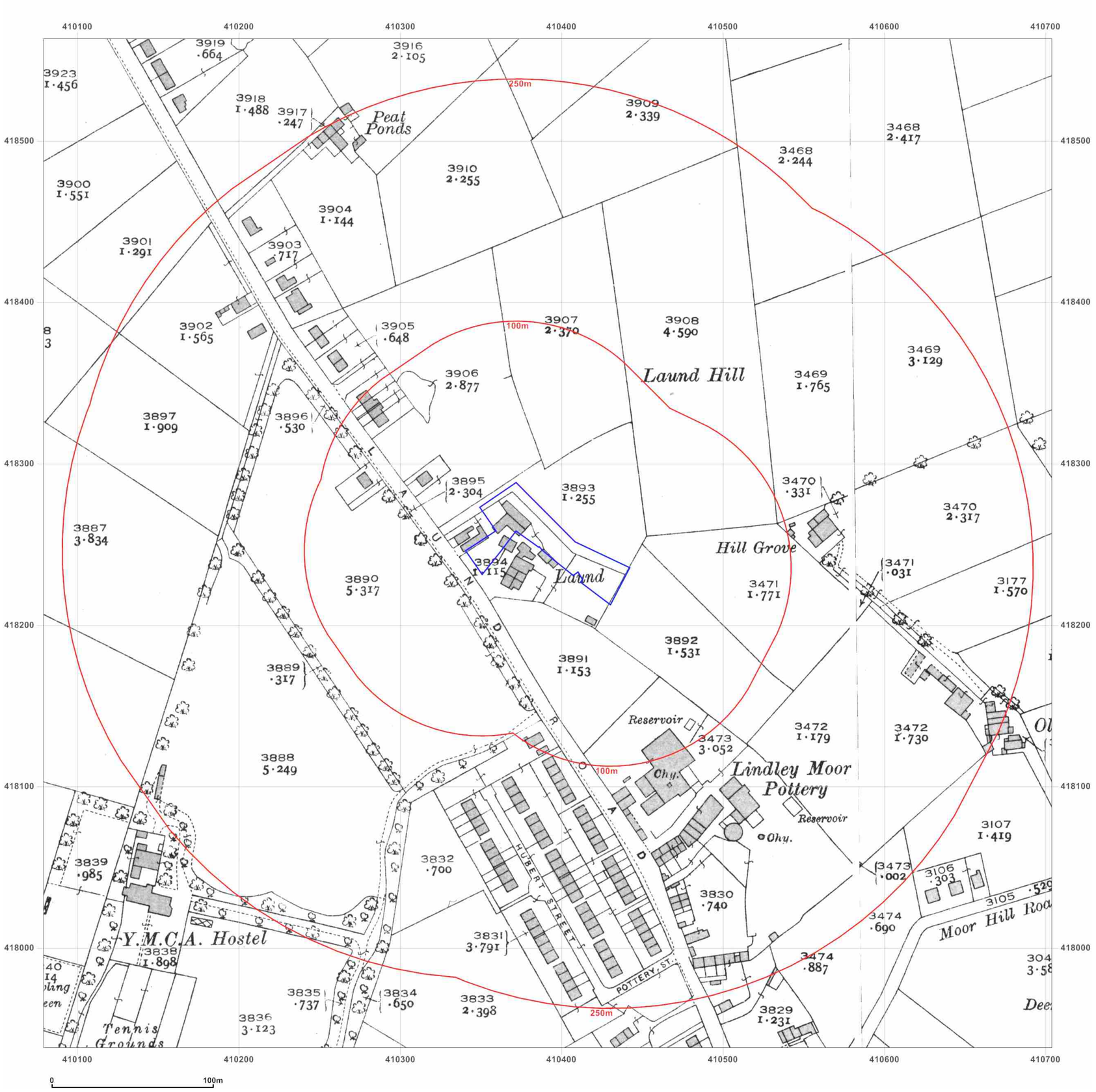
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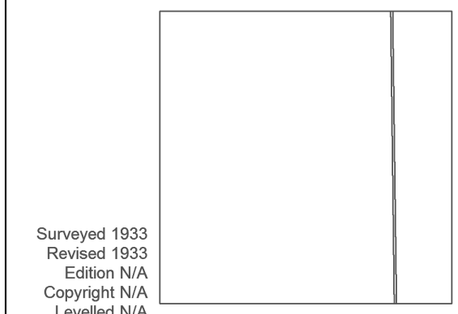
Map Name: County Series

Map date: **1933**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1933
Edition N/A
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Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

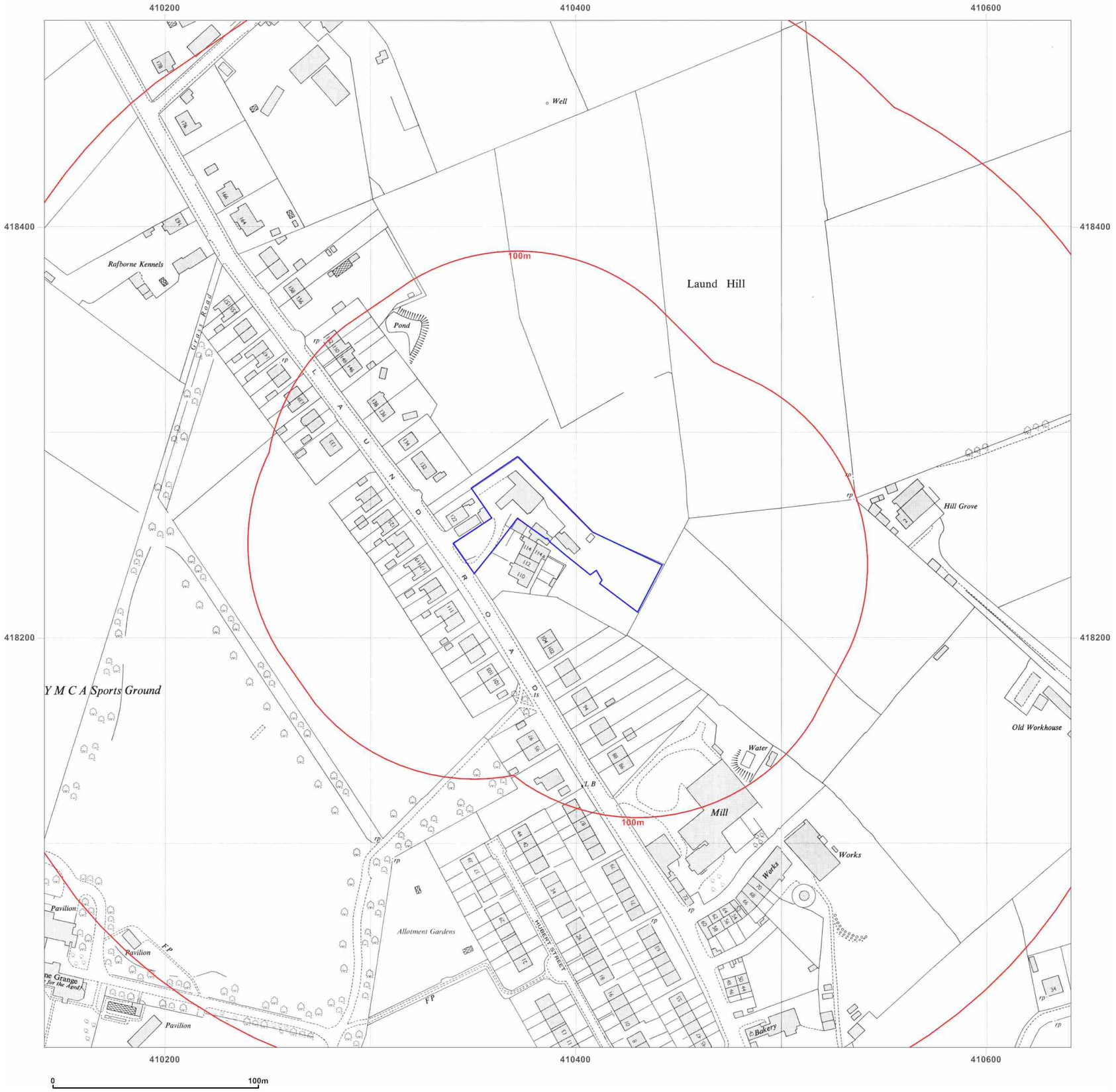
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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1960**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1960	Surveyed 1960
Revised 1960	Revised 1960
Edition N/A	Edition N/A
Copyright 1960	Copyright 1960
Levelled 1931	Levelled 1931

