



**IAN FARMER
ASSOCIATES**

Hanson Springs Ltd.

Hanson Springs, Gorrells Way, Rochdale

PRELIMINARY INVESTIGATION REPORT

Contract: 2231378

Date: October 2024

PRELIMINARY INVESTIGATION REPORT

carried out at

Hanson Springs, Gorrells Way, Rochdale

Prepared for

**Hanson Springs Ltd.
Hanson Place
Gorrells Way
Rochdale
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Contract: 2231378

Date: October 2024

Document Control

Project: Hanson Springs, Gorrells Way, Rochdale
Project No.: 2231378
Report title: PRELIMINARY INVESTIGATION REPORT
Revision: 00
Document No.: 2231378-PIR-00-281024

Revision Log

Version	Date	Comment
00	28/10/2024	First issue

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EXECUTIVE SUMMARY

Site Location	Situated off Gorrells Way, approximately 1.9 km to the southwest of the town centre of Rochdale BGR SD 889 115
Current Use	The site was occupied by Hanson Springs manufacturing facility composed of a large manufacturing and administrative building, a smaller manufacturing building, material and waste storage areas, and carparking areas.
Proposed Use	Extension of existing central building. Construction of new warehouse-type building in west of the site.
Site History	Pre 1851 to 1977 – agricultural 1977 to 1988 - Large warehouse building in the east of site and a smaller building in the west 1988 – Existing warehouse building extended to northwest (current layout)
Environmental Setting	• Geology – Glaciofluvial Deposits • Geology – Pennine Lower Coal Measures • Secondary A superficial and bedrock aquifers. • Rochdale Canal adjacent to the southeast. • Lancashire and Yorkshire Railway to northwest • Transpennine Trading Estate to southwest • Multiple Mills, depots and garages within 250 m of site.
Geological Hazards	Geological hazards associated with the site include: • Coal mining high risk area, however, assessed risk is considered to be very low • Possible areas of Made Ground associated with historical development on site. • High groundwater table • Instability of excavations associated with water bearing coarse Made Ground or superficial deposits.
Potential Pollutant Linkages	• Made Ground due to previous development on the site. • Existing over ground storage tanks on the site. • Migration of contaminants associated with neighbouring commercial / industrial land uses and historical landfill to north and northeast. • Potential ground gas associated with former landfill to the north and northeast of the site.

Recommendations for further work	• Boreholes and for the recovery of samples for geotechnical and chemical contamination analysis. Exploratory locations should be located to target the areas of new development and undertaken to sufficient depth to facilitate pile design. • Installation and monitoring of standpipes within the Made Ground and Glaciofluvial Deposits for ground gas and groundwater levels • Installation and monitoring of standpipes within the Made Ground and Glaciofluvial Deposits to monitor groundwater. Should sources of contamination be identified within the soil and leachate analysis, samples of groundwater should be obtained for chemical contamination analysis.
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1.0 INTRODUCTION

1.1 General

- 1.1.1 On the instructions of Hanson Springs Ltd., a Preliminary Investigation in the form of a desk study and site reconnaissance has been carried out to assess the potential hazards relevant to the site and prepare a geo-environmental risk assessment for further consideration.
- 1.1.2 It is understood that it is proposed to extend the central existing building to the south and construct a new warehouse-type building in the west of the site.
- 1.1.3 This report has been prepared for the sole use of the Client for the purpose described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.
- 1.1.4 It is recommended that a copy of this report be submitted to the relevant authorities to enable them to carry out their own site assessment and provide any comments.
- 1.1.5 The comments given in this report and the opinions expressed herein are based on the information obtained from the desk study and site reconnaissance. No intrusive investigation has been carried out to confirm the actual ground or environmental conditions.
- 1.1.6 Any risks identified in this report are perceived risks based on information reviewed. Actual risks can only be assessed following a physical investigation of the site.
- 1.1.7 This report has been based, in part, on information supplied by others. The report has been prepared based on that information being accurate. Where information that supersedes the Envirocheck report is available online, this has been referenced and may differ to the information provided within the published data. All information is considered valid at the time of the report, though may subject to subsequent changes.
- 1.1.8 The conclusions presented in this report are based on the guidance available at the time of preparation of the report. No liability can be accepted for the retrospective effects of any changes or amendments to legislation or guidance.
- 1.1.9 This Preliminary Investigation has been conducted in general accordance with Contaminated Land Research report CLR 3, Environment Agency reports 'Land Contamination Risk Management' (LCRM) and 'Guiding Principles for Land Contamination' (GPLC 1), and British Standard BS 10175.

2.0 SITE SETTING

2.1 Site Location

- 2.1.1 The site is situated off Gorrells Way, approximately 1.9 km to the southwest of the town centre of Rochdale.
- 2.1.2 The site may be located by British National Grid reference SD 889 115.
- 2.1.3 A site location plan and aerial photo are included in Appendix 1, Figure A1.1 and Fig A1.2.

2.2 Site Walkover and Description

- 2.2.1 A walkover survey of the site was conducted on the 26th September 2024. The walkover was carried out in general accordance with CLR 2.
- 2.2.2 Photographs from the walkover survey are included within Appendix 2, Figures A2.1s. A site plan is included in Appendix 1, Figure A1.3.
- 2.2.3 The site is irregular in shape, occupies an area of approximately 2.8 hectares (Ha), and is situated at an approximate altitude of 136 m above Ordnance Datum (AOD).
- 2.2.4 At the time of the walkover survey, the site was occupied by Hanson Springs manufacturing facility composed of a large manufacturing and administrative building, a smaller manufacturing building, material and waste storage areas, and carparking areas.
- 2.2.5 An area of soft landscaping was present to the east of the main building. In addition, mature trees were present along the east and west of the site.
- 2.2.6 The Lancashire and Yorkshire Railway bound the west of the site and was positioned approximately 4 m above the level of the site.
- 2.2.7 Embankments were present along the west boundary and in the southeast corner of the site.
- 2.2.8 The majority of the site was covered by tarmacadam or concrete. Generally, this was of good condition.
- 2.2.9 Evidence of multiple existing service and drainage runs, fuel tanks and above ground storage tanks were present across the site. An electricity substation was located to the southeast of the main building. A gas substation was located in the northeast corner of the site.
- 2.2.10 No evidence of spillages or leaks from above ground storage tanks was observed.

