



john newton & partners
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Consulting Engineers

Report on

Coal Mining Risk Assessment

Proposed replacement dwelling:
18 Granny Lane
Mirfield

For

Mrs Burrows

Prepared by

Marta Sroka
MEng

Approved by

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Date

11th March 2015

Ref.

B20199

Chesham
Brighouse
Midlands
Sheffield
Teesside



Issue Record

Job Number: B20199

Prepared By:

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Date: 11th March 2015

Revision	Change Overview	Reason for Change	Date

CONTENTS

1	INTRODUCTION.....	1
1.1	Site Location and Description.....	1
1.2	Description and Layout of Proposed Development	1
1.3	Scope of the Coal Mining Risk Assessment.....	1
2	SOURCES OF INFORMATION USED TO INFORM THIS REPORT	1
3	IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING RISKS.....	2
3.1	Geology	2
3.2	Borehole Logs	3
3.3	Mine Entries	3
3.4	Open Cast Working	3
3.5	Intrusive Investigation of Nearby Site	3
3.6	Possible Ancient Shallow Coal Workings	3
4	MITIGATION STRATEGY PROPOSED.....	3
5	THE COAL AUTHORITY PERMISSION.....	4
6	CONCLUSIONS AND RECOMMENDATIONS	4

APPENDICES

Appendix A	SITE PLAN
Appendix B	COAL MINING REPORT
Appendix C	GEOLOGICAL INFORMATION
Appendix D	BOREHOLE RECORDS
Appendix E	HISTORIC ORDNANCE SURVEY MAPS

COAL MINING RISK ASSESSMENT

B20199: Proposed replacement dwelling at 18 Granny Lane, Mirfield.

1 INTRODUCTION

Jim Granger RIBA has submitted a planning application for the proposed replacement of an existing building with a single detached dwelling at 18 Granny Lane, Mirfield.

JNP Group has been commissioned to prepare a Coal Mining Risk Assessment Report for the proposed site in order to provide the Local Planning Authority with information on coal mining and an assessment of its impact on land stability.

1.1 Site Location and Description

The site is located to the south of Granny Lane, near the junction with Gregory Springs Road in Mirfield village, north east of Huddersfield town centre. Refer to Appendix A for scheme drawings.

1.2 Description and Layout of Proposed Development

The proposed development consists of a removal of an existing building and an erection of a single detached dwelling. Refer to Appendix A for Architectural drawings.

1.3 Scope of the Coal Mining Risk Assessment

The purpose of this Coal Mining Risk Assessment Report is to:

- Present a desk-based review of all available information on the coal mining issues which are relevant to the application site;
- Use that information to identify and assess the risks to the proposed development from coal mining legacy, including the cumulative impact of issues;
- Set out appropriate mitigation measures to address the coal mining legacy issues affecting the site, including any necessary remedial works and/or demonstrate how coal mining issues might influence the proposed development; and
- Demonstrate to the Local Planning Authority that the application site is, or can be made, safe and stable to meet the requirements of national planning policy with regard to development on unstable land, if necessary.

2 SOURCES OF INFORMATION USED TO INFORM THIS REPORT

The following sources of information have been obtained, upon which the risk assessment of coal mining issues have been based. Reports/extracts are appended.

- An up-to-date Coal Mining Search Report (Appendix B) which includes information obtained from a visit to The Coal Authority's Mining Records Office in Mansfield, Nottinghamshire.
- Geological information obtained from the British Geological Survey including the 1:50,000 Series Solid and Drift Edition, Sheet No. 77 (Appendix C) and nearby borehole location records (Appendix D).
- A site history based on historic Ordnance Survey mapping of the area (Appendix E).
- Past desk-based assessments of ground conditions for the application site or adjacent/nearby sites. (None of direct relevance available)
- Results of past intrusive site investigation works undertaken to assess ground conditions for the application site or adjacent/nearby sites. (None of direct relevance available)

3 IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING RISKS

The table below summarises the potential risks associated with coal mining legacy for the proposed development site, identified from the sources listed in Section 2.

Coal Mining Issue	Yes	No	Risk Assessment
Underground coal mining (recorded at shallow depths)		x	
Underground coal mining (probable at shallow depths)	x		yes
Mine entries (shafts and adits)		x	
Coal mining geology (fissures)		x	
Record of past mine gas emissions		x	
Recorded coal mining surface hazard		x	
Surface mining (opencast workings)		x	

3.1 Geology

Examination of the published solid and drift map of the area indicates the site to lie in an area of Lower Coal Measures, shales and mudstones. The surrounding area has a complex geology with a net of fault lines surrounding the site. There is a fault line running in northwest to southeast direction located approx. 500m northeast of the site with the downthrow side towards northeast, away from the site. Another fault line running northeast to southwest direction with the downthrow side towards southeast is located approximately 800m northwest of the site. There are also three fault lines located approx. 900m south of the site. They run east to west direction with the downthrow side towards north.

The site is underlain by Clifton Rock and the local strata is dipping towards the southeast at 5 degree angle.

There are two potential coal outcrops located approximately 150m and 250m southwest of the site. They may be identify as the Top Lousey seam (or Top Beeston seam) and the Trub seam. There is also The Blocking seam outcropping approx. 700m southeast of the site. These seams are dipping away from the site and also the arrangement of the strata shown on BGS map suggest that these seams are located above the Clifton Rock and therefore they are not expected to be present and worked beneath the site and pose no risk to the proposed development. There is a coal outcrop, identified as The Black Bed seam, located approx. 1000m northwest of the site. Considering the strata arrangement and the fault line located between the outcrop and the site, this seam would be expected to be present beneath the site at approx. 88m depth or deeper. The Coal Mining Search Report confirms that the property is in the likely zone of influence from workings in the Low Moor Black Bed seam at 70m depth, worked pre 1900. The thickness of the worked seam is 76cm which suggests that there is a sufficient cover of competent strata overlying any possible voids created by mining activities and any possible settlement is likely to have been completed long ago and shall not have affected the site.

The Coal Mining Search Report indicates also that the property is in the area where the Coal Authority believe there is coal at or close to the surface which may have been worked at some time in the past. The study of the geological map confirms that there may be three coal seams present between the Black Bed seam and the surface. These are the Crow seam and the 22 and the 32 Yard seams. It is possible that these seams have been worked in the past and if there is insufficient cover of competent strata overlying any voids created by possible mining activities, then these voids could migrate upwards by successive roof collapse over many years and cause ground instability at the surface.

3.2 Borehole Logs

There are four boreholes located approx. 180m northwest of the site. Two of the boreholes penetrated down to 12.0m and 14.5m and no coal has been found. Borehole SE21NW105 is 25.1m deep with the traces of coal recorded at 20.5m. Borehole SE21NE106 is 17.0m deep and traces of coal have been found between 14.5m and 17.05m.

The SE21NW1 borehole is located approx. 180m northeast of the site and it is 245m deep. The coal is recorded at three levels, a 20m and a 3.3m thick coal+ fireclay is located at 26m and 49m, and a 0.15m layer of coal only at 151m.

3.3 Mine Entries

The Coal Mining Search Report states that there is no knowledge of any mine entries within 20 metres of the property or the boundary of the property. There are no evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.

3.4 Open cast working

The property is not situated within the boundary of a former opencast coal mining site and there is no underground or opencast workings currently planned within 800m of the boundary.

3.5 Intrusive Investigation of Nearby Site

Not available.

3.6 Possible Ancient Shallow Coal Workings

The Coal Mining Search Report highlights the site to be located within the area of possible ancient coal mining working within the likely zone of influence of the surface. The study of the geological maps suggests that there is a risk of ancient mine workings within one or more of the coal seams located above the Black Bed seam. Due to the complex geology of the area it is difficult to estimate the depth of any possible workings, some of which may be at shallow depths. In addition, the Coal Authority's interactive maps suggest that the site is located over an area where there is a risk of shallow mine workings being present.