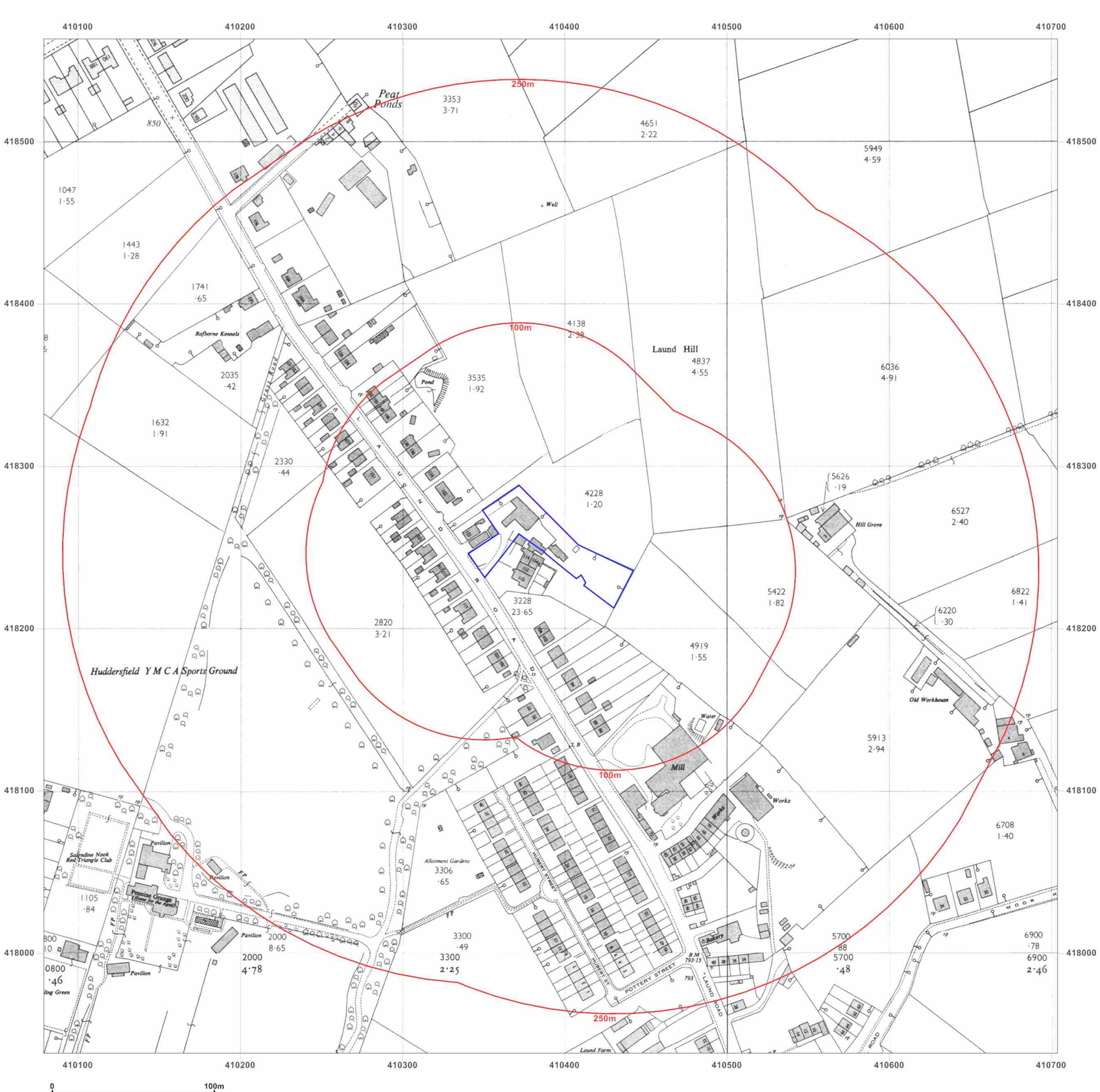
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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1961**

Scale: 1:2,500

Printed at: 1:2,500

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Revised 1961
Edition 1963
Copyright 1963
Levelled 1959

Surveyed 1961
Revised 1961
Edition 1962
Copyright 1962
Levelled 1959

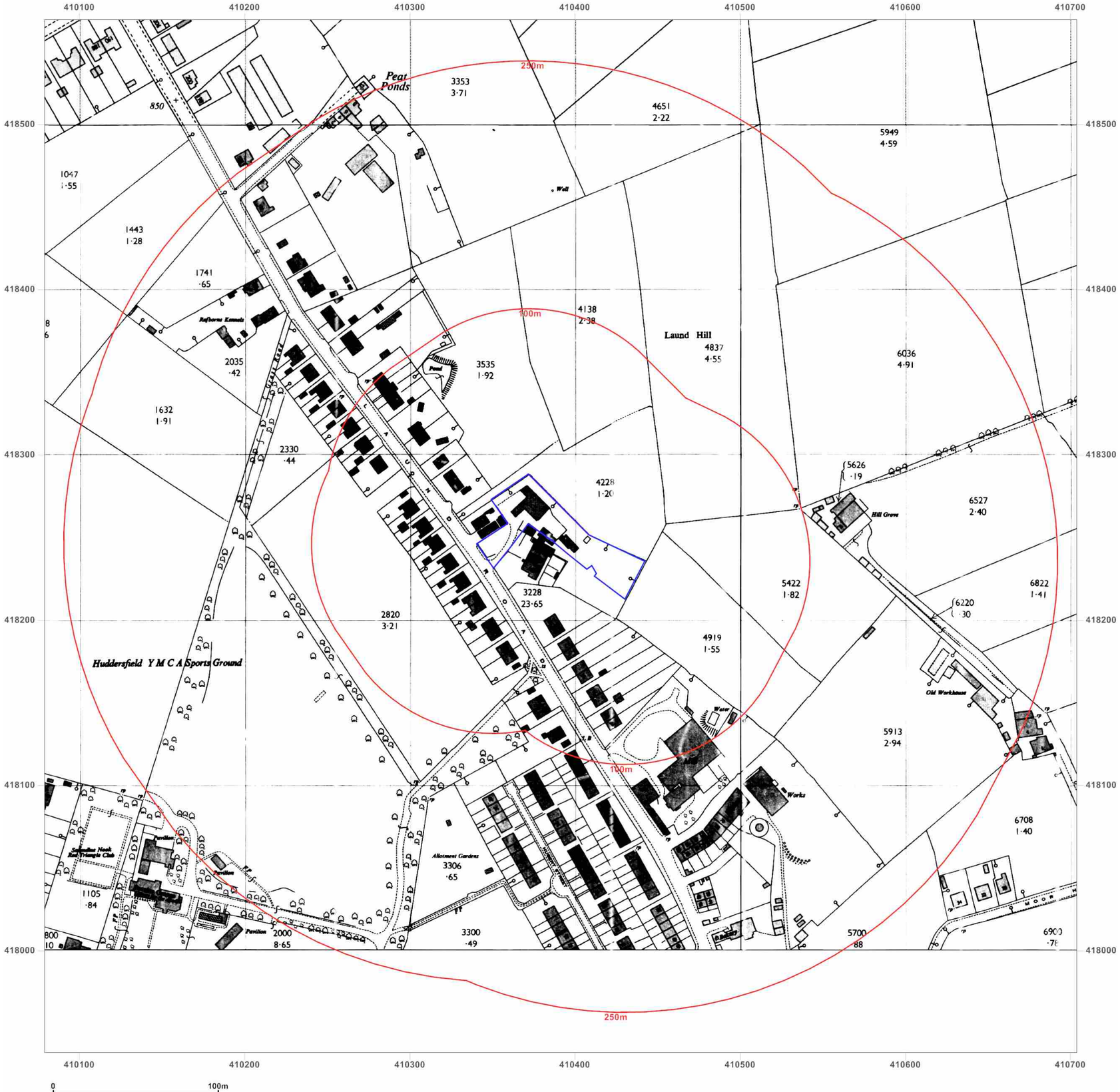
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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1963**

Scale: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
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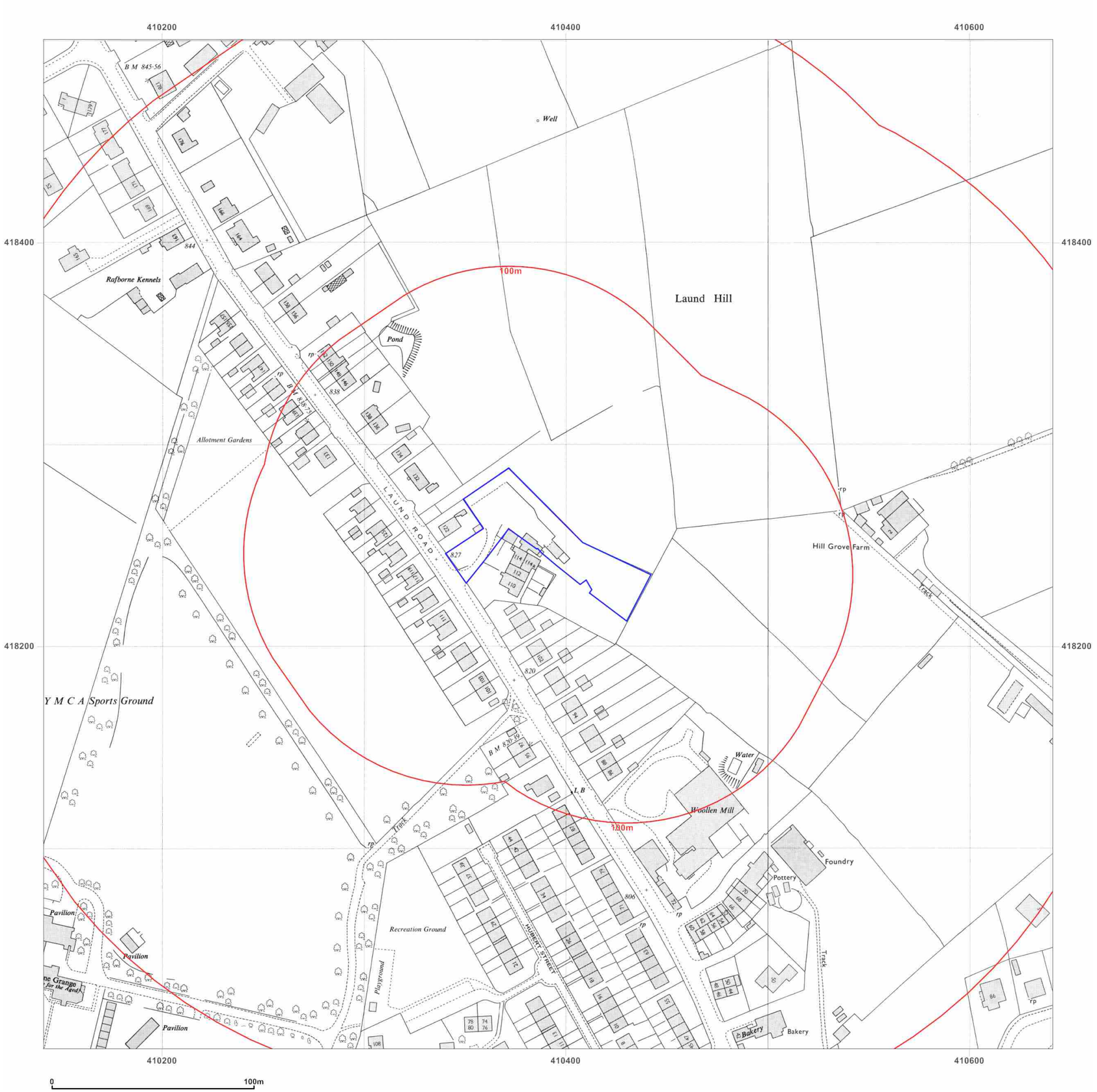
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Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1966-1970**