2.3 Historical Maps

2.3.1 A review of the history of the site has been conducted based on readily available historical maps. Copies of these maps are provided in Appendix 4.

2.3.2 Notable on-site land uses identified from the historical maps are summarised in the table below:

Date Range	Description	Likelihood of Pollutant Linkage
1851-1977	Agricultural fields	Very low
1977-1988	Large warehouse building in the east of site and a smaller building in the west	Low
1988 – present	Existing warehouse building extended to northwest.	Low

2.3.3 Notable off-site land uses in the surrounding area identified from the historical maps are summarised in the table below:

Date Range	Land Use	Distance / Direction	Likelihood of Pollutant Linkage
1851 – present	Lancashire and Yorkshire Railway	Adjacent to northwest	Moderate due to proximity to site and permeable geology
1977 - present	Transpennine Trading Estate – various unspecified depots and warehouses	Adjacent to southwest	High due to size of land use, proximity to site and permeable geology
1930 – 2024	Dunlop Mills (1930-1990), Royal Works (1990-2024)	50 m east	Moderate due to proximity to site and permeable geology.
1851 – present	Rochdale Canal	75 m southeast	Moderate due to proximity to site and permeable geology
1978 – present	Unnamed depot	100 m southeast.	Moderate due to proximity to site and permeable geology
1968 – present	Garage	200 m southeast	Low due to size of land use, proximity to site and permeable geology
1910 – present	Crest Ring Mill	200 m south	Moderate due to size of land use, proximity to site and permeable geology
1851 – 1999	Union Mill, Valley Mill and Newbarn Crane Works	250 m northwest	Moderate due to size of land use, proximity to site and permeable geology

2.4 Environmental Searches

2.4.1 A summary of the records held by the various regulatory authorities and other statutory bodies included within the Envirocheck report and relevant to the site is provided in the table below:

Activity	On Site	Off Site (Distance / Direction)	Detail
Contaminated Land Register Entries	None	None within 500 m	None
Discharge Consents	None	Two within 250-500 m, both located 496 m to the east.	Closest relates to sewage discharge from storm tanks. Remainder relate to sewage discharge.
Prosecutions Relating to Authorised Processes	None	None	None
Pollution Incidents	None	Six within 250 m, two within 250-500 m. Closest 148 m south	Closest relates to a 1994 category 2 – Significant Incident related to diesel oil. Remainder relate to two category 2 and 3 incidents.
Registered Radioactive Substances	None	None within 500 m	None
BGS Recorded Landfill Sites	None	One within 250 m located 41 m north	None.
Historical Landfill Sites	None	Two within 250 m. Closest 40 m north.	Little further information provided by Envirocheck report.
Licenced Waste Management Facilities	None	One within 500 m; located 384 m east with boundaries extending to 35 m northeast of the site.	Ashfield Valley Inert Landfill Site accepting non-biodegradable waste (not construction). License issued June 1994; now expired and site closed. Licenced to accept between 10,000 and 25,000 tonnes per year
Registered Waste Transfer Site	None	None.	None.
Registered Waste Treatment or Disposal Sites	None	None.	None.
Potentially Infilled Ground	None	Five within 250 m; ten between 250-500 m.	Closest located 83 m north related to unknown filled ground.
Hazardous Substances / Explosive Sites	None	None	None.

Activity	On Site	Off Site (Distance / Direction)	Detail
Industrial Land Uses	One	Twenty-three up to 250 m; forty-six between 250-500 m.	Hanson Springs Ltd. recorded on the site. Nearby notable activities include car dealers, distribution services, tyre manufacturing, garage services, manufacturing (engineering materials, textile, electronic component, joiners, metal fabricators, fibre glass), domestic cleaning, powder coatings, scrap metal merchants, dry cleaners, and petrol filling stations.

2.5 Radon

2.5.1 Online mapping provided by the UK Health Security Agency indicates the site to lie within an area where there is a probability of 1-3% of present or future properties being above the action level of 200 Bq/m³.

2.5.2 Therefore, the site is not classified as being within a Radon Affected Area and radon protective measures are not deemed necessary for the proposed development, as confirmed within guidance from the Building Research Establishment (BRE).

2.6 Unexploded Ordnance (UXO)

2.6.1 Zetica online UXO risk mapping indicates the site to be within a low-risk area with regard to potential UXO encounter. Therefore, there are no further recommendations for UXO mitigation.

2.7 Anecdotal Evidence

- 2.7.1 During the site walkover, historical ownership and site usage was discussed with the Facilities Manager. The site was first owned by the logistics company Tibbett and Britten after which it was occupied by DHL. In 2012 the current owners, Hanson Springs, acquired the site.

2.8 Historical Investigations

- 2.8.1 A historical investigation was undertaken in June and July 2017 by Rogers Geotechnical Services Ltd. (Report No. J3936/17/E).
- 2.8.2 The investigation consisted of two cable percussion boreholes to 15.45 mbgl; three windowless sample boreholes to between 4.00 and 5.00 mbgl; three dynamic probes to between 8.70 and 10.70 mbgl; and gas and groundwater monitoring on two occasions of standpipes installed in the cable percussion boreholes.
- 2.8.3 The exploratory holes were positioned around the proposed new building in the west of the site.
- 2.8.4 The ground conditions consisted of Made Ground to between 0.20 to 0.40 mbgl; loose to medium dense gravelly sand to between 8.40 and 9.60 mbgl; and soft to stiff clayey silt / silty clay to 15.45 mbgl. Interbedded silty clay and silty sand was recorded between 10.50 and 15.45 mbgl in one cable percussion borehole. Strata was generally consistent across the investigation area.
- 2.8.5 A slight hydrocarbon odour was noted in one windowless sample borehole between 1.85 and 2.00 mbgl.
- 2.8.6 No geoenvironmental testing was undertaken as part of the investigation.