4 MITIGATION STRATEGY PROPOSED

The desk-based assessment cannot conclude at this stage with any certainty the extent of the coal mining risks on the site. There are seams expected to be present beneath the site with a risk of influence on the surface if they have been mined.

The Black Bed seam worked in the past at 70m has a sufficient cover of competent strata overlying any voids and therefore it poses little risk in terms of land instability to the proposed development. No further recommended action needs to be taken with regards to old deep workings.

The Coal Mining Search Report suggest that there are possible ancient coal mining workings within the likely zone of influence on the surface in the vicinity of the property, for which no accurate plans or records exist. The studies of the geological sequence of strata shown on the BGS map suggests that the possible risk is from workings within one of the three seams located above the Black Bed seam. Due to the complex geology of the local area and the fault line located northwest of the site the depths of these seams are difficult to assess. There may be workings present at shallow depths which pose a risk to the proposed development and this should be investigated further.

It would be prudent to investigate the actual strata below the site by driving a borehole to 30m depth. If coal is encountered, or greater confidence in the below ground strata is required, then the number of boreholes could be increased to three (this will provide a three dimensional view of the strata).

5 THE COAL AUTHORITY PERMISSION

Prior written permission from The Coal Authority is required for intrusive activities which will disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits). Further information on The Coal Authority's permissions process can be found at:

www.coal.gov.uk/services/permissions/index.cfm

This permission has not been requested at this stage.

6 CONCLUSIONS AND RECOMMENDATIONS

There is a risk of shallow ancient mine workings within influence of the surface, highlighted by the Coal Mining Search Report that should be investigated prior to development.

We initially recommend drilling one borehole on site to a depth of 30m to determine the location of any shallow coal or workings (if any) beneath the site.

Should workings or a workable seam be discovered beneath the site and there is insufficient cover of competent strata overlying possible workings of the seam, then the site should be investigated in detail to confirm if there are any workings and voids beneath the foot print of the proposed building. Any workings or voids revealed within a depth that may have an influence at the surface will require grouting.

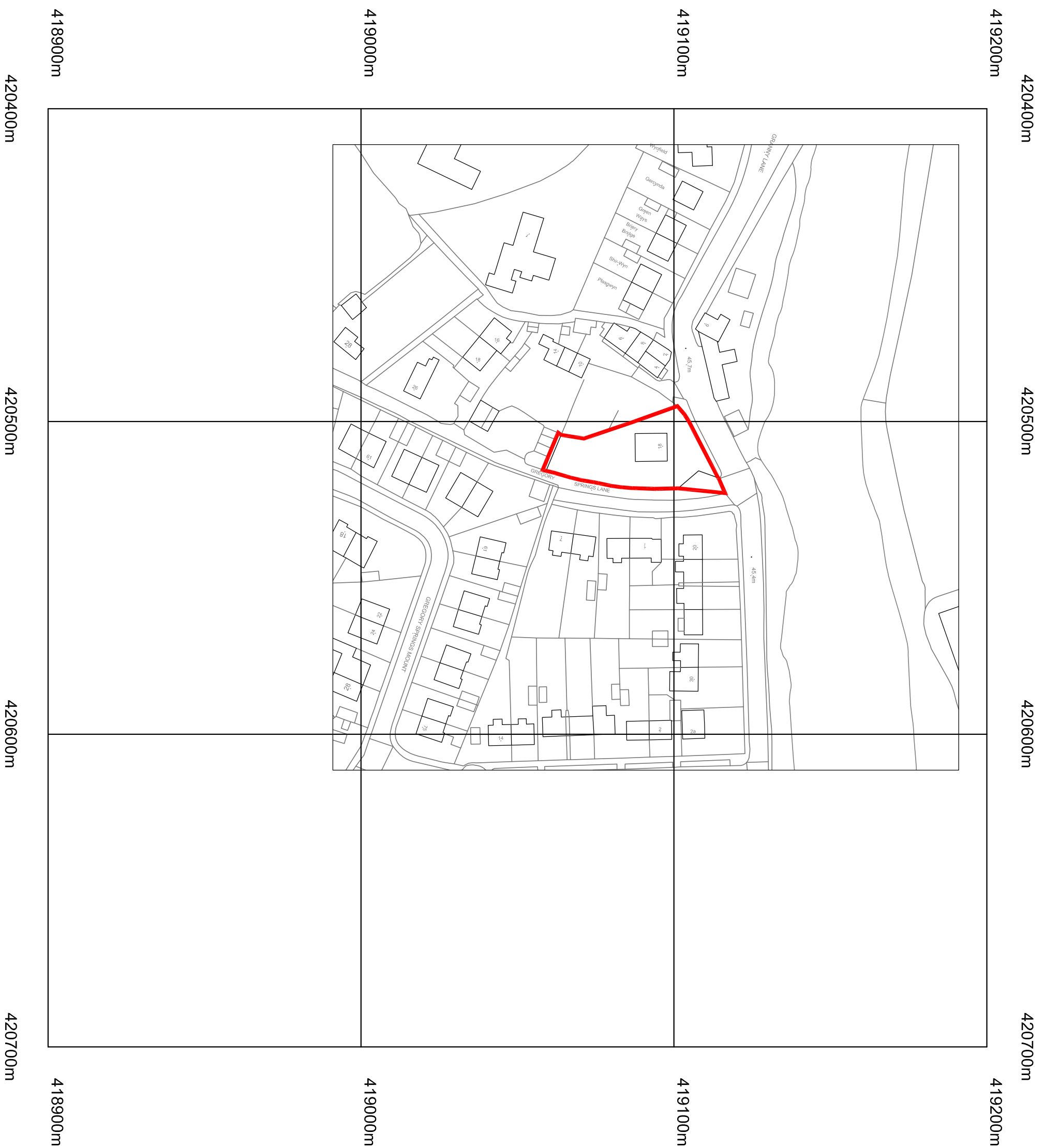
The investigation will allow an appropriate set of mitigation measures to be put in place in order to reduce the effect on the structures on the site.