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Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1975**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A

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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1977**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

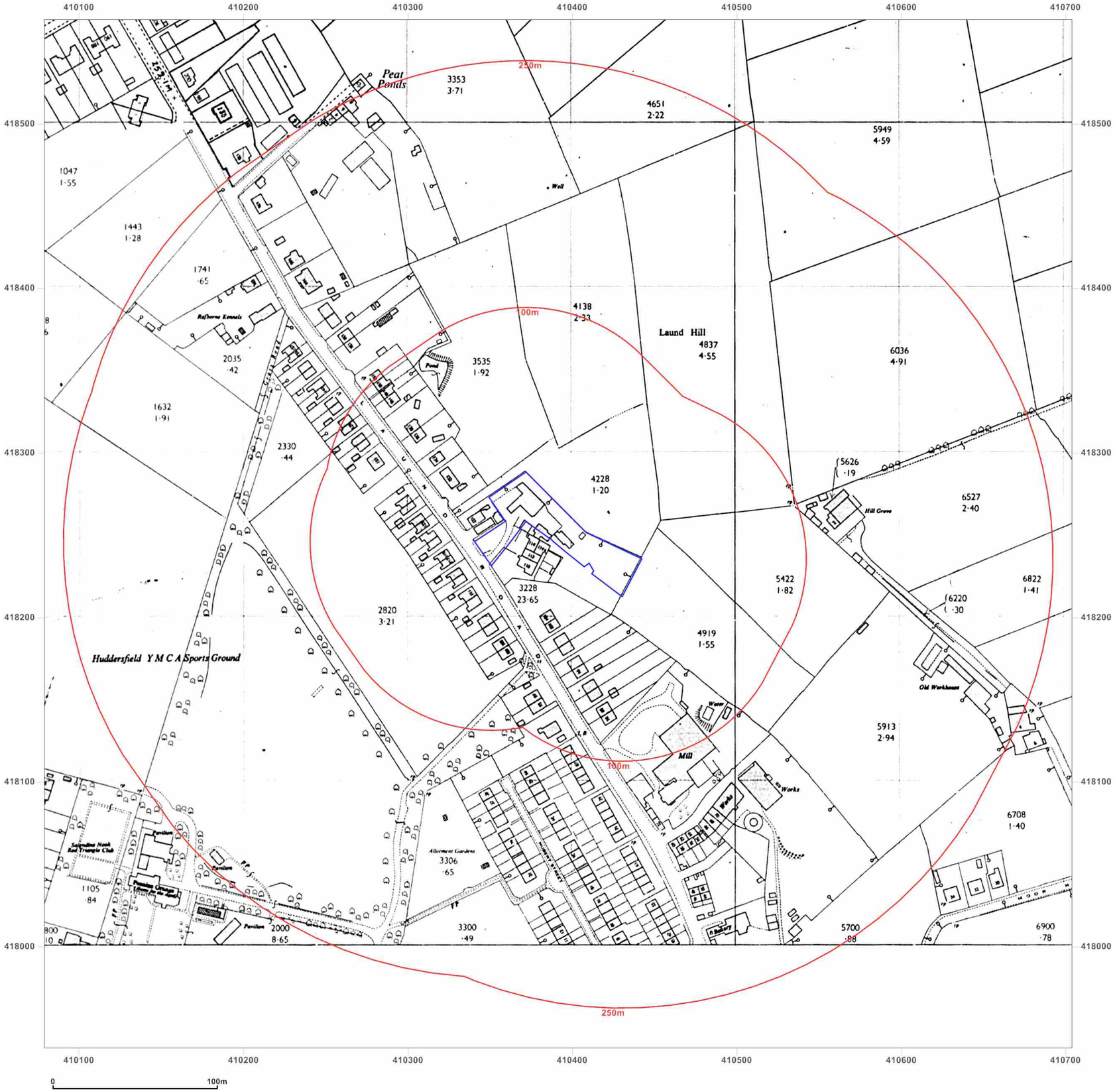
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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1978**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1978
Revised 1978
Edition N/A
Copyright 1978
Levelled N/A

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Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1979**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1979
Revised 1979
Edition N/A
Copyright 1979
Levelled N/A

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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

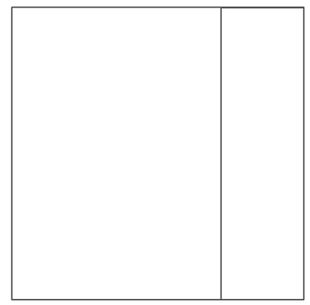
Map Name: National Grid

Map date: **1980**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1960
Revised 1980
Edition N/A
Copyright 1980
Levelled 1959

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Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1987**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1960
Revised 1987
Edition N/A
Copyright 1988
Levelled 1959

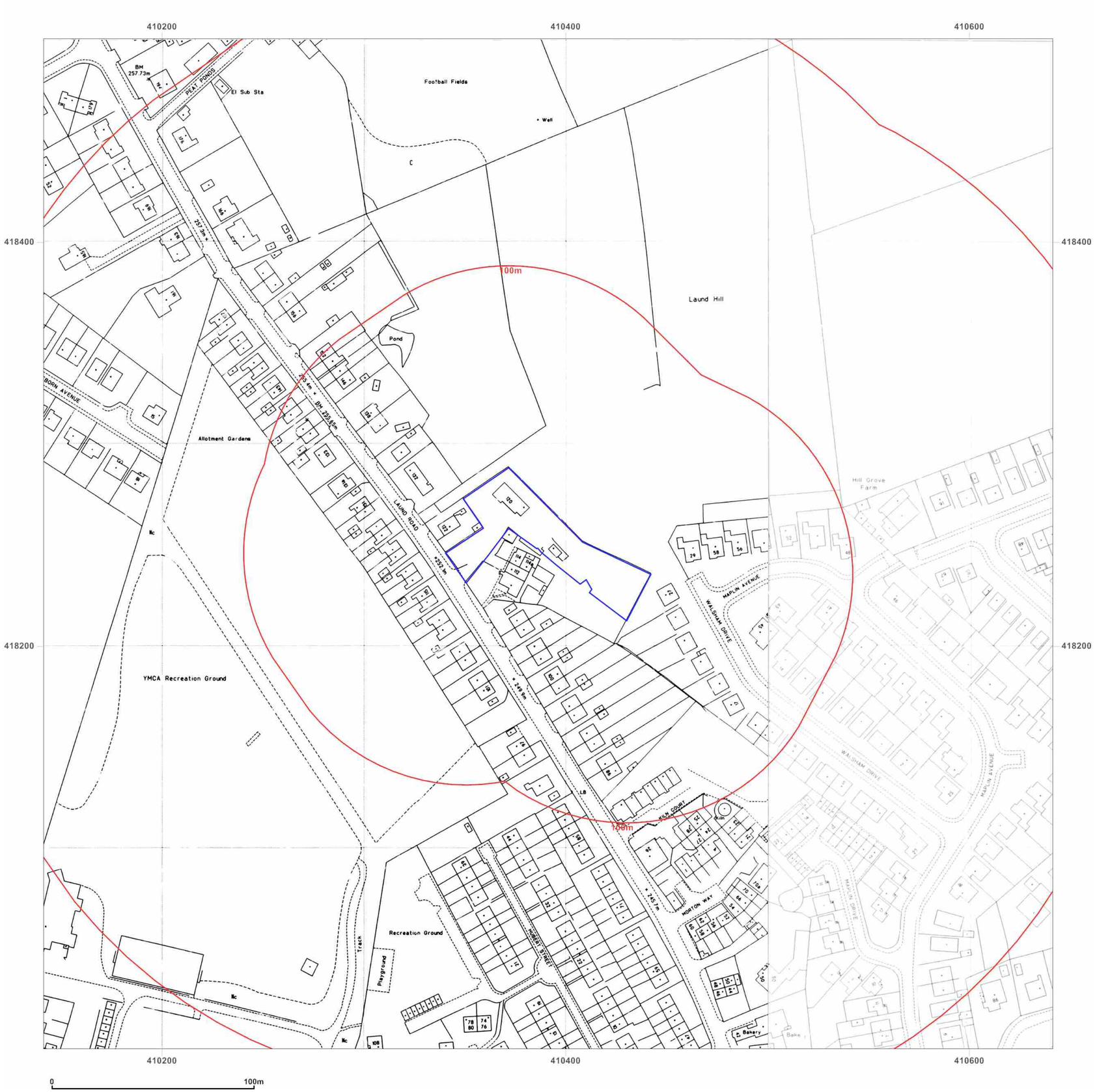
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Site Details:

120, LAUND ROAD,
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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1993
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1993
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

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Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1993**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

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Site Details:

120, LAUND ROAD,
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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1854**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1850
Revised N/A
Edition 1854
Copyright N/A
Levelled 1853