3.0 ENVIRONMENTAL SETTING

3.1 Geology

3.1.1 Details of the geology underlying the site have been obtained from the relevant British Geological Survey (BGS) geological map of the area and from the BGS web based geological records (contains BGS materials © UKRI 2024).

3.1.2 The anticipated geology is summarised in the following table:

Geological Unit	Aquifer Status	Notes
Made Ground	Not applicable	Limited thickness anticipated associated based on historical mapping and historical investigation.
Glaciofluvial Deposits, Devensian	Secondary A	None
Pennine Lower Coal Measures	Secondary A	None

3.2 Hydrogeology and Hydrology

3.2.1 The following hydrogeological and hydrological information for the site has been obtained from the Envirocheck report and online Environment Agency data:

Soil Vulnerability	High associated with superficial aquifer.
Source Protection Zones (SPZ)	None recorded within 1 km.
Licensed Groundwater Abstractions	Closest recorded 149 m south for manufacturing use (license revoked). No abstractions for sensitive use recorded within 1 km.
Surface Watercourses	Rochdale Canal directly to the southeast (quality 'good'). Sudden Beck 43 m southeast (quality 'good');
Licensed Surface Water Abstractions	Closest recorded 247 m south from the Rochdale Canal for a boiler feed (license revoked). No abstractions for sensitive use recorded within 1 km.
Groundwater Flood Risk	Potential for groundwater flooding to occur at the surface.
Surface Water Flood Risk	Low to Medium risk.
Risk of Flooding from Rivers	Site is within a flood zone 1 (low probability of flooding) and within an area that does not benefit from flood defences.

4.0 GEOTECHNICAL RISK ASSESSMENT

4.1 Geotechnical Hazards

4.1.1 The following are brief findings relating to factors identified during the research from the Envirocheck data and from BGS that may have a potential impact upon the engineering of the proposed development.

Potential Hazard	Assessed Risk	Comment
BGS Recorded Mineral Sites	Very Low	Nearest recorded site 253 m northeast.
Coal Mining	Very low	Within a Coal Mining Authority Reporting Area – see section 4.1 for details.
Man-Made or Natural Cavities	Low to moderate	No evidence of basements observed during walkover. It is understood that the site has been subject to limited development beyond structures present currently.
Collapsible Ground	Very low	None
Compressible Ground	Very low	None
Ground Dissolution	None	None
Landslide	Very low	None
Running Sand	Very low	Likelihood will relate to grading of sand strata below the water table.
Shrinking or Swelling Clay	None	None
Unconsolidated Made Ground	Low to moderate	Historical maps suggest the site has been subject to limited development beyond structures present currently. Undocumented areas of infilling may be present.
Bearing Pressure	Low	None
Aggressive Conditions for Construction Materials	Low	Made Ground may contain potentially high concentrations of sulphates and sulphides.
Shallow or High Groundwater Table	Low	Site is within an area with potential for groundwater flooding to occur at the surface suggesting a shallow or high groundwater table.

4.2 Coal Mining

4.2.1 The site is located within the coal field. As such, a Coal Mining Report has been commissioned and is include in Appendix 4.

4.2.2 A summary of the findings are as follows:

- The site is not within an area affected by present and past recorded underground coal mining.
- The site is not within an area where the Coal Authority has received an application, or granted a licence, to remove or work coal by underground methods. The site is also not in an area likely to be affected by any planned future coal mining. The report notes that coal reserves exist beneath the site that could be worked in the future.
- There are no recorded mine entries on the site or within 20 m of the site boundaries.
- The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.
- The site is not within the boundary of an opencast site.
- The site is not within 200 m of a present opencast mine.
- The site is not within 800 m of the boundary of an opencast site where a licence has been requested or granted.
- The Coal Authority has not received a damage notice or claim for any property within 50 m of the site since 31st October 1994.
- The Coal Authority has no record of a mine gas emission requiring action.
- The site has not been subject to remedial works.

4.2.3 Based on the above information, the main risk posed to the site is future underground coal mining. However, the likelihood of this taking place is very low, therefore the risk posed by coal mining is considered to be very low.

4.3 Geotechnical Risk

4.3.1 The main hazards determined from available information and reconnaissance have been summarised in Section 4.1 above.

- Soil Conditions

Although there is no evidence on the historical maps, there is the possibility that areas of infilled land associated with historical development on site. This is considered to represent a low to moderate risk due to the unknown nature of the material used to backfill the excavations. Such material may be both highly compressible and variable, potentially leading to excessive total and differential settlements.

Superficial deposits of sand, associated with high groundwater may present difficult construction conditions due to running sand. It is considered the risk associated with this is very low. However, this risk will be dependent upon the grading of sand deposits beneath the site.

The presence of a significant thickness of coarse Made Ground or superficial deposits particularly if they are water bearing, may cause instability in excavations for foundations or services trenches. This is considered to represent a low risk.

The location and anticipated geology of the site suggests there to be a low risk from high groundwater. Should shallow groundwater be encountered, then pumping may be required from any excavations on site.

- Previous Use

Historical mapping and site reconnaissance indicates previous development on the site including structural and infrastructure changes. Therefore, the presence of buried structures such as services, basements and old foundations are considered to represent a low to moderate risk to the development.