Appendix A

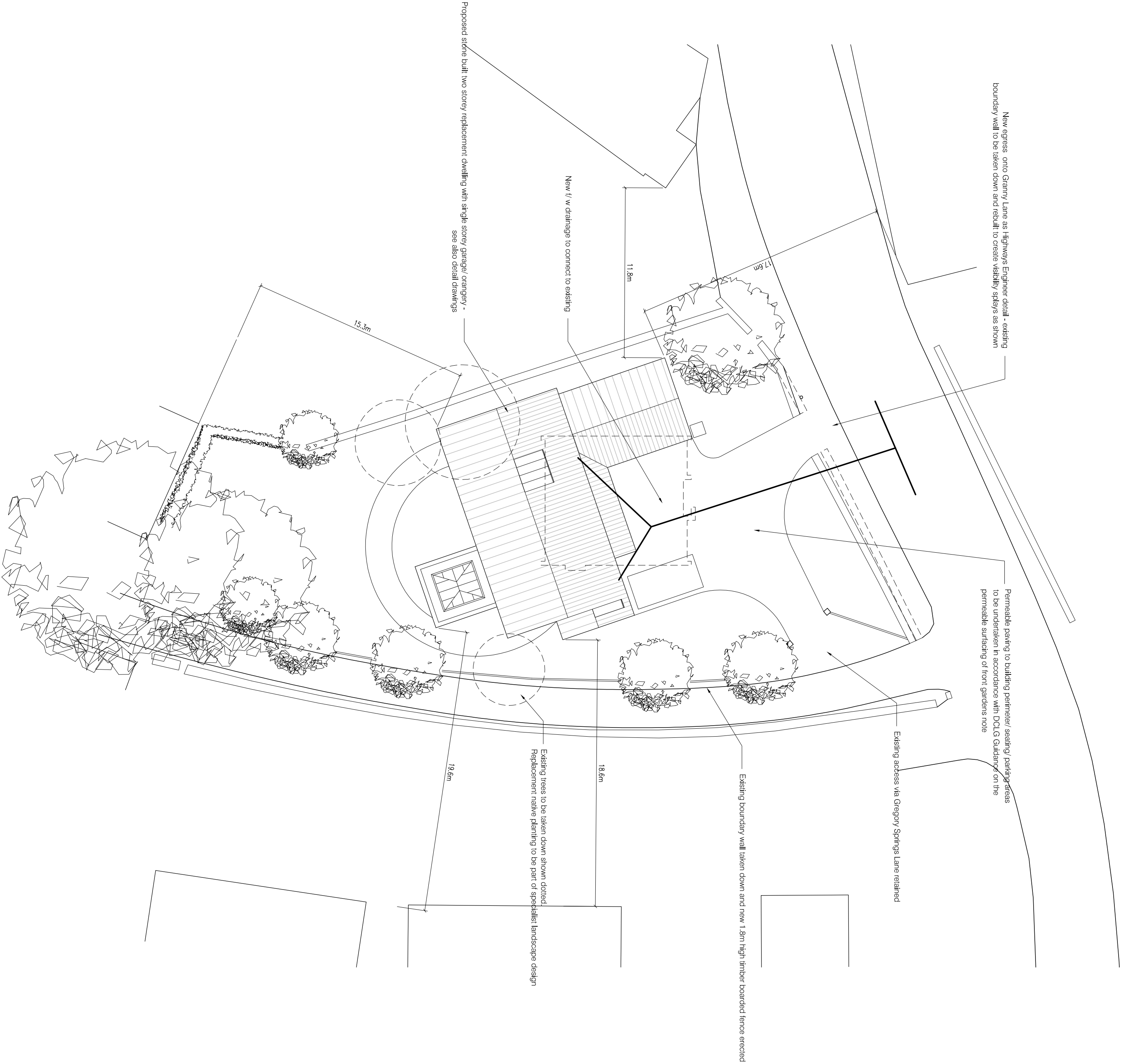
Site Plan

Location Plan 1: 1250



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Block Plan 1: 200





Appendix B

Coal Mining Report

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By

David Bellis
CONSULTING SURVEYORS

Coal Mining Search Report

Incorporating Cheshire Brine Enquiries



Serial Number 313141

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Search produced by M J Peace

Property details:

Site at
Granny Lane
Mirfield
WF14 8LA

Your ref : B20199

Purchaser :

Vendor :

In accordance with your instructions received 24 Feb 2015 we have inspected plans and records of coal mine workings and have made enquiries with respect to Cheshire brine extraction in relation to the above property and can report as follows :

1. **SEAM DETAILS FOR PAST UNDERGROUND COAL MINING** : In relation to the property the undermentioned seam(s) have been worked within the likely zone of physical influence on the surface.

Seam	Depth (m)	Sect (cm)	Date	Remarks
Low Moor Black Bed	70	76	pre 1900	Subjacent

2. **SEAM DETAILS FOR CURRENT AND FUTURE UNDERGROUND COAL MINING** : The undermentioned seam(s) are currently being worked, or licenses to work are being determined, or have been granted to work, within the likely zone of physical influence on the surface in relation to the property.

Seam	Depth (m)	Sect (cm)	Date	Remarks
				Coal in reserve - no workings currently planned.

3. **UNDERLYING GEOLOGY** :

The property is situated in an area of Alluvium over Lower Coal Measures, shales and mudstones.

There are no faults or abnormal features relevant to the property.

4. **OPENCAST COAL MINING** :

Serial Number 313141

Past Opencast Workings : The property is not situated within the boundary of a former opencast coal mining site.

Present Opencast Workings : The property is not situated within 200m of the boundary of a currently operating opencast coal mining site.

Future Opencast Workings : The property is not situated within 800m of the boundary of an opencast site for which a license to extract coal by opencast methods has been granted or a license to do so is currently being determined.

5. SHAFTS, ADITS (MINE ENTRIES) AND ADDITIONAL INFORMATION :

We have no knowledge of any shafts or adits within 20 metres of the property or the boundary of the property.

There are no tips or lagoons in the vicinity of the property.

There are possible ancient shallow coal mining workings within the likely zone of influence on the surface in the vicinity of the property, for which no accurate plans or records exist.

6. NOTICES IN RELATION TO FUTURE COAL MINING ACTIVITY :

We have no knowledge of any intention to work coal by underground methods within influencing distance on the surface in the vicinity of the property for which notices have been issued under the Coal Mining Subsidence Act 1991.

7. PAST COAL MINING RELATED SUBSIDENCE :

Our investigations have shown no evidence of coal mining related subsidence claims in relation to the property in the past 10 years.

8. CONCLUSION (COAL MINING) : In the light of the above facts we conclude that in relation to coal mining :

Old workings are present but all settlement is likely to have completed long ago.
In our opinion it is unlikely that coal will be worked in the foreseeable future.

COAL MINING RISK LEVEL : We recommend that the transaction is treated as :

Where this report is to be used for development purposes particular attention is drawn to the paragraphs below concerning the ownership of in situ coal, coal workings and the risks from mine gases.

Please note that the overall coal mining risk level above is based upon an assessment of the detailed information contained in the body of the report. The risk assessment must be used in conjunction with the detailed report.

If development of the property is being considered then all necessary enquiries and investigations should be completed prior to the commencement of works to ensure that

Serial Number 313141

proposals follow good engineering practice for development in mining areas. The Coal Authority has ownership of in situ coal, coal mines (both current and disused) and coal mine shafts and adits. Activities that intersect, enter or disturb any of the Coal Authority's interests require the written permission of the Authority.

Any development proposals should consider risks to the development, or adjacent property, of generating or displacing underground gases where coal seams or former mining works are disturbed. The need for effective measures to prevent gasses entering public properties should be assessed and properly addressed. These actions are necessary due to the public safety implications of development in these circumstances.

CHESHIRE BRINE EXTRACTION INFORMATION :

The property lies outside the Cheshire Brine Compensation District as prescribed by the Cheshire Brine Pumping (Compensation for Subsidence) Act 1952.

With respect to coal mining there is nothing to prevent a claim being made under the provisions of the Coal Mining Subsidence Act 1991 and subsequent legislation, but it must not be inferred that the Coal Authority or their licensees will necessarily accept that any damage has been caused as a result of mining subsidence.

If you require any further information or amplification please contact CoalSearchPlus+ on 01423 529911 or via our website www.coalsearch.plus.com.

This report is prepared in accordance with the CoalSearchPlus+ terms and conditions as published on the CoalSearchPlus+ website (www.coalsearch.plus.com) on the date of issue of this report.

This is a Coal Mining Search Report and is not to be interpreted as being part of an Environmental Assessment of the property.

We cannot be held responsible for the accuracy of the information provided to us by third party organisations.

The information and/or material supplied is composed from data based in many cases on measurements and records of various standards of reliability and age. We cannot be held responsible for the accuracy of such information.

This search report is based upon the privately owned CoalSearchPlus+ mining record database and plans and records publicly available at the time of inspection from the Coal Authority, including British Geological Survey and Ordnance Survey data. Organisations reserve the right to vary their proposals and intentions as to their future mining operations without prior notice save as provided in the Coal Mining (subsidence) Act 1991 and the Coal Industry Act 1994.

Coal Authority Address : The Coal Authority, 200 Lichfield Lane Berry Hill, Mansfield, Nottinghamshire, HG18 4RG
British Geological Survey Address : British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG

The information contained in this report relates to the property address given by the individual or organisation ordering the report. Where a plan indicating the property location and boundary is supplied with the instruction the report is based on that information. Where no plan is supplied the report is based on the property location as defined in publicly available mapping data. At all times it remains the responsibility of the instructing organisation or individual to define the boundary of the property.

Additional notes applicable to Residential Coal Mining Reports only :

David Bellis Consulting Surveyors Ltd is not aware of any personal or business relationship between the person conducting or preparing the search and any person involved in the sale of the property.