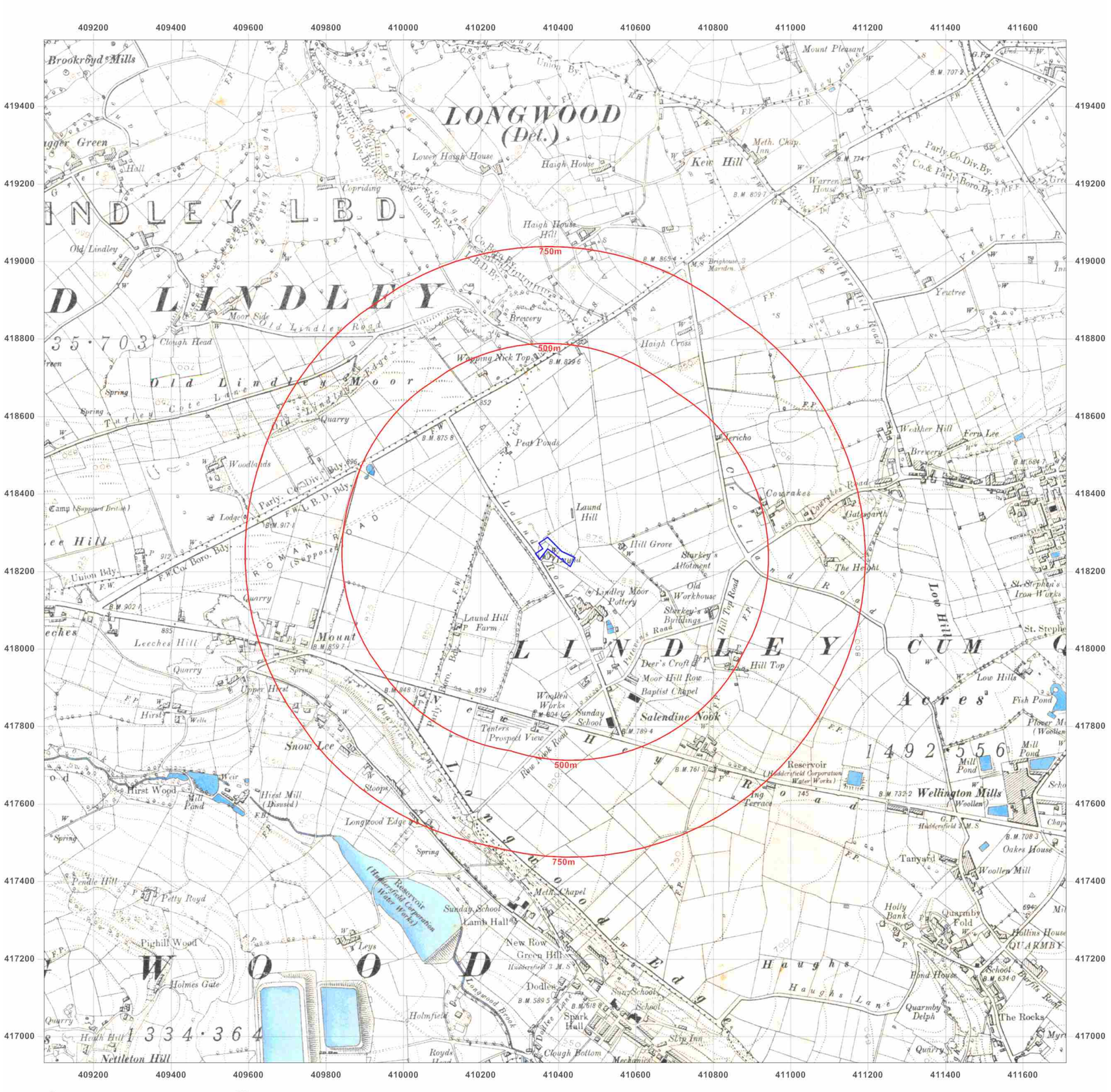
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Site Details:

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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1890-1892**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

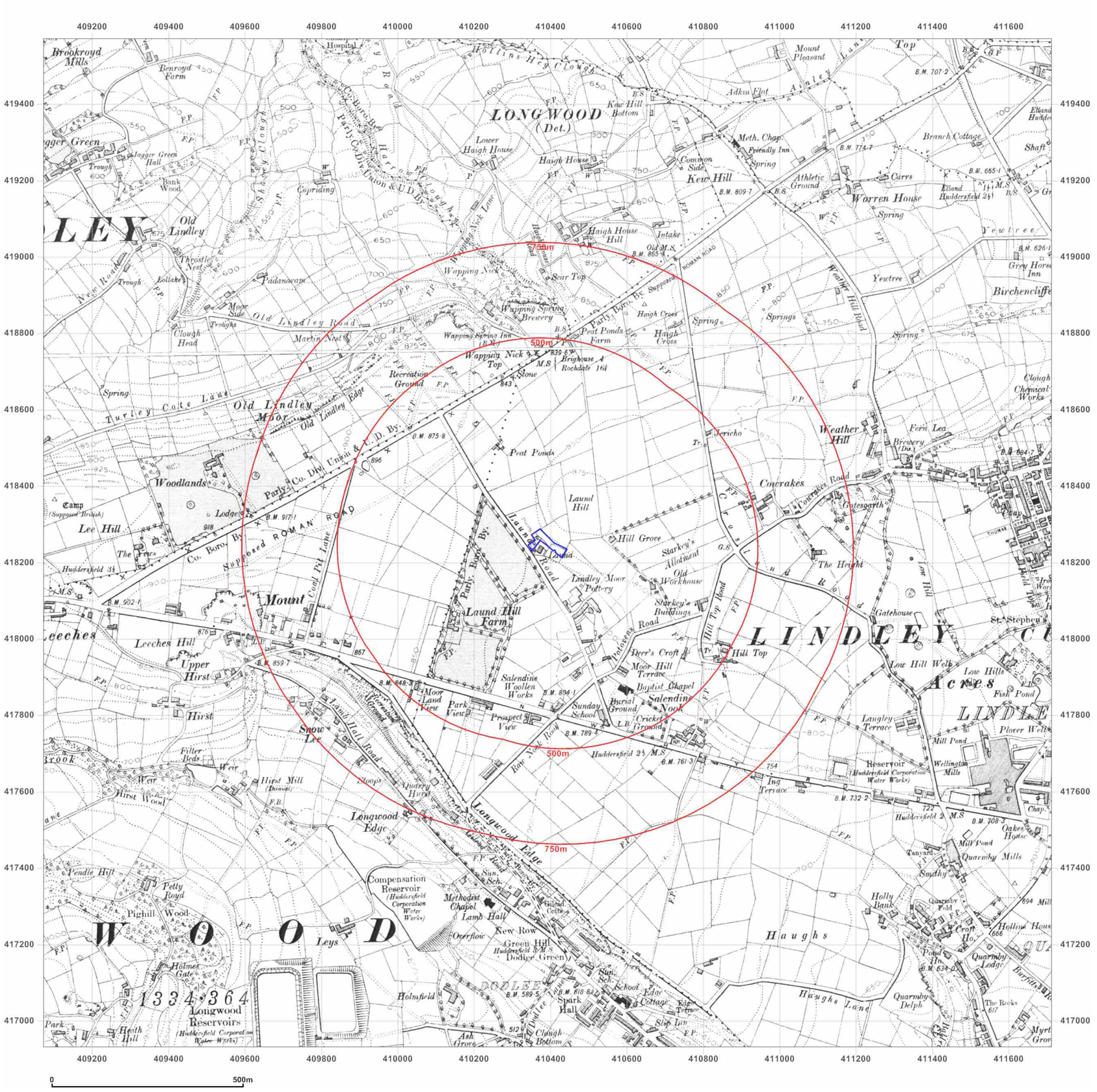
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Site Details:

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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1905**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1892
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1905
Edition N/A
Copyright N/A
Levelled N/A

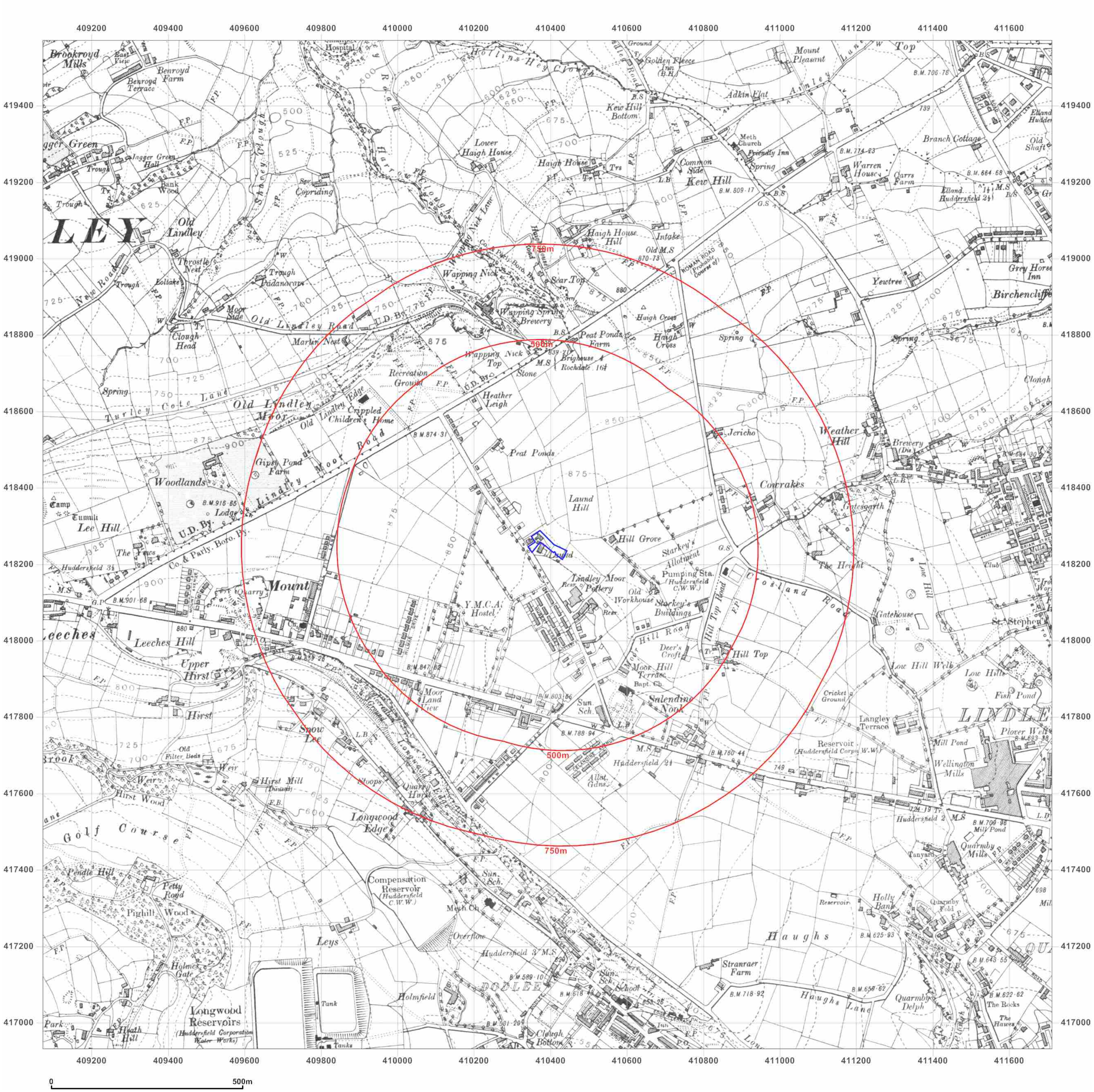
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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1930**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1849
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1849
Revised 1930
Edition N/A
Copyright N/A
Levelled N/A