4.4 Conclusions of Geotechnical Risk Assessment

- 4.4.1 The research has identified evidence of potential geotechnical hazards associated with underlying ground conditions, either natural or man-made. The geotechnical risks have been assessed as low to moderate.
- 4.4.2 It is recommended that intrusive ground investigation is carried out to confirm the presence, nature or extent of those hazards anticipated to impact on the site. On completion of intrusive ground investigation, the geotechnical risks may be re-evaluated.

5.0 GEOENVIRONMENTAL RISK ASSESSMENT

5.1 General

- 5.1.1 The background to the guidance for the assessment of 'contaminated land' is provided in Appendix 3.
- 5.1.2 The assessment of environmental risk is aimed at identifying the possible risk, if any, arising from substances used or deposited on the site, or from any other sources of land contamination, based on the principles of the pollutant linkage.
- 5.1.3 The assessment is based on the proposed development end use, taking account of present and previous use. It is based only on a review of historical maps, desk based data and site reconnaissance. Therefore, it contains some elements of conjecture based on professional judgement. A comprehensive risk assessment can only be made following an intrusive investigation and testing regime.

5.2 Potential Sources of Contamination

- 5.2.1 The research has identified the following potential sources of contamination that may form part of a pollutant linkage:
 - Made Ground due to previous development on the site.
 - Existing / former overground storage tanks on the site.
 - Potential ground gas and contamination associated with the former landfill to the east of the site.
 - Lancashire and Yorkshire Railway adjacent to the site
 - Industrial and commercial land uses within 200 m of the site

5.3 Potential Pathways

- 5.3.1 The research has identified a number of potential pathways which are relevant to the potential sources of contamination identified above and may form part of a pollutant linkage.
- 5.3.2 Those identified are detailed within the Conceptual Site Model, along with the receptors relevant to the development on a site specific basis.

5.4 Hazard Identification

- 5.4.1 The research has identified a number of potential sources and pathways which are considered 'likely' to be present which, taking into account the potential receptors identified, form potential pollutant linkages and have been used in the formulation of the Conceptual Site Model.

5.5 Hazard Assessment

- 5.5.1 An assessment of the main sources of contamination and the potential for unacceptable risk to receptors is detailed below. Unless stated otherwise, it is considered 'likely' that a potential source is present at this stage, in order to provide a preliminary estimation of the risk and therefore determine the need for further work.

- Human Health

There is the potential for contamination to be present associated with Made Ground and existing overground storage tanks on the site. There is the potential for the migration onto site from contamination associated with the neighbouring commercial and industrial properties and the historical landfill to the north and northeast. The main receptor is anticipated to be construction and maintenance workers. Assuming appropriate PPE is worn, and hygiene practices observed, the risk posed is considered to be low

As the site of the proposed structures will be covered by concrete, there is not considered to be a valid pathway for site users. Therefore, this risk is not considered further.

There is the potential for the migration of explosive gases from the nearby landfill. The risk to end-users is considered to be low to moderate.

- Services and Construction Materials

There is considered to be a moderate to low risk due to chemical attack on services and construction materials emplaced within the Made Ground. If organic contaminants are present in any form, there may be a risk to standard plastic polyethylene (PE) pipes for potable water supply.

- Controlled Waters

The site is situated above a Secondary aquifer relating to the highly permeable Glaciofluvial Deposits. Therefore, any consequence of contamination to the groundwater environment is considered to be medium and a moderate risk level has been assigned.

The Rochdale Canal runs directly to the southeast of the site, therefore, any consequence of contamination to the surface water environment is considered to be medium and a moderate risk level has been assigned.

5.6 Conceptual Site Model

5.6.1 The research has therefore identified the following pollutant linkages that require further consideration and have been used to formulate the Conceptual Site Model.

Source	Contaminants of Concern	Potential Pathways	Receptor Group	Probability	Consequence	Risk
Made Ground	Asbestos Heavy Metals PAH TPH VOCs SVOCs Phenols Cyanide	Ingestion of contaminated soil by direct contact	Humans	Unlikely	Medium	Low ¹
		Entry of contaminants by skin or eye contact with contaminated soils or dust	- Construction workers - Neighbouring site users	Unlikely	Medium	Low ²
		Inhalation of contaminated dust	Water Environment - Groundwater - Surface Water	Likely Likely	Medium Medium	Moderate Moderate
		Inhalation or migration of toxic/explosive gases/vapours	Buildings, Materials and Services Plastic pipes and services	Likely	Mild	Moderate/Low
Direct contact						
Ground Gases	Methane Carbon dioxide	Migration Ingression	Humans and buildings			
			- Gas ingress into buildings - Site occupants	Low Likelihood Low Likelihood	Medium Medium	Moderate/Low Moderate/Low

¹ – Assumes that PPE is worn at all times

² – Pathway exists only during the construction period

5.7 Conclusions of Geoenvironmental Risk Assessment

- 5.7.1 The research has identified evidence of potential sources of contamination on or which may impact on the site, with plausible pathways to the likely receptors, and therefore potential pollutant linkages have been suggested.
- 5.7.2 It is recommended that further work be carried out to confirm the presence, nature or extent of any contamination which is anticipated to impact on the site.

5.8 Consultation

- 5.8.1 During development, consultation may be required for a number of reasons with a number of regulatory Authorities. The following provides an indication as to the most likely Authorities with which consultation may be required:
- Local Authority.** There may be a planning condition regarding contamination and consultation will be required with a designated Contaminated Land Officer within the Environmental Health Department. The Local Authority is generally concerned with human health risks.
 - Environment Agency (EA).** Where a site is situated above an aquifer, within a groundwater protection zone, close to surface water or has been designated as a special site, the EA is likely to be involved to ensure that controlled waters are protected.

- 5.8.2 Based on the results of any consultation, there may be specific investigation and/or remediation requirements imposed by one or more of the Authorities.