This report is a desk study of existing published geological and coal mining records and the CoalSearchPlus+ coal mining database. In order to compile this report enquiries have been made relating to the following :

Past Coal Mining – the existence of any previously worked seams of coal within influencing distance on the surface in relation to the property including an indication of the location, depth and age of the workings,

Present Coal Mining - the existence of any currently worked seams of coal within influencing distance on the surface in relation to the property including an indication of the location, depth and age of the workings. The existence of coal that could be worked at some time in the future will be enquired into and detail of any relevant licenses disclosed where available.

Underlying Geology - the underlying geology of the property will be reviewed and briefly described in relation to coal mining.

Opencast Coal Mining - the existence of past present and future opencast coal mining, specifically :

Serial Number 313141

- if the property is situated within the boundary of a former opencast site. In the case of old opencast workings it must be understood that records are often unclear regarding the site boundary and/or worked areas. Published records will be reviewed to give our opinion of the existence of relevant former opencast coal workings.
- if the property is situated within 200m of the boundary of a currently operating opencast site.
- if the property is situated within 800m of the boundary of an opencast for which either a license to extract coal by opencast methods has been granted or a license to do so is currently being determined.

Shafts, Adits (Mine Entries) and Additional Information – the existence of any mine entries within 20m of the property or the boundary of the property and its associated land and buildings (the definition of the boundary of the property is the responsibility of the individual or organisation ordering this report). Where a mine entry is found to exist the approximate location of the mine entry will be indicated on a plan to be provided by the instructing organisation or individual. The existence of unworked coal will be enquired into and our opinion regarding the likelihood of it being worked at some time in the past will be given where relevant. Any other relevant coal mining related features discovered will be noted.

Notices in relation to future coal mining activity – the existence of notices indicating an intention to work coal by underground methods in the future.

Past coal mining related subsidence – if any publicly available records indicate coal mining related subsidence affecting the property in the past 10 years.

Coal Mining Risk Level – the opinion of David Bellis Consulting Surveyors of the risk posed to the property from coal mining given all the information contained in the report. The risk to the property is given in relation to the majority of the housing stock in the immediate area.

Cheshire Brine – the location of the property in relation to the Cheshire Brine Compensation District and any relevant information to the property regarding brine extraction.

Additional information, including answers to many frequently asked questions, can be found on the CoalSearchPlus+ website, www.coalsearch.plus.com

Complaints Procedure

David Bellis Consulting Surveyors Ltd is registered with the Property Codes Compliance Board as a subscriber to the Search Code. A key commitment under the Code is that firms will handle any complaints both speedily and fairly.

If you want to make a complaint, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs):

Tel: 01722 333306, E-mail: admin@tpos.co.uk

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

Complaints should be sent to:

Mr M. Peace, Director, David Bellis Consulting Surveyors Ltd, 8 Mornington Terrace, Harrogate, North Yorkshire, HG1 5DH
Tel : 01423 529911 Fax : 01423 529922 Email : contact@coalsearch.plus.com

Date : 09 Mar 2015

Signed :



Serial Number 313141**Important Consumer Protection Information**

This search has been produced by David Belis Consulting Surveyors Ltd, 8 Mornington Terrace, Harrogate, HG1 5DH (T: 01423 529911, F: 01423 529922, E: contact@coalsearch.plus.com) which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered firms maintain compliance with the Code.

The Search Code:

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- sets out minimum standards which firms compiling and selling search reports have to meet
- promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

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- Conduct business in an honest, fair and professional manner.
- Handle complaints speedily and fairly.
- Ensure that all search services comply with the law, registration rules and standards.
- Monitor their compliance with the Code.

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If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award compensation of up to £5,000 to you if he finds that you have suffered actual loss as a result of your search provider failing to keep to the Code.

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TPOs Contact Details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk.

PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

Serial Number 313141**David Bellis Consulting Surveyors Ltd and CoalSearchPlus+ Terms and Conditions (Available in large print by request)**

1. Definitions.
 - a) The Service Provider is David Bellis Consulting Surveyors Ltd, trading as CoalSearchPlus+.
 - b) The Applicant is the Individual, Organisation, or appointed officer of said Organisation placing a Request with the Service Provider.
 - c) The Third Party Provider is any Organisation from which the Service Provider obtains data and/or information on behalf of the Applicant in the normal course of fulfilling the Applicants Request.
 - d) The request is a formal Request by the Applicant with CoalSearchPlus+ to retrieve specific data and/or information.
2. CoalSearchPlus+ accept Requests only on the basis that the Applicant is acting as a principal and is directly liable for payment of our invoice or account.
3. It is the policy of CoalSearchPlus+ to observe confidentiality with regard to the identity and affairs of our customers to the extent permitted by law, but, in common with other service providers, we may be required exceptionally to disclose information to governmental and other public authorities.
4. The placing of a Request by the Applicant with CoalSearchPlus+ confirms acceptance of these terms and conditions.
5. Any Order Form produced by CoalSearchPlus+, either printed or published on the CoalSearchPlus+ website, is an invitation to treat. The Applicant makes an offer to buy from CoalSearchPlus+ by the submission of a Request, subject to clause 10. Acceptable modes of transmission for a Request are facsimile (fax), telephone, electronic mail(e-mail), online transmission via the CoalSearchPlus+ website only, Document Exchange (DX), Royal Mail or courier appointed by the Applicant.
6. Orders will be accepted on order forms other than CoalSearchPlus+ forms however these will be accepted under the standard CoalSearchPlus+ terms and conditions only, subject to Clause 10.
7. CoalSearchPlus+ reserves the right to refuse any Request.
8. CoalSearchPlus+ reserves the right to cancel any Request at any time.
9. Proof of transmission of a Request by the Applicant does not constitute proof of receipt by CoalSearchPlus+.
10. It is the responsibility of the Applicant to ensure the accuracy, legibility, clarity and completeness of all data and/or information provided to CoalSearchPlus+ as part of the Request, including but not limited to, names, numbers, addresses, location plans, and boundary plans. This applies whether the Request is submitted on CoalSearchPlus+ order forms either printed or published on the CoalSearchPlus+ website or on the Applicants own order form.
11. CoalSearchPlus+ may request additional relevant data and/or information from the Applicant in the course of fulfilling a Request, including, but not limited to, names, numbers, addresses, location plans, and boundary plans.
12. CoalSearchPlus+ may request clarification of data and/or information supplied by the Applicant.
13. If, subsequent to Clause 11. and/or Clause 12., requested data and/or information is not provided and/or clarified, CoalSearchPlus+ cannot be held responsible for any resultant loss or delay.
14. If, subsequent to Clause 11. and/or Clause 12., requested data and/or information is not provided and/or clarified within a reasonable period of time, CoalSearchPlus+ reserves the right to cancel the Request in whole or in part. The Applicant remains liable for all fees, Taxes and Disbursements accrued prior to the cancellation.
15. CoalSearchPlus+ reserves the right to subcontract data and/or information retrieval to selected Organisations and/or Individuals. CoalSearchPlus+ is not required to reveal the identity of its Subcontractors.
16. CoalSearchPlus+ will, in the process of fulfilling the request, retrieve data and/or information from publicly and/or commercially available sources and the CoalSearchPlus+ mining database. The sources of data used will primarily be data held by The Coal Authority under an agreement with the Health and Safety Executive, data owned by the British Geological Survey and the CoalSearchPlus+ database.
17. A CoalSearchPlus+ mining report is a report of the interpretation of the data sources in 16. made by CoalSearchPlus+ staff.
18. CoalSearchPlus+ coal mining search reports are based upon the plans and records available from data sources detailed in 16. at the time the report was produced. It should be understood that third party organisations reserve the right to vary their proposals and intentions as to their future mining operations without prior notice save as provided in the Coal Mining Subsidence Act 1994. CoalSearchPlus+ cannot be held responsible for changes to the future proposals and intentions of Third Parties.
19. The information and/or material supplied in a CoalSearchPlus+ coal mining report is composed from data based, in many cases, on measurements and records of various standards of reliability and age. In some instances (usually relating to older records) it is necessary for CoalSearchPlus+ to make assumptions regarding the 'best plot' position of mining features. For these reasons users of CoalSearchPlus+ reports should take the position of mining features detailed in reports to be indicative only.
20. The data and/or information that a coal mining search report is based on is constantly being updated. A CoalSearchPlus+ coal mining search report is based on the most up to date information available at the time that the report is produced however it cannot be guaranteed that the information and/or data will not become obsolete at some time in the future. Responsibility for the supply of accurate and up to date information to CoalSearchPlus+ lies with the data supplying organisations listed in 16.
21. A CoalSearchPlus+ coal mining search report relates only to coal mining and minerals worked in relation to coal mining. Other reports may be required in relation to other minerals.
22. A CoalSearchPlus+ coal mining search report is not a substitute for site investigation or a mining survey. Depending on the content of a coal mining search report, or whether development is intended, the Applicant must decide whether a site investigation or mining survey is required.
23. CoalSearchPlus+ coal mining reports comply with the Search Code.