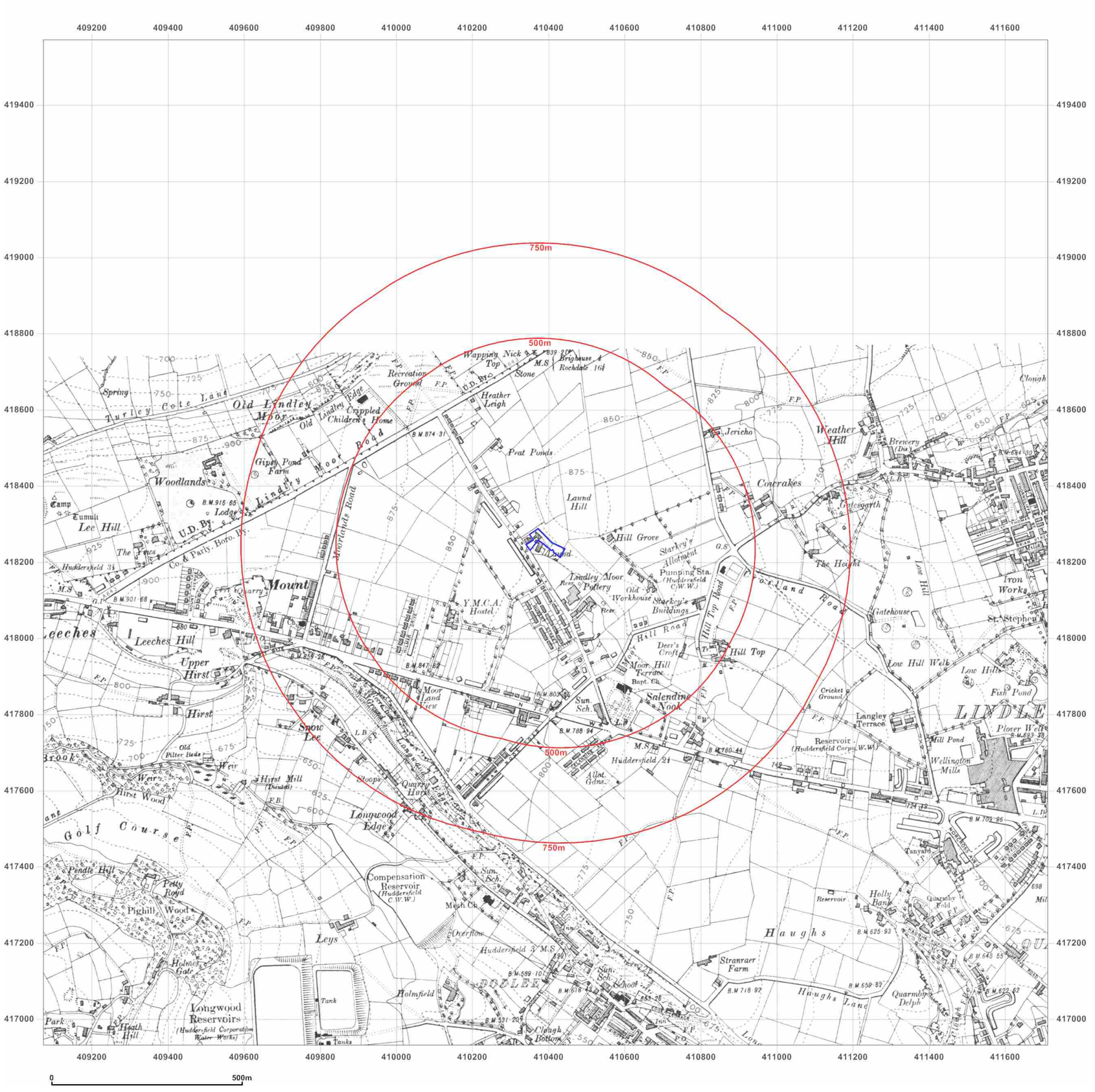
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Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1849
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

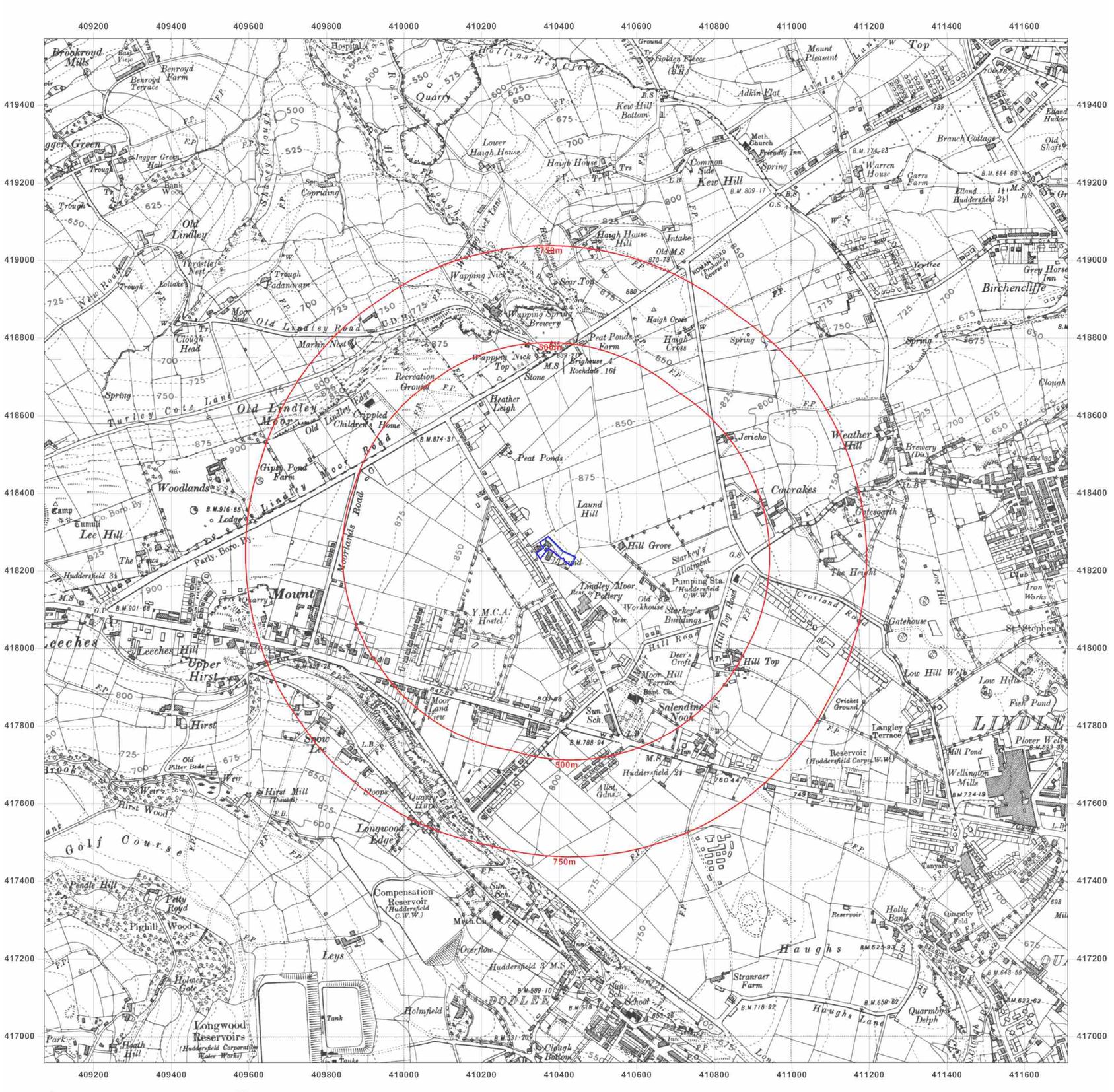
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Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1849
Revised 1948
Edition 1948
Copyright N/A
Levelled N/A