6.0 RECOMMENDATIONS

6.1 Further Work

6.1.1 An intrusive investigation should be undertaken to address the geological hazards and / or potential pollutant linkages identified.

6.1.2 The following scope of works is suggested in order to collect the required data:

- The sinking of boreholes for the recovery of samples for geotechnical and chemical contamination analysis. Exploratory locations should be located to target the areas of new development and undertaken to sufficient depth to facilitate pile design.
- The installation and monitoring of standpipes within the Made Ground and Glaciofluvial Deposits for ground gas and groundwater levels.
- The installation and monitoring of standpipes within the Made Ground and Glaciofluvial Deposits to monitor groundwater. Should sources of contamination be identified within the soil and leachate analysis, samples of groundwater should be obtained for chemical contamination analysis.

7.0 REFERENCES

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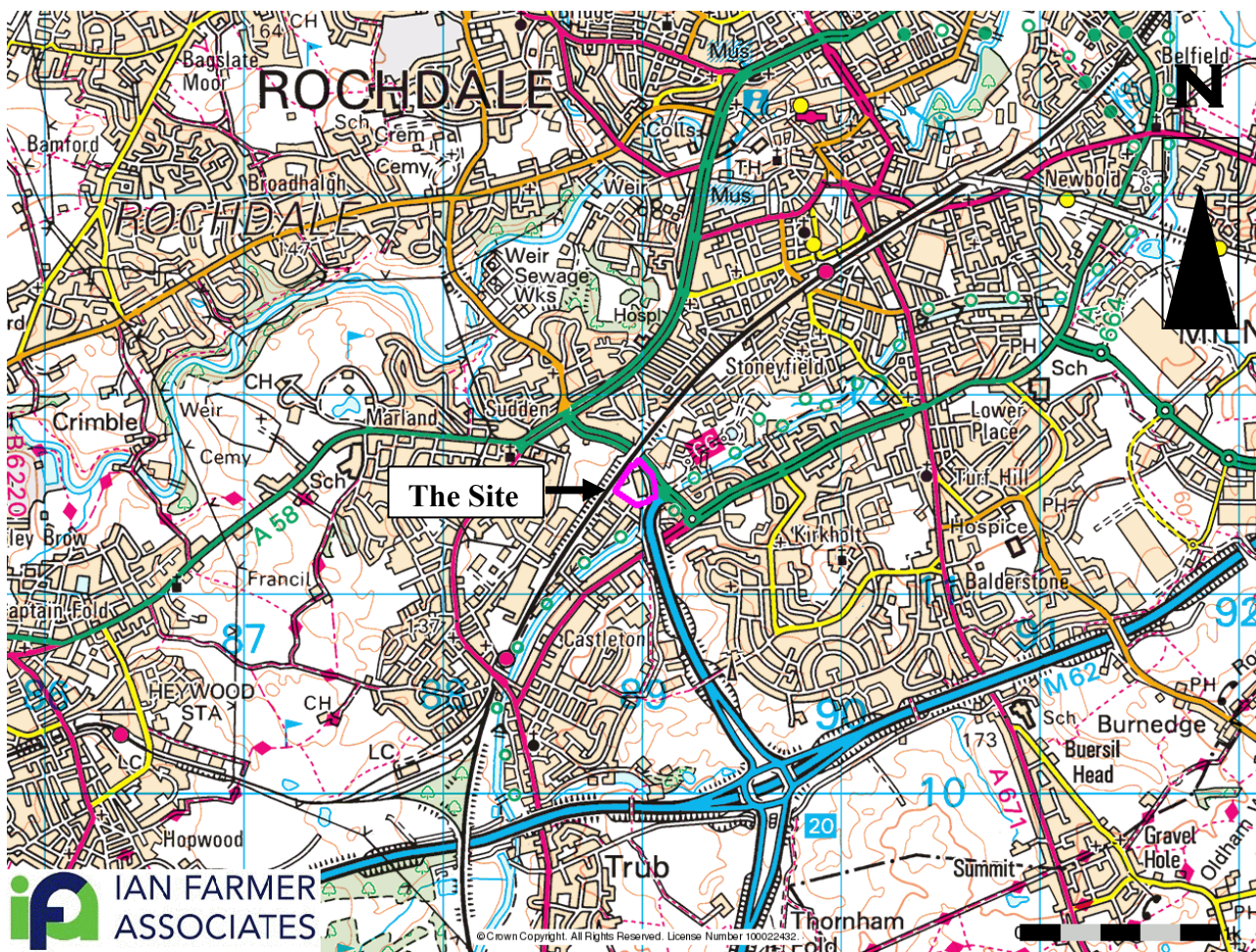
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APPENDIX 1
DRAWINGS