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24. All CoalSearchPlus+ reports are covered by professional indemnity insurance. The content of CoalSearchPlus+ coal mining search reports does not prevent any future claim being made by the Applicant against the Coal Authority in respect of coal mining related subsidence.
25. Any liability in the instance of negligence by CoalSearchPlus+ or its employees in the interpretation of coal mining data and/or the production and provision of coal mining reports will be limited to the extent of the CoalSearchPlus+ Professional Indemnity Insurance or the value of the loss caused by the negligence, whichever is the lower.
26. All CoalSearchPlus+ coal mining search reports give the information detailed in the services section of the CoalSearchPlus+ website and summarised in the report. Further explanation of this information is available in the Glossary and/or the Frequently Asked Questions areas of the CoalSearchPlus+ website. Alternatively contact CoalSearchPlus+ who will be happy to explain the content of a report.
27. The Request is fulfilled when all reports, data and/or information requested by the Applicant have been retrieved and/or compiled by CoalSearchPlus+ and delivered by electronic mail (e-mail) or fax or post or document exchange (DX) or a combination of these methods as required by the Applicant. Alternative delivery arrangements are at the discretion of CoalSearchPlus+.
28. If Requests for multiple reports, data and/or information relating to multiple addresses were made on a single order form these will be fulfilled individually by the delivery of the reports, data and/or information relating to each individual address being treated as an individual Request.
29. CoalSearchPlus+ is not responsible for any loss or misdelivery of retrieved data and/or information caused by failure of Document Exchange (DX), Royal Mail or internet service provider. Most retrieved data and/or information is archived by CoalSearchPlus+ and a copy may be requested by the Applicant. If the data and/or information could not be archived CoalSearchPlus+ reserves the right to treat the request as a new Request.
30. Delivery, by whatever agreed means, will be accompanied by an invoice. Delivery by electronic mail may be followed up with a paper invoice by post or DX. Where Applicants have agreed account facilities with CoalSearchPlus+ invoicing may be on a monthly basis. In all cases the Applicant agrees to provide CoalSearchPlus+ with remuneration for the full amount shown on the invoice, including all Fees, Taxes and Disbursements.
31. The Applicant will be liable for payment of the full invoice amount within 14 days from the date of receipt of the invoice. CoalSearchPlus+ reserve the right to charge for costs and expenses incurred in recovering late payments and to charge interest at the rate of 8% above the Bank of England base rate per annum for the full period that the payments are overdue.
32. Where full payment of the invoice is not made by the Applicant within 14 days from receipt of the invoice CoalSearchPlus+ reserve the right to withdraw account facilities from the Applicant and cancel any individual agreements concerning fees or other Terms and Conditions that may have been made between the Applicant and CoalSearchPlus+.
33. Where possible the Applicant will receive Advance Notice of the cost of the Request, including all Fees, Taxes and Disbursements, prior to receipt of the invoice. This advance notice will take the form of the price for the service requested as published on the CoalSearchPlus+ website, or the price as individually agreed between CoalSearchPlus+ and the Applicant.
34. Additional Fees, Taxes and Disbursements may arise during the course of data and/or information retrieval, over and above Advance Notice costs as in clause 33. The Applicant is liable for any such additional costs. Where possible, the Applicant is notified of additional costs prior to fulfilment of the Request.
35. If the Applicant shall pay in advance of receipt of the invoice, then the Applicant remains liable for any underpayment.
36. Any overpayment on the part of the Applicant will be refunded. Arrangements for refunds are agreed on a case-by-case basis, through discussion between CoalSearchPlus+ and the Applicant.
37. The Applicant may cancel the Request in whole or in part at any time prior to Clause 27.
38. If the Applicant cancels the Request in whole or in part prior to Clause 27, the Applicant remains liable for all Fees, Taxes and Disbursements already accrued prior to the Cancellation.
39. CoalSearchPlus+ accept no liability for any loss incurred by the Applicant or the Applicants client where the Applicant is acting as an agent for a client, due to late fulfilment and delivery of the Request.
40. CoalSearchPlus+ accept no liability for any loss to the Applicant, or the Applicant's client where the Applicant is acting as an agent for a client, due to any negative outcome of a report provided in the process of the correct and accurate fulfilment of the Request.
41. Any disputes relating to the provision of coal mining search reports should be addressed to the Practice Principal, CoalSearchPlus+ in the first instance. Disputes will be settled according to the CoalSearchPlus+ complaints procedure detailed in each report.
42. Third Party and subcontractor Terms and Conditions shall apply in addition to these clauses. Should any conflict arise between CoalSearchPlus+ Terms and Conditions and Third Party or Subcontractor Terms and Conditions, then CoalSearchPlus+ Terms and Conditions prevail unless and until CoalSearchPlus+ expressly states otherwise in writing and/or courts of England and Wales establish otherwise.
43. No variation to these Terms and Conditions is effective unless and until CoalSearchPlus+ expressly agrees in writing.
44. CoalSearchPlus+ reserves the right to alter these terms and conditions as appropriate, without notice, at any time. Such amended Terms and Conditions will become effective upon publication on the CoalSearchPlus+ website.
45. These Terms and conditions are subject to English Law and the exclusive jurisdiction of the courts of England and Wales.