Surveyed 1849
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

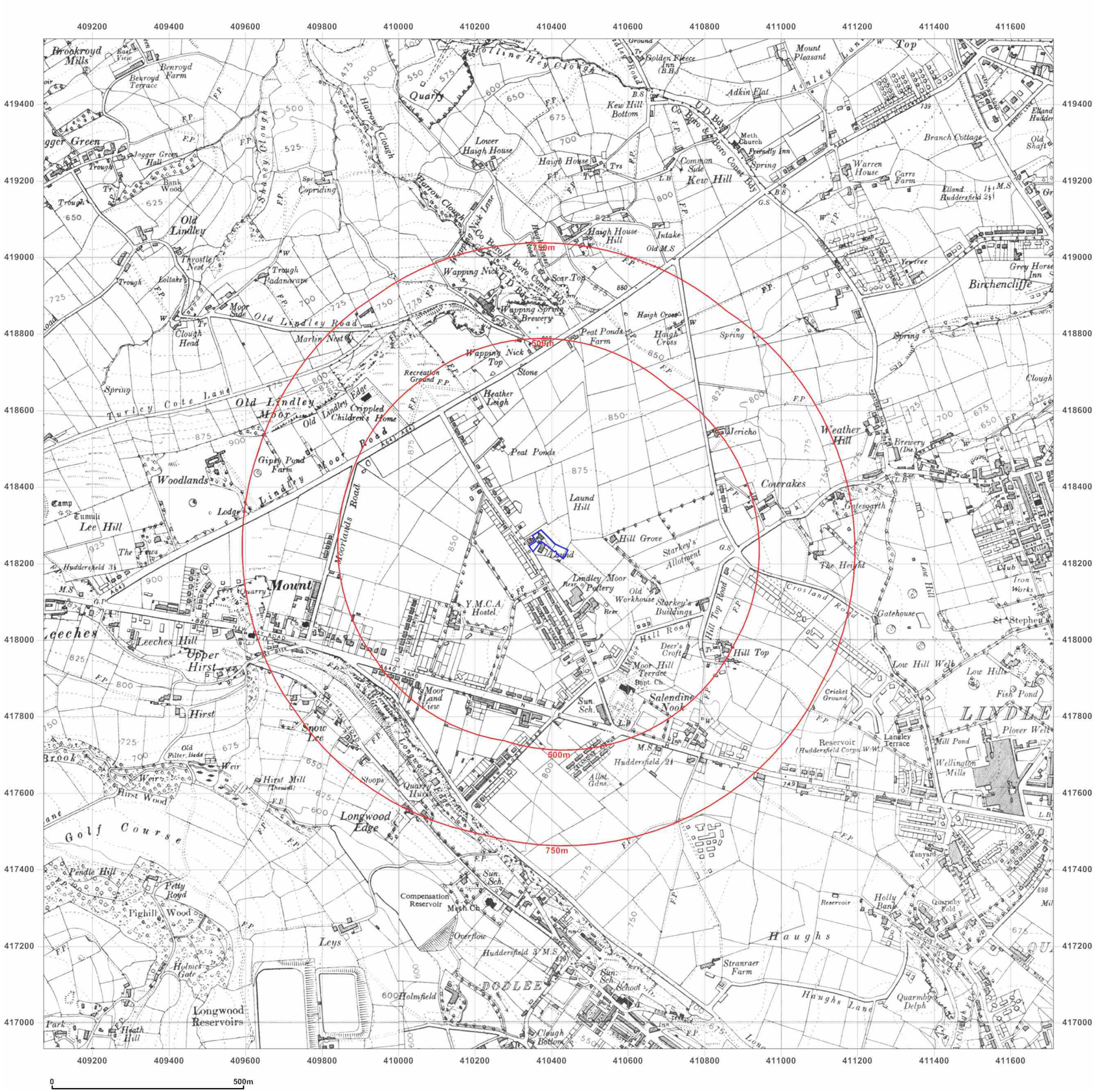
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Groundsure INSIGHTS

Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: Provisional

Map date: **1955-1956**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright 1956
Levelled N/A

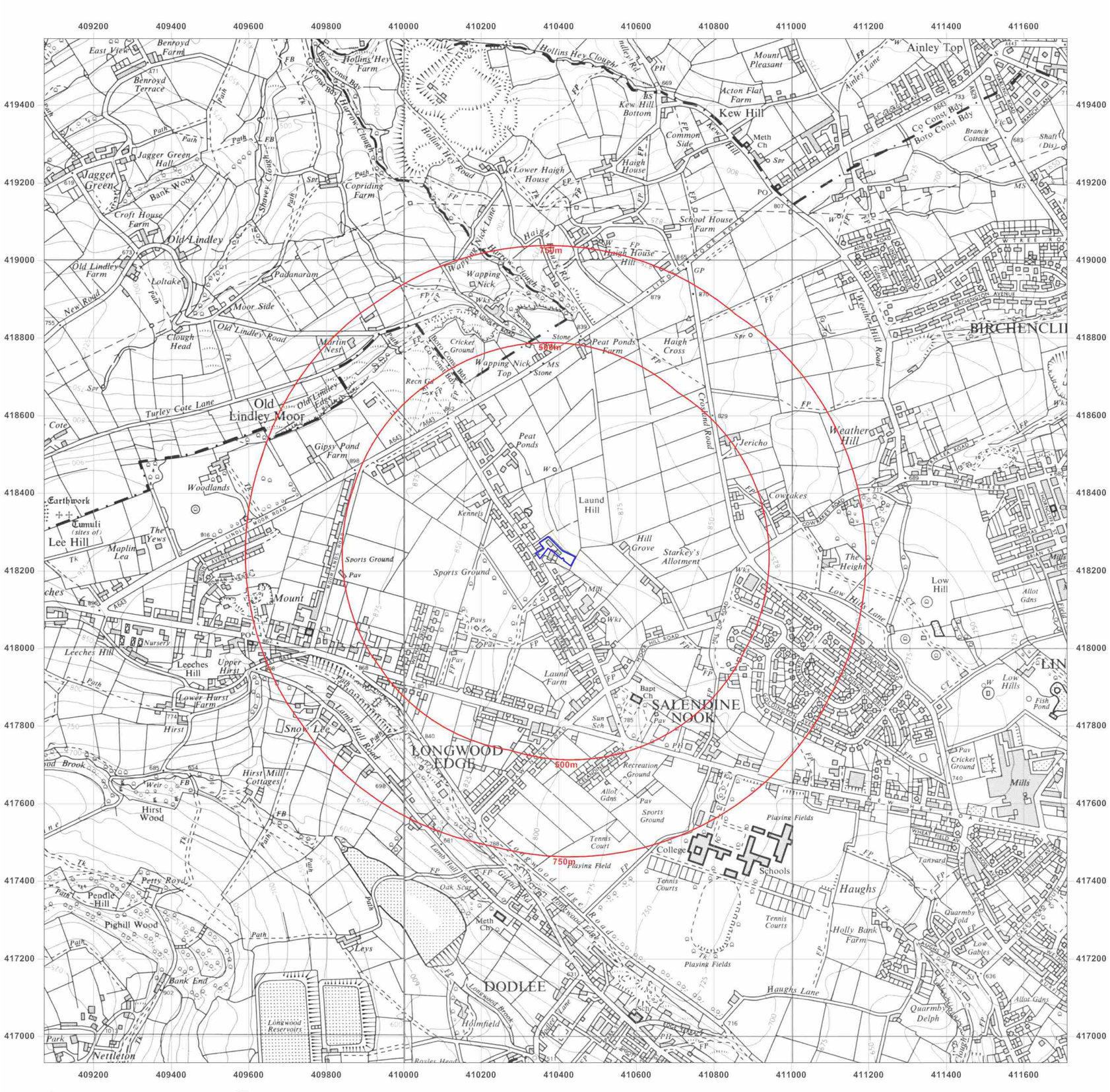
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Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: Provisional

Map date: **1966-1967**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
Levelled N/A

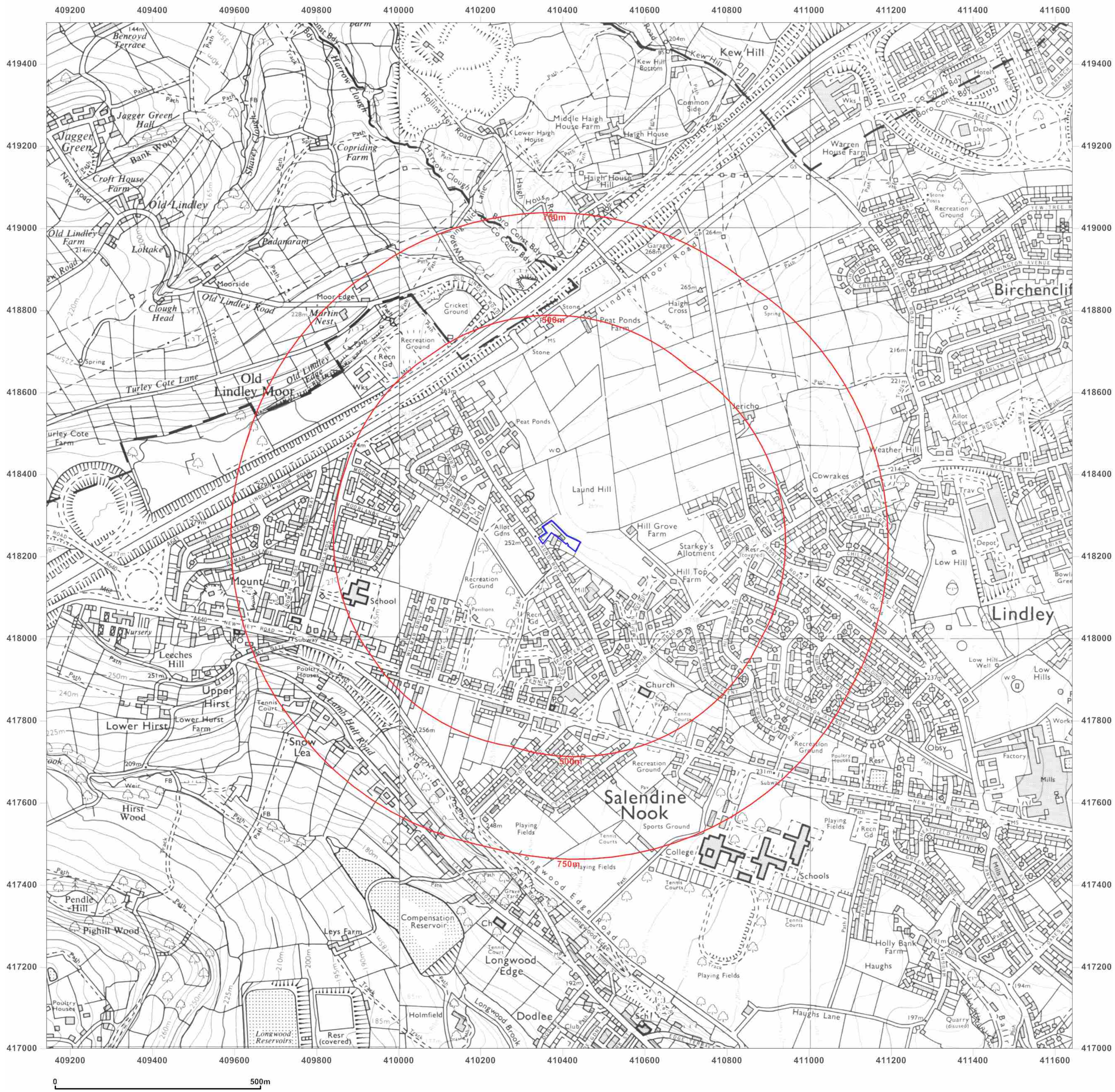
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Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1975-1978**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1977
Revised 1978
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