PROJECT: 2231378 – Hanson Springs

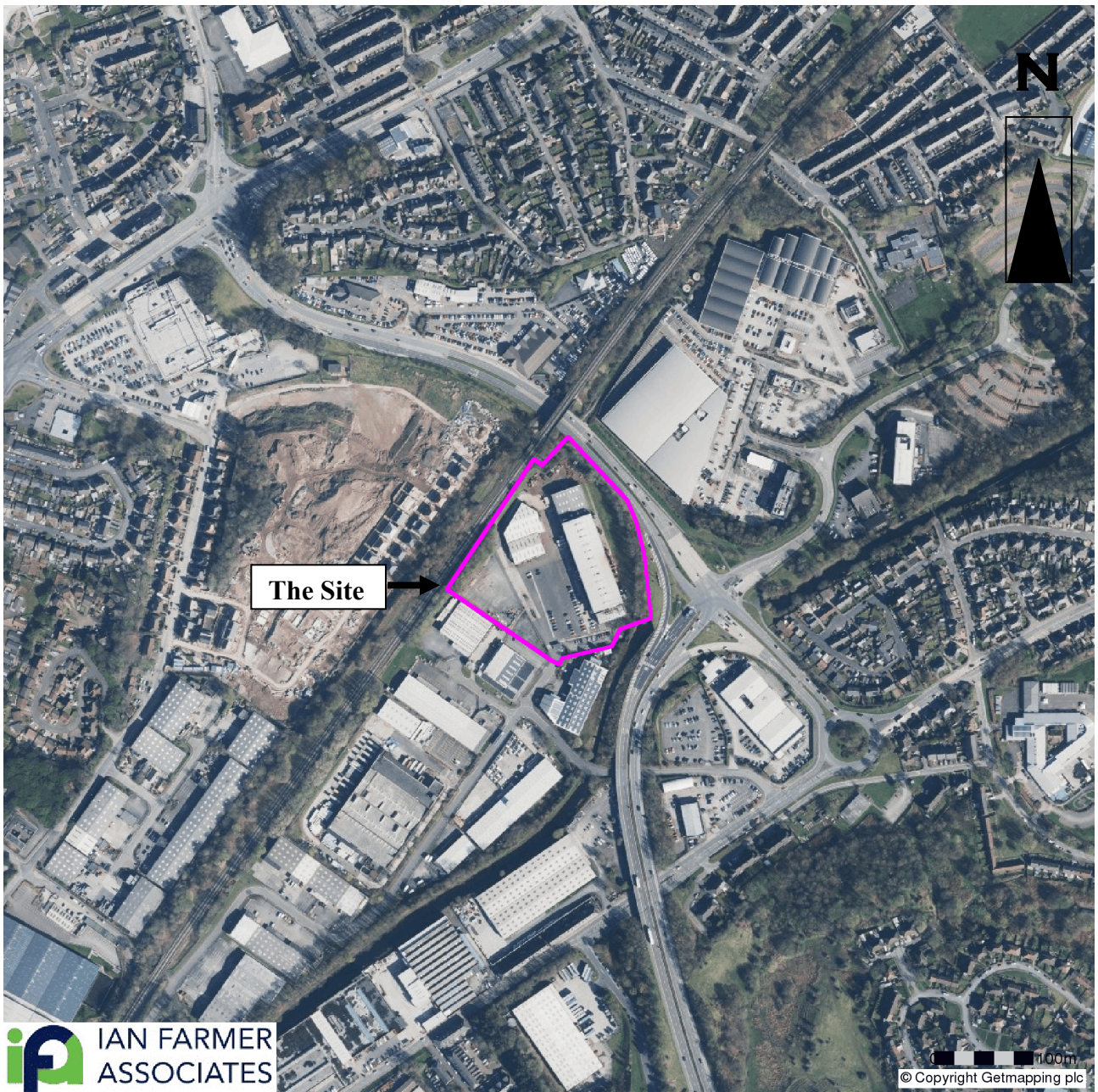
FIGURE No. A1.1

SCALE: Not to scale

TITLE: Site Location Plan

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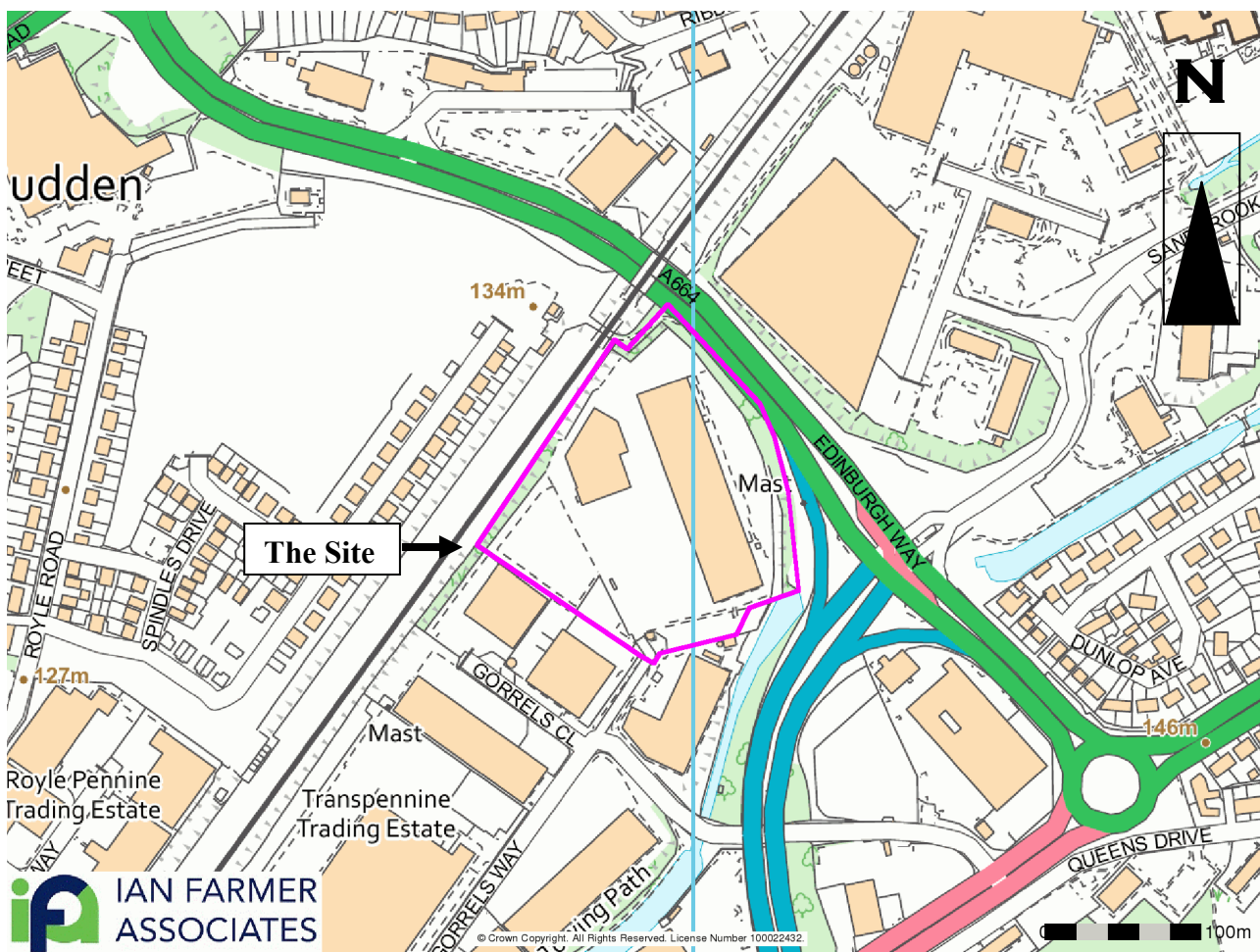
PROJECT: 2231378 – Hanson Springs