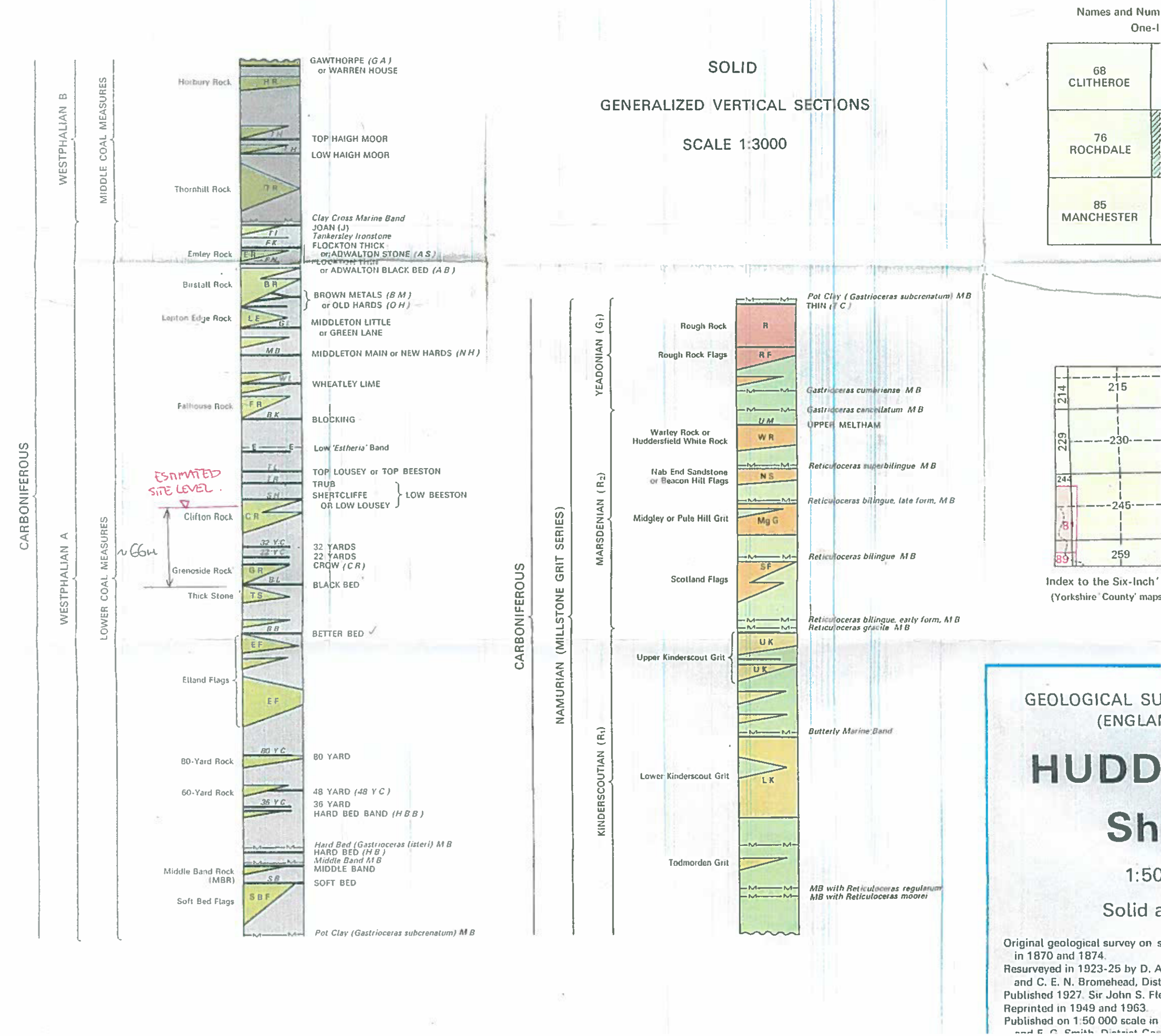


Appendix C

Geological Information



SE 225199

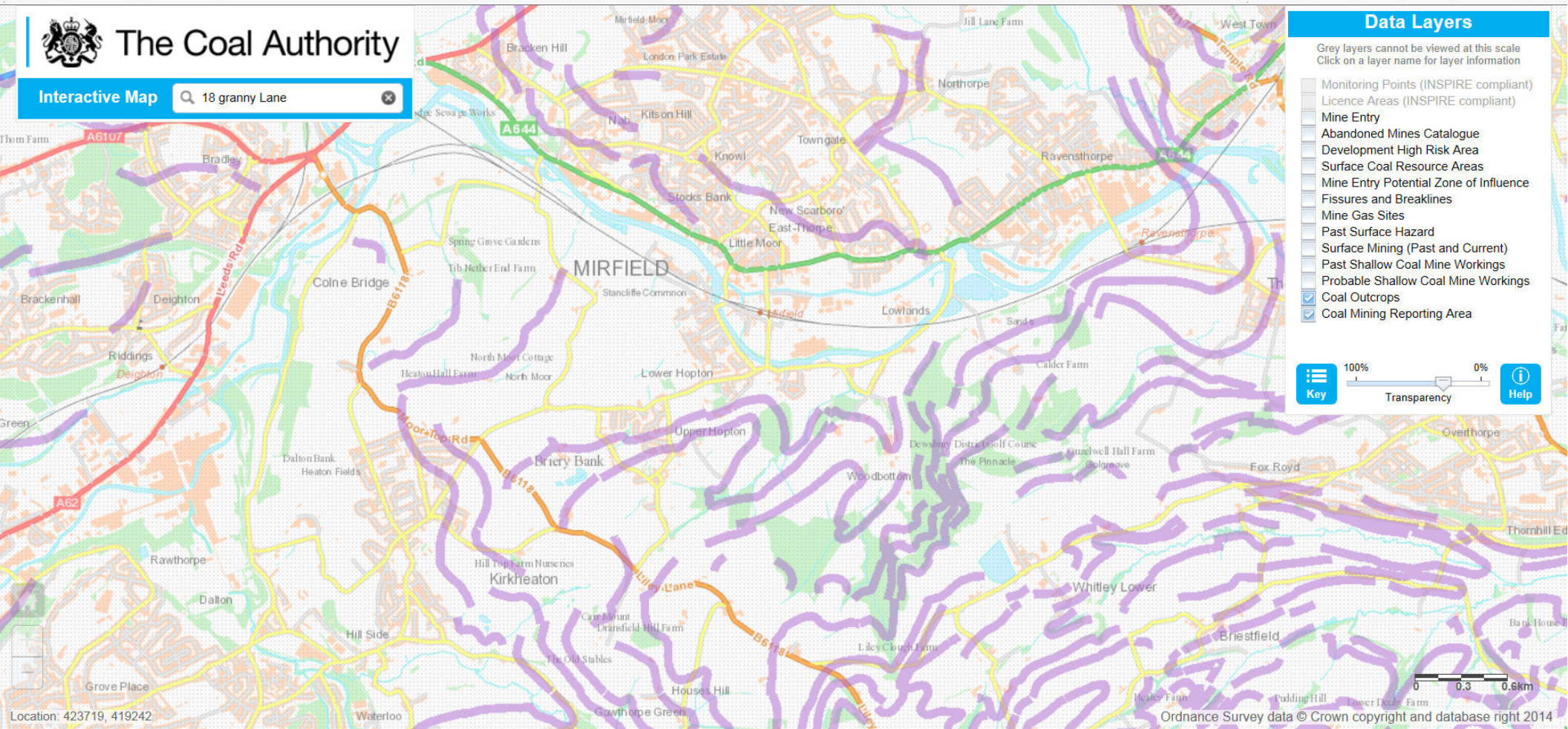




The Coal Authority

Interactive Map

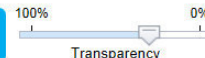
18 granny Lane



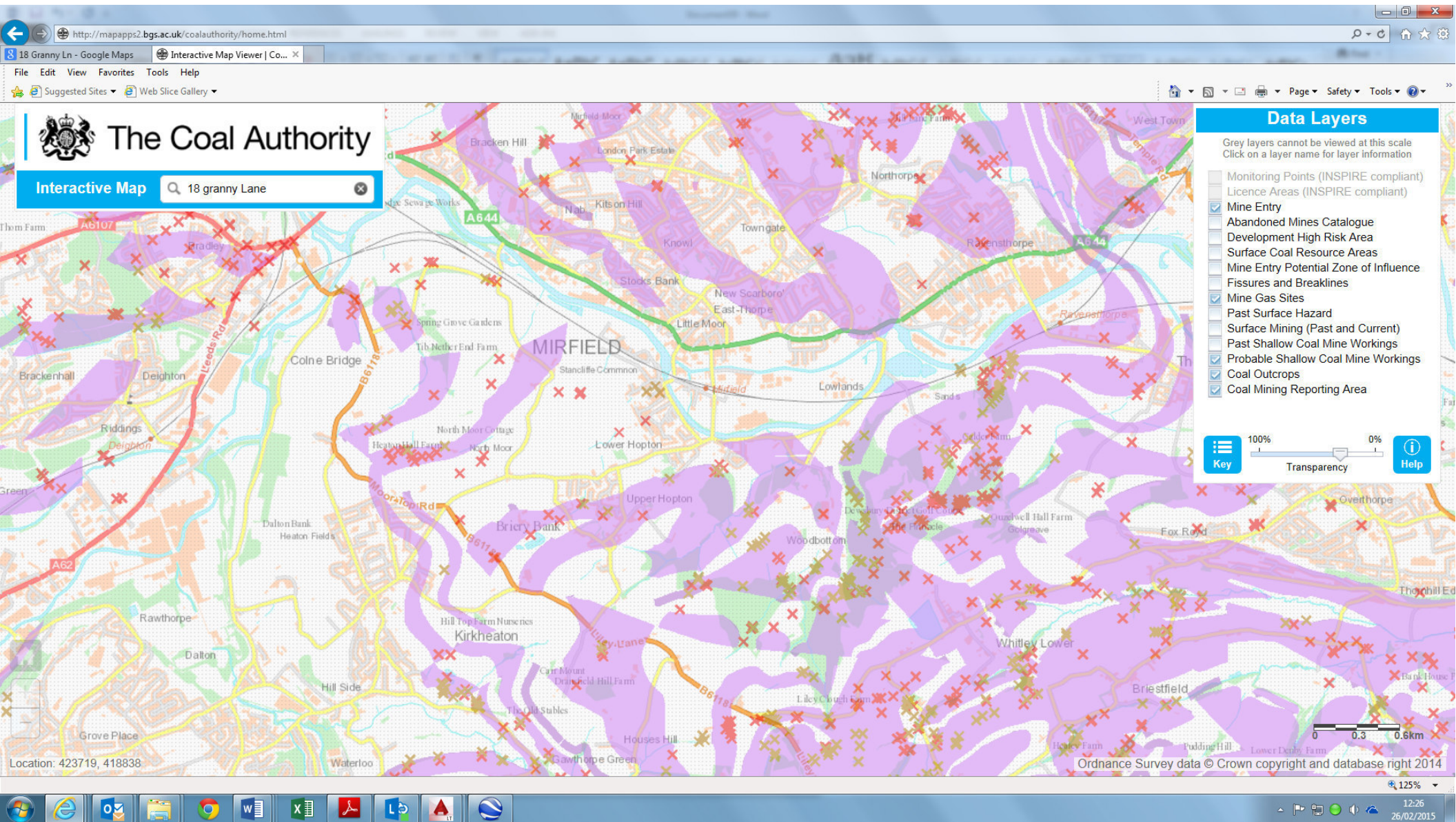
Data Layers

Grey layers cannot be viewed at this scale
Click on a layer name for layer information

- ☐ Monitoring Points (INSPIRE compliant)
- ☐ Licence Areas (INSPIRE compliant)
- ☐ Mine Entry
- ☐ Abandoned Mines Catalogue
- ☐ Development High Risk Area
- ☐ Surface Coal Resource Areas
- ☐ Mine Entry Potential Zone of Influence
- ☐ Fissures and Breaklines
- ☐ Mine Gas Sites
- ☐ Past Surface Hazard
- ☐ Surface Mining (Past and Current)
- ☐ Past Shallow Coal Mine Workings
- ☐ Probable Shallow Coal Mine Workings
- ☒ Coal Outcrops
- ☒ Coal Mining Reporting Area



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Appendix D

Borehole Records

Borehole Scans

Click on a borehole to view scan.

Borehole depth

- 0 - 10m
- 10 - 30m
- 30m+
- Unknown
- Confidential or Restricted

[More on boreholes](#)

SE21NW105 SE21NW104

SE21NW106 SE21NW107

WF148LF

SE21NW111 River Calder

0 30 60m



BRIS ID: 56736 BGS Reference: SE21NW104
British National Grid (27700): 420418, 419180

File: 10081343 Page 1 of 6 Total

SE21NW 104

LOCATION HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 1

Method Cable tool percussion and rotary coring

Date 8 - 11.9.81

Casing 0.15m diameter to 14.2 metres 2041 1918

Sheet 1 of 6

RL. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
	G.L.					
		MADE GROUND comprising paving flags over burnt colliery waste.				
	0.45					
	0.65	MADE GROUND comprising sandstone masonry/old kerbs.				
		MADE GROUND comprising ash and broken sandstone.				
	1.2		B1	1.2-1.5		
		MADE GROUND comprising medium dense and loose light brown silty fine and medium sand with traces of sandstone gravel and clayey zones.	D2	1.7-2.15	N	18
			B3	2.2-3.0		
			D4	3.2		
			U5	3.55-4.0		
			D6	4.05		
			D7	4.1-4.55	N	4
			U8	4.75-5.2		
		Continued from 5.0 metres.				



British
Geological Survey

BGS 111 547M BGS Reference: SE21NW104