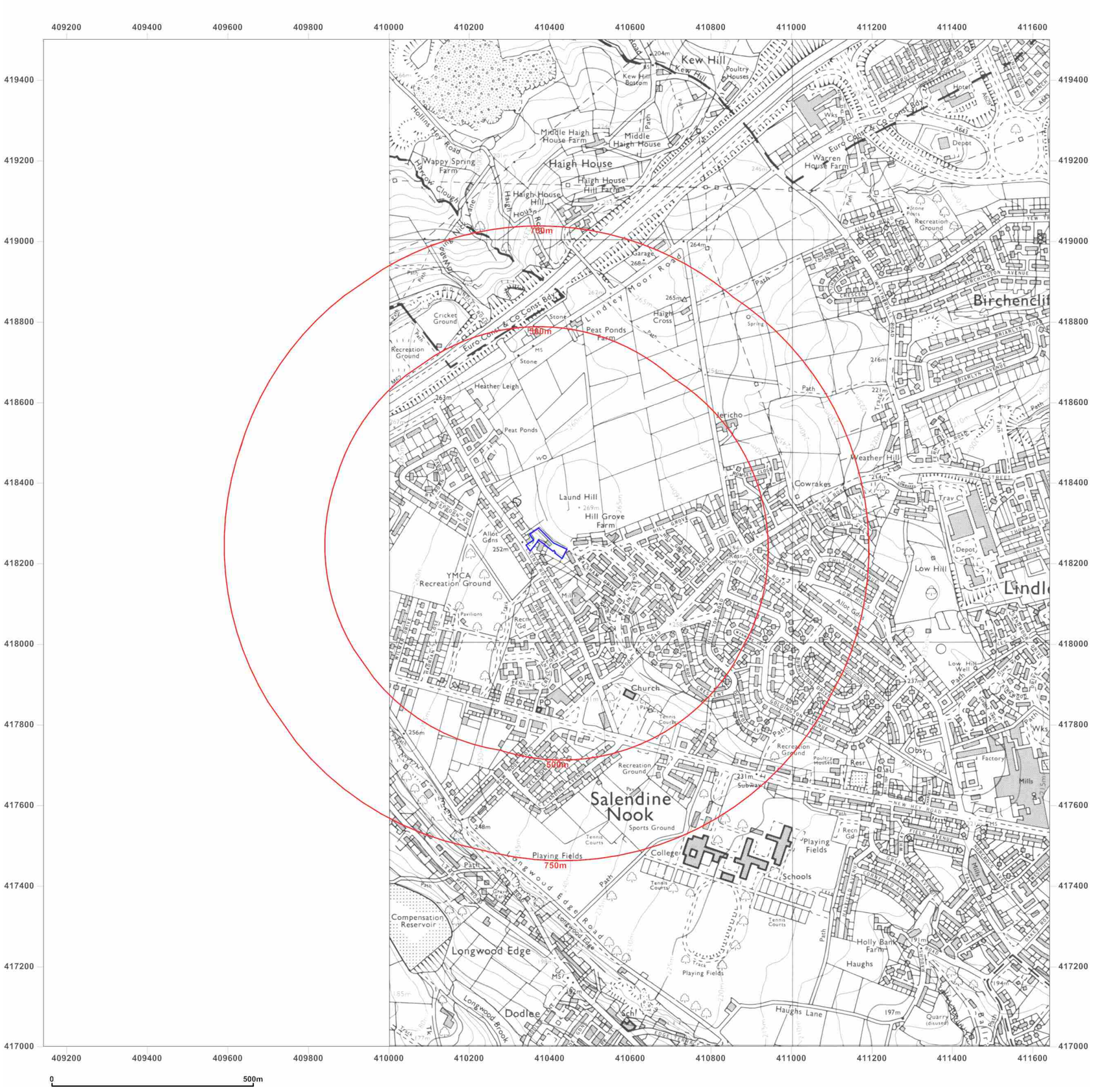
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Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **1985**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1984
Revised 1985
Edition N/A
Copyright N/A
Levelled N/A

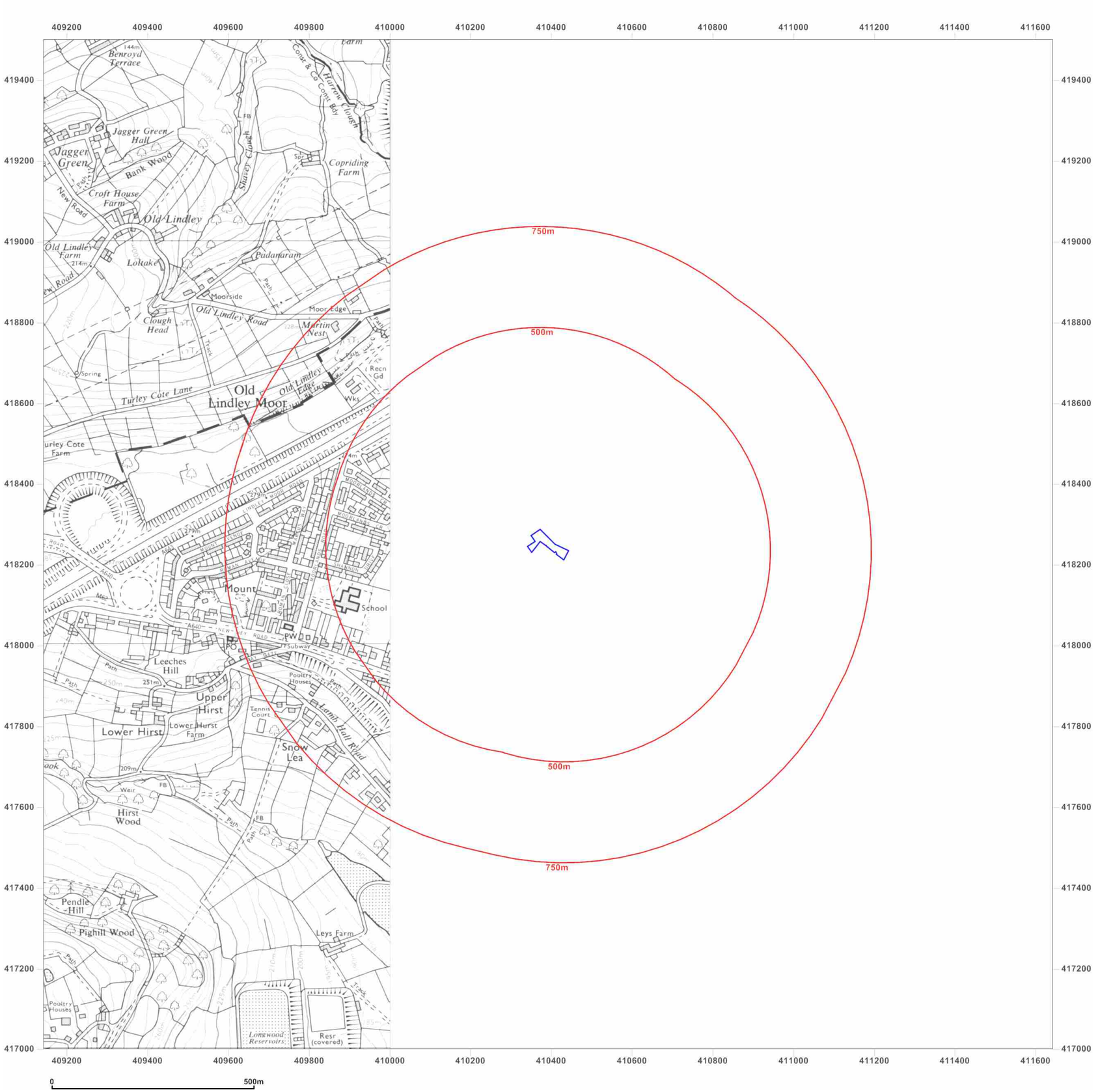
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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