FIGURE No. A1.2

SCALE: As above

TITLE: Aerial Photograph

IAN FARMER ASSOCIATES



PROJECT: 2231378 – Hanson Springs

FIGURE No. A1.3

SCALE: Not to scale

TITLE: Site Plan

IAN FARMER ASSOCIATES

APPENDIX 2
SITE WALKOVER PHOTOGRAPHS

Figure A2.1 Site Walkover Photographs



Photograph of entrance to main Hanson Springs building. Taken looking east.

Figure A2.1 Site Walkover Photographs



Photograph of carparking area showing main building (right) and smaller garage building (left). Taken looking northwest.

Figure A2.1 Site Walkover Photographs



Photograph of machinery storage area in the west of the site. Taken looking southeast.

Figure A2.1 Site Walkover Photographs



Photograph of barrels stored in skip. Skip located in west of site.

Figure A2.1 Site Walkover Photographs



Photograph of machinery storage area in the west of the site. Taken looking east.

Figure A2.1 Site Walkover Photographs



Photograph of machinery storage area in the west of the site. Taken looking northwest.

Figure A2.1 Site Walkover Photographs



Photograph of fuel storage tank within machinery storage area in the west of the site. Taken looking southwest.

Figure A2.1 Site Walkover Photographs



Photograph with garage building in the foreground and the main building in the background. Taken looking northeast.

Figure A2.1 Site Walkover Photographs



Photograph of above ground storage tank near southwest corner of garage building. Taken looking north.

Figure A2.1 Site Walkover Photographs



Photograph of access road to northwest of garage building. Note embankment with railway beyond to the left and service scars on road surface. Taken looking northeast.

Figure A2.1 Site Walkover Photographs



Photograph of skips in north of site. Taken looking northeast.

Figure A2.1 Site Walkover Photographs



Photograph of storage area to the north of the main building. Taken looking northeast.

Figure A2.1 Site Walkover Photographs



Photograph of storage areas to the west of the main building. Note service scars on road surface. Taken looking southeast.

Figure A2.1 Site Walkover Photographs



Photograph grassed area to the east of main building. Taken looking southeast.

Figure A2.1 Site Walkover Photographs



Photograph of electricity substation near southeast corner of main building. Taken looking south.

APPENDIX 3
ENVIRONMENTAL RISK

APPENDIX 3

ENVIRONMENTAL RISK ASSESSMENT

The statutory definition of contaminated land is defined in the Environmental Protection Act 1990, which was introduced by the Environment Act 1995. The UK guidance on the assessment of land contamination has developed as a direct result of the introduction of these two Acts.

A Preliminary Investigation (Desk Study) should initially be undertaken in accordance with Environment Agency Report LCRM, together with Contaminated Land Reports CLR 2 to CLR 4, in order to identify potential hazards, assess potential risks associated with those hazards and produce a Conceptual Site Model for further investigation. The Conceptual Model is based upon information collated from desk based studies, and reconnaissance of the site (a walkover survey).

In establishing whether a site fulfils the statutory definition of 'contaminated land' it is necessary to identify whether the three essential elements of risk exist; a 'source', a 'pathway' and a 'receptor'.

If potential pollutant linkages are identified within the conceptual model, an intrusive ground investigation and report will be recommended. This will enable a generic quantitative risk assessment (GQRA) to be conducted, at which point the conceptual model can be updated and relevant pollutant linkages can be identified.

Risk Evaluation

The preliminary geoenvironmental assessment involves the initial classification of the:

- magnitude of the 'probability' (likelihood) of the risk occurring; and
- magnitude of the potential 'consequence' (severity) of the risk occurring

The risk evaluation methodology is illustrated in the following tables.

Classification of Probability

Classification	Definition
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

Classification of Consequence

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings property. A short-term risk to a particular ecosystem, or organism forming part of such.	High Concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse, can also equate to a short-term human health risk if buildings are occupied.
Medium	Chronic damage to Human Health ('significant harm'). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of a contaminant from site exceed the generic or site-specific assessment criteria. Leaching of contaminants from a site to a Principal or Secondary aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures, and services ('significant harm'). Damage to sensitive buildings / structures / services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (e.g., foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures, and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in landscaping scheme. Discoloration of concrete.