British National Grid: 427000 4204 to 419100 (extent of logs, with this borehole)

Page 2 of 6

SE21NW 104

LOCATION HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 1

Method

Date

Casing

Sheet 2 of 6

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 5.0 metres.				
	6.0		D9 D10	5.25 5.3-5.75	N	3
	6.8	Dark grey slightly organic micaceous very silty fine SAND/sandy SILT with traces of roots.				
			U11	6.3-6.75		
			D12 D13	6.8 6.9-7.35	N	16
	7.6	Medium dense becoming dense grey silty medium SAND.				
			D14	7.45-7.9	N	33
		Dense becoming very dense silty sandy varied GRAVEL and COBBLES with occasional boulders.				
			B15	8.0-8.8		
			D16	8.8-9.25	N	38
			B17	9.3-9.9		
		Continued from 10.0 metres.				



British
Geological Survey

BH18 ID: 56736 BH18 Reference: SE21NW104
Borehole Name: (and / or ID) 420499, 419180 Report as name with this borehole

Page 3 of 6

SE21 NW 104

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 1

Method

Date

Casing

Sheet 3 of 6

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 10.0 metres				
		As above with mudstone gravel and cobbles becoming evident at base.	D18	10.2-10.65	N	62
	11.4		B19	11.4-11.8		
		Extremely becoming very weak light grey clayey MUDSTONE.	U20	11.8-12.25		
			D21	12.3		
			D22	12.3-12.75	N	> 150
			D23	13.0-13.3	N	> 200
			ROTARY CORING			
			RUN 1	13.3-15.15	REC RQD FF	55 - -
		Continued from 15.0 metres.				



BH18 104 94736 BH18 Reference: SE21NW104
Borehole Name and Grid (277000 429400) (19100 Report on joint south of the borehole)

Page 4 of 6

SE21NW 104

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 1

Method

Date

Casing

Sheet 4 of 6

RL m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 15.0 metres.				
		Very weak light grey clayey MUDSTONE.	D24	15.15- 15.3	N	> 200
			RUN 2	15.3- 17.0	REC RQD FF	30 - -
	17.2		RUN 3	17.0- 18.1	REC RQD FF	70 30 > 20
		Moderately weak to moderately strong grey current bedded silty fine grained SANDSTONE tending to siltstone in parts. Bedding generally 10 to 20° with occasional 60° joints. Traces of clay present.	RUN 4	18.1- 19.2	REC RQD FF	65 25 15
			RUN 5	19.2- 20.1	REC RQD FF	35 15 > 20
		Continued from 20.0 metres.				



BGS ID: 56736 BGS Reference: SE21NW104
British National Grid (TTP09) 420488.419100 Report as seen with this borehole

For: [Borehole logs](#)

SE21NW 104

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 1

Method

Date

Casing

Sheet 5 of 6

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 20.0 metres.				
	20.5	As above.				
		Traces of coal present	RUN 6	20.1- 21.5	REC RQD FF	85 40 10
			RUN 7	21.5- 25.1	REC RQD FF	70 10 20
	25.1	Becoming clayey and grading to silty mudstone.				
		END OF BOREHOLE				



BGS ID: 56737 BGS Reference: SE21NW105
 British National Grid (2700) 420398 119180 [Return to map with this borehole](#)

Print Page Print Page Print Page

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

SE21NW 105

BOREHOLE 2

Method Cable tool percussion

Date 14 - 15.9.81

Casing 0.15m diameter to 11.5 metres

2039 1918

Sheet 1 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
	G.L.	MADE GROUND comprising footpath construction over sandstone slabs.				
	1.1	MADE GROUND comprising very loose burnt colliery waste with ash and clinker, sandstone fragments, sand and brick.	B1	1.7-2.1		
	2.4	MADE GROUND comprising very loose unburnt colliery waste with traces of dark brown sand.	D2 B3	2.2-2.65 2.4-3.0	N	5
	3.1	Firm dark brown very sandy silty CLAY. (Possibly made ground)	D4 U5	3.3 3.4-3.75		
	3.8	Very loose brown silty fine SAND (Probably made ground)	D6 D7	3.8 3.9-4.35	N	3
		Continued from 5.0 metres.	U8	4.65-5.1		



British
Geological Survey

2015 ED 36737 2015 Reference: SE21NW105
Borehole Interval: Grid (27700) 420390, 491000 Reduced to datum with this borehole

Page 2 of 4

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

SE 21 NW 105

BOREHOLE 2

Method

Date

Casing

Sheet 2 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 5.0 metres.				
		As above.	D9 D10	5.15 5.25-5.7	N	3
	6.1					
		Dark grey and brown slightly organic micaceous fine SAND. Occasionally tending to silt. Occasional carbonaceous traces present.	U11 D12 D13	6.25-6.7 6.75 6.8-7.25		
	6.75					
		Very dense brown silty slightly clayey fine, medium and coarse SAND and rounded and subrounded GRAVEL and COBBLES with occasional boulders.	D14 B15	7.4-7.85 7.8-8.6	N	46
			D16 B17	8.75-9.2 9.2-9.9	N	48
		Continued from 10.0 metres.				



BGS ID: 56737 BGS Reference: SE21NW105
British National Grid (277000, 420300) 19100 British National Grid

Page 3 of 4

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 2

Method

Date

Casing

Sheet 3 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 10.0 metres.				
		As above	D18	10.1-10.55	N	46
	11.0					
		Light grey very silty CLAY with numerous mudstone fragments rapidly becoming very weak grey MUDSTONE. Bedding at 20 to 30°.	U19	11.85-12.1		
			D20	12.15		
	12.45		D21	12.15-12.45	N	> 200
		END OF BOREHOLE				
		Water sample from river			pH SO ₄	6.9 11.6 ppr
		Water sample from borehole			pH SO ₄	6.6 24.9 ppr
		ppm - parts per million				



British
Geological Survey

DB16 ID: 56738 DB16 Reference: SE21NW106
British National Grid (27000 420000.419) Report as issued with this borehole

SE21NW 106

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 3

Method Cable tool percussion and rotary coring

Date 16 - 21.9.81

Casing 0.2m diameter to 11.0 metres

Nx to 11.8 metres.

Sheet 1 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
	G.L.					
	0.15	MADE GROUND comprising footpath construction				
	0.325	MADE GROUND comprising asphalt and tarmac.				
	0.6	MADE GROUND comprising sandstone flags.				
		MADE GROUND comprising loose brown silty sand with numerous sandstone fragments, up to cobble size.	B1	1.0-1.6		
			U2	1.7-2.15		
			D3	2.2		
			D4	2.25-2.7	N	5
		Sandstone flag present.				
			D5	3.0-3.2		
			D6	3.2-3.65	N	28
	3.8	Brown very silty sandy CLAY and clayey SAND with occasional rounded gravel and cobbles. (Probably made ground).	B7	4.0-4.5		
			U8	4.55-5.0		
		Continued from 5.0 metres.				

British
Geological SurveyBGS ID: 56738 BGS Reference: SE21NW106
British National Grid (277001 420791.419) 50 Eastings, 420791.419 Northings

Page 2 of 4

SE 21 NW 106

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 3

Method

Date

Casing

Sheet 2 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 5.0 metres.				
		As above	D9 D10	5.05 5.1-5.55	N	10
	6.5	-	D11 U12	5.9 6.0-6.45		
		Medium dense to dense grey and light brown fine to medium, becoming medium, SAND with a little rounded and subrounded gravel.	D13	6.5-6.95	N	36
			D14	7.4-7.85	N	27
			B15	8.3-8.8		
	9.0		D16	8.8-9.25	N	45
		Slightly clayey, slightly silty sandy GRAVEL and COBBLES with occasional boulders.	B17	9.0-10.0		
		Continued from 10.0 metres.				



British
Geological Survey

BGS 02-56738-0018 Reference: SE21NW106
British National Grid (277000) 420991.4 (19150) 56738.0 (19150) 56738.0

File: Page 3 of 4

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

SE21NW 106

BOREHOLE 3

Method

Date

Casing

Sheet 3 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 10.0 metres.				
		As above.	D18	10.15- 10.6	N	17
	11.4		D19	11.0		
		Very weak becoming weak grey MUDSTONE. Bedding generally less than 10° with occasional 45° to 60° joints.	U20	11.5- 11.8		
			D21	11.85		
			D22	11.85- 12.05	N	>200
			ROTARY CORING			
			RUN 1	12.05- 13.0	REC RQD FF	45 0 > 20
			RUN 2	13.0- 14.6	REC RQD FF	45 - -
	14.5		RUN 3	14.6- 17.0	REC RQD FF	20 - -
	17.0					
		END OF BOREHOLE				
		Water sample from borehole			pH SO ₄	7.3 16.2 ppm



BGS ID: 56739 BGS Reference: SE21NW107
Borehole National Grid (277709) 420489.419150 [Export as image with this borehole](#)

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

SE21NW107

BOREHOLE 4

Method Cable tool percussion

204 1915

Date 22- 24.9.81

Casing 0.15m diameter to 10.8 metres.

Sheet 1 of 4

R.L. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
	G.L.					
	0.17	MADE GROUND comprising footpath construction				
		MADE GROUND comprising ash with some				
	0.45					
		MADE GROUND comprising sandstone.				
	0.9					
		MADE GROUND comprising very loose slightly silty ashy sand with sandstone and mudstone fragments with traces of brick and coal.	B1	1.2-1.5		
			D2	1.5-1.95	N	5
			B3	2.0-2.6		
	2.9					
		Medium dense brown very silty fine SAND/sandy SILT with occasional sub-rounded and rounded gravel and cobbles.	B4	3.0-3.2		
			U5	3.35-3.8		
			D6	3.8		
		(Probably made ground)	D7	3.8-4.25	N	12
			B8	4.2-4.6		
			U9	4.65-5.1		
		Continued from 5.0 metres.				



British
Geological Survey

BN15 ID: 56739 BN15 Reference: SE21NW107
Borehole National Grid (27709 42610, 61919) Located 40.1m from the borehole

Page 2 of 4

LOCATION: HOPTON RIVER BRIDGE, MIRFIELD

BOREHOLE 4

Method

Date

Casing

Sheet 2 of 4

RL. m A.O.D.	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 5.0 metres.				
		As above but becoming dense and clayey. (Probably made ground)	D10 D11	5.15 5.2-5.65	N	50
	6.2	Dense brown slightly silty very sandy rounded GRAVEL and COBBLES with occasional boulders.	B12	7.0-7.5		
			D13 B14	7.65-8.1 7.8-8.2	N	20
			B15	8.5-8.8		
			D16 B17	9.3-9.75 9.4-9.7	N	47
		Continued from 10.0 metres.				



British
Geological Survey

BH16 ID: 56739 BH16 Reference: SE21NW107
Borehole National Grid (277000): 420410, 419130 Borehole Name: SE21NW107

Page 3 of 4

SE21NW 107

LOCATION: HUPTON RIVER BRIDGE, MIMFIELD

BOREHOLE 4

Method

Date

Casing

Sheet 3 of 4

R.L. m A.O.D	DEPTH m	SOIL DESCRIPTION	SAMPLING		TEST	RESULT
			No.	Depth		
		Continued from 10.0 metres.	B18	10.0- 10.2		
		As above but less sandy	B19	10.5- 10.8		
	10.9	Firm to stiff grey silty CLAY with fine mudstone gravel and traces of sand. Becoming stiff light grey friable very silty CLAY, tending to mudstone.	C20	10.9- 11.55		
	11.5		D21	11.4		
	11.4	COAL	D22	11.4- 11