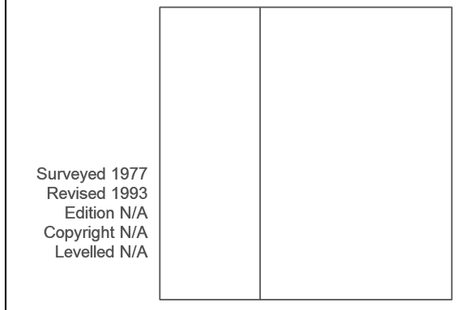
Map Name: National Grid

Map date: **1993**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S



Surveyed 1977
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

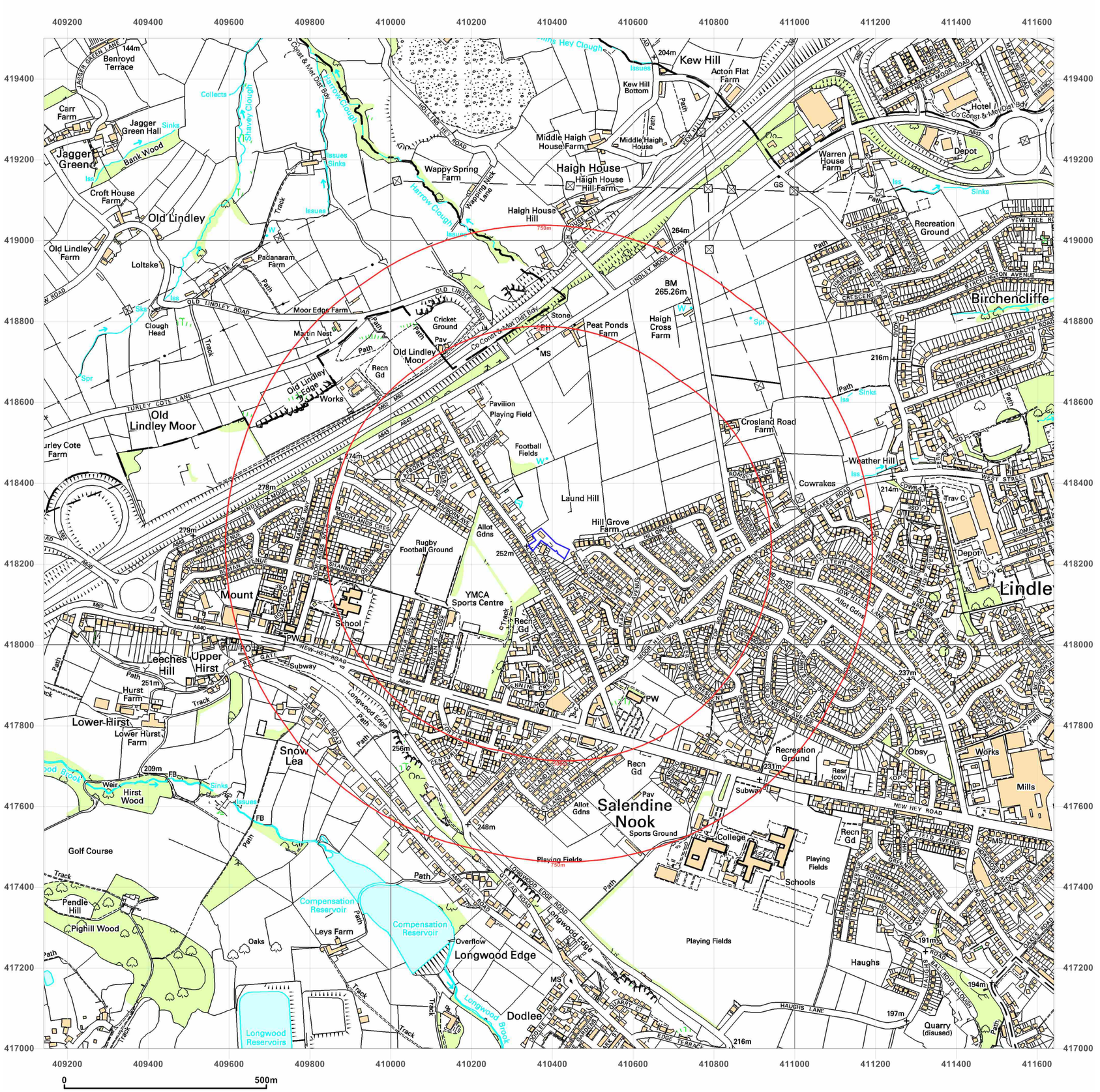
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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: 1:10,000 Raster

Map date: **2002**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

2002

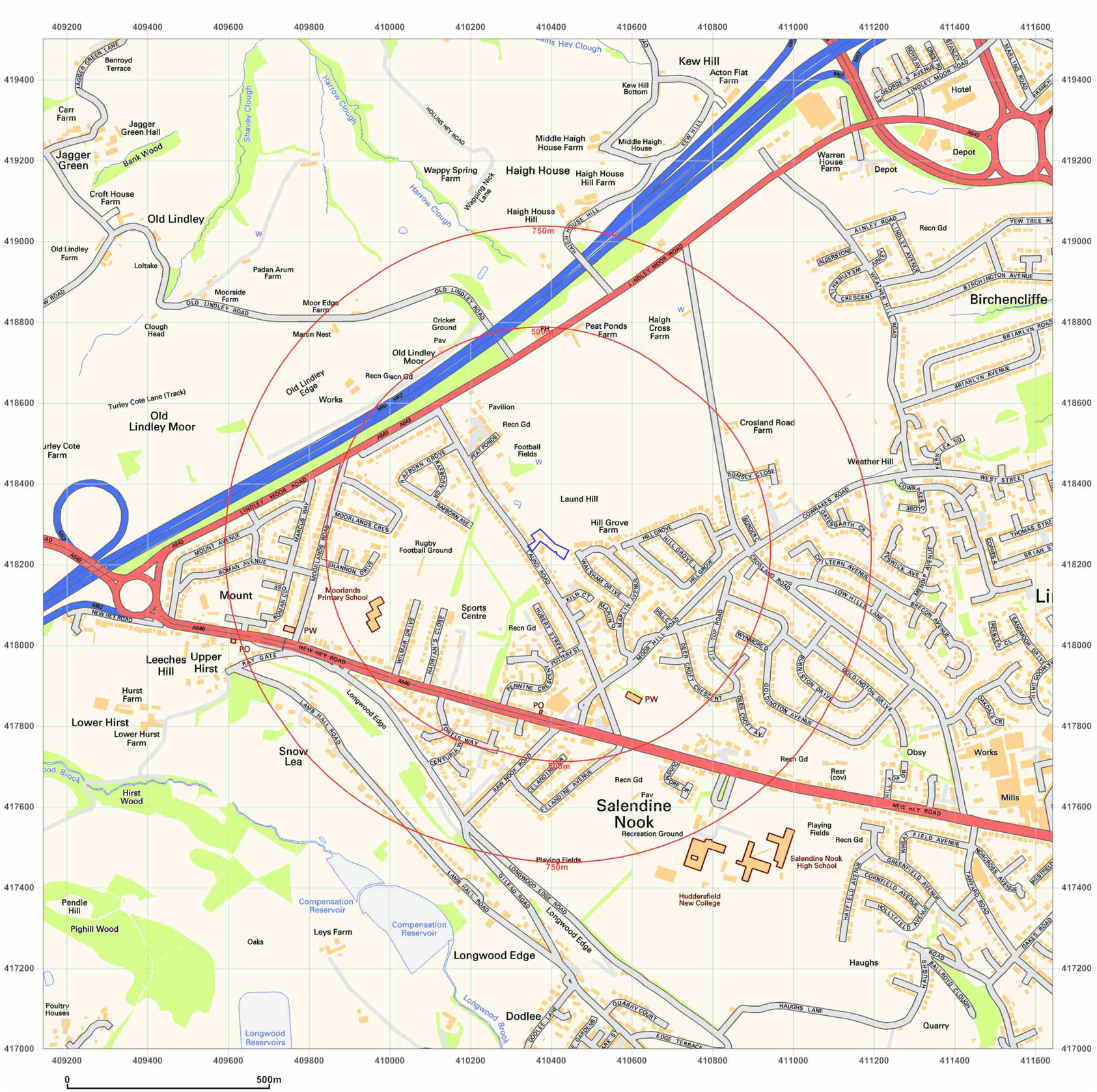
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Groundsure INSIGHTS

Site Details:

120, LAUND ROAD,
SALENDINE NOOK,
HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

2010

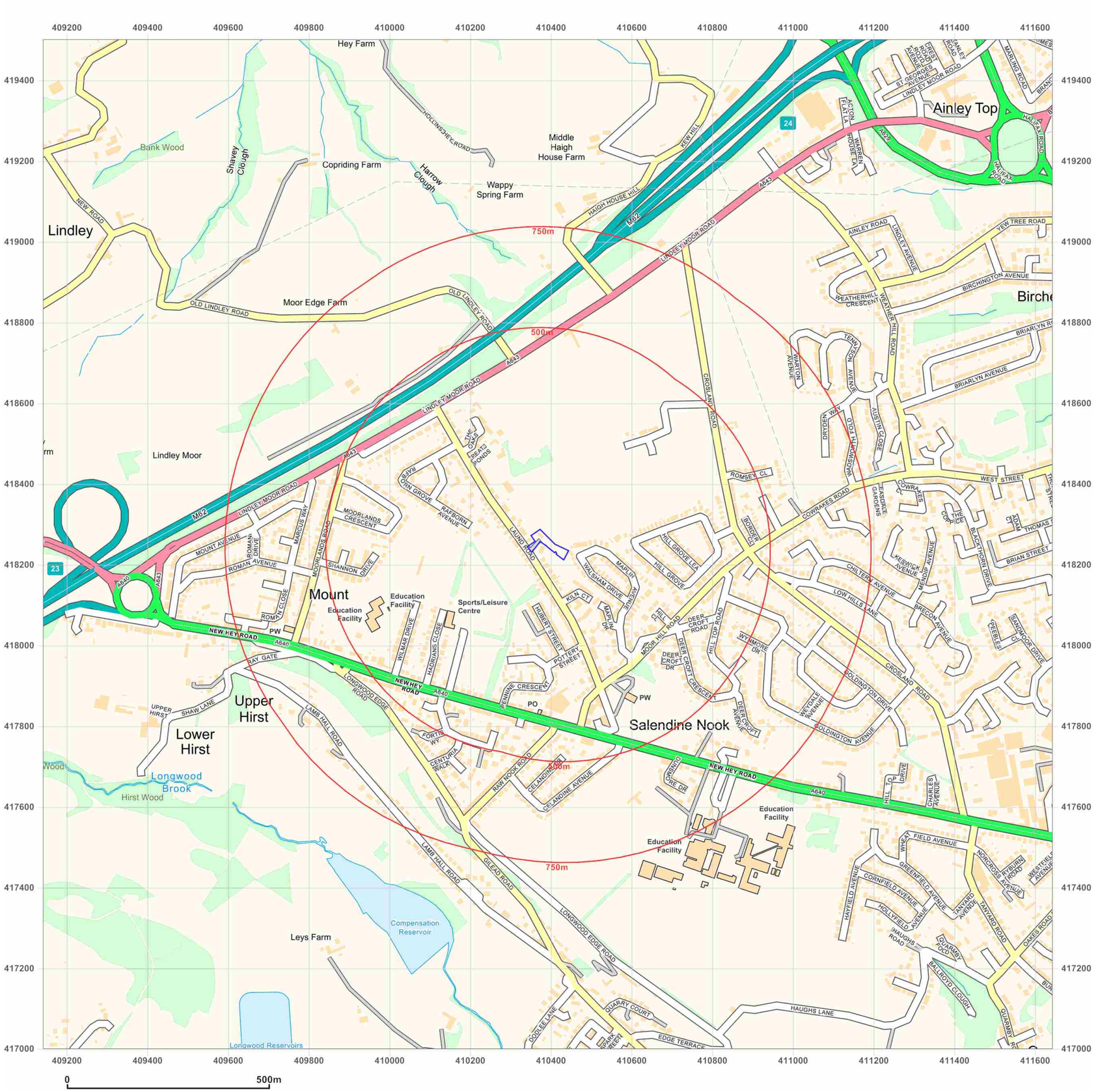
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Groundsure INSIGHTS

Site Details:

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HUDDERSFIELD, HD3 3TY

Client Ref: A0697
Report Ref: GS-4424567
Grid Ref: 410391, 418251

Map Name: National Grid

Map date: **2014**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

2014

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