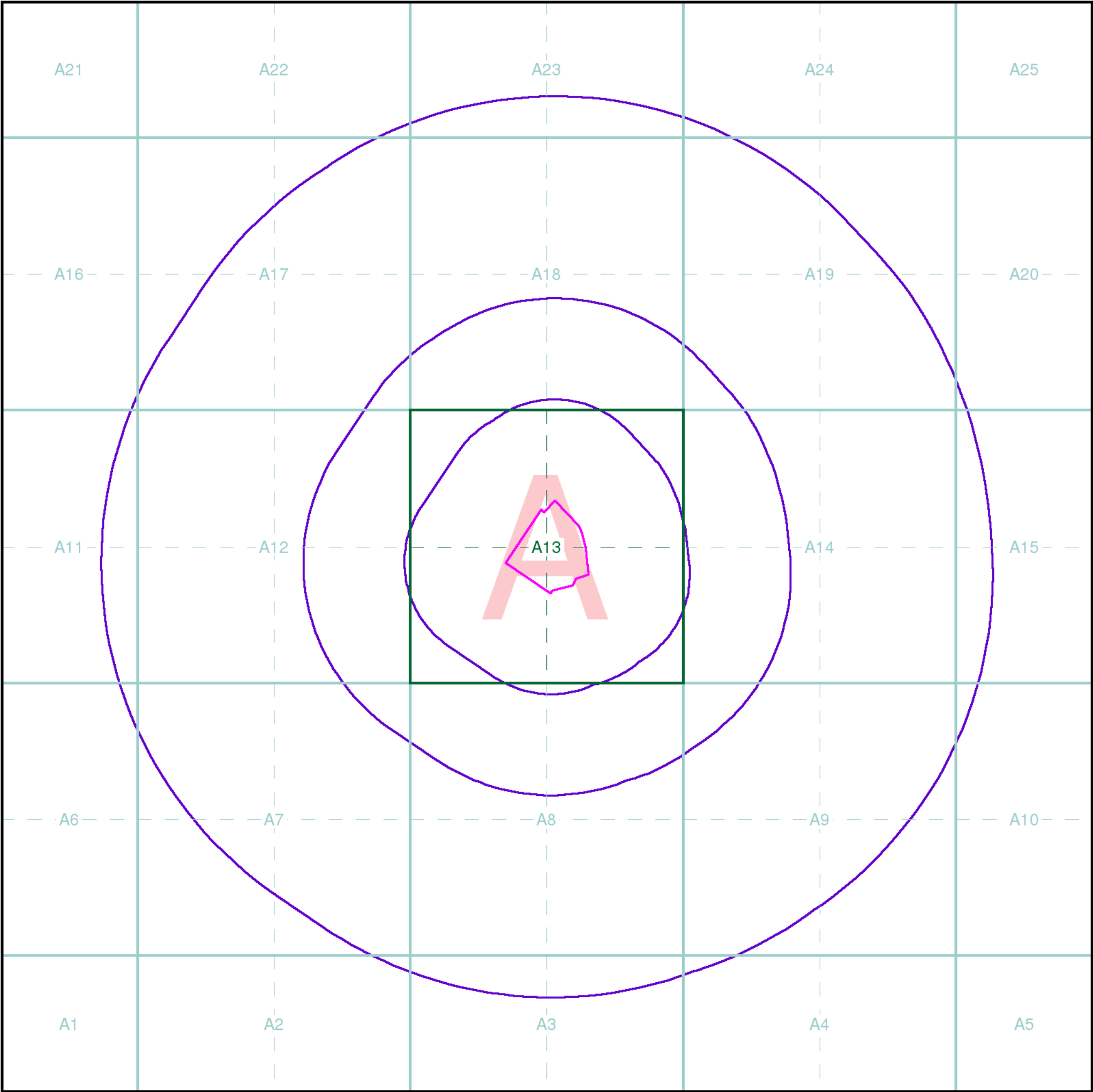
Classification of Risk

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

Required Action

Very High Risk	There is a high probability that severe harm could pose a risk to a designated receptor from an identified hazard; OR there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate Risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

APPENDIX 4
ENVIROCHECK REPORT



Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details
Mr M Green, Ian Farmer Associates, 14-15 Rufford Court, Hardwick Grange, Warrington, Cheshire, WA1 4RF

Order Details
Order Number: 359044817_1_1
Customer Ref: 2231378
National Grid Reference: 388980, 411550
Site Area (Ha): 2.82
Search Buffer (m): 1000

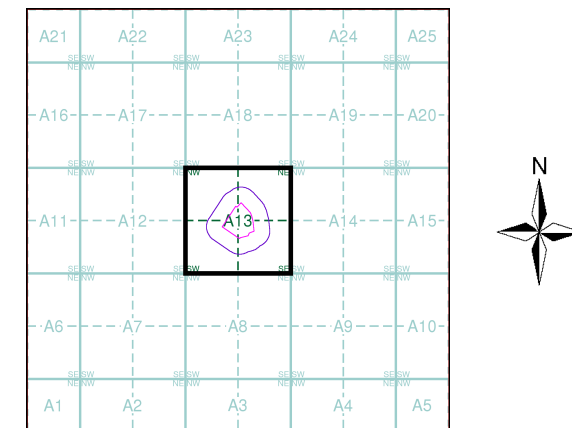
Site Details
Hanson Springs Ltd, Unit 2, Trans Pennine Trading Estate, Gorrells Way, ROCHDALE, OL11 2PX

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>

General

- Specified Site Specified Buffer(s) Bearing Reference Point Map ID
- Several of Type at Location Pylon Overhead Transmission Line
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Integrated Pollution Prevention and Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Waste**
- BGS Recorded Landfill Site (Location)
 - BGS Recorded Landfill Site
 - EA Historic Landfill (Buffered Point)
 - EA Historic Landfill (Polygon)
 - Integrated Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Non-water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Potentially Infilled Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point Buffered to 100m)
 - Registered Landfill Site (Point Buffered to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13



Order Details

Order Number: 359044817_1_1
Customer Ref: 2231378
National Grid Reference: 388970, 411550
Slice: A
Site Area (Ha): 2.82
Plot Buffer (m): 100

Site Details

Hanson Springs Ltd, Unit 2, Trans Pennine Trading Estate,
Gorrells Way, ROCHDALE, OL11 2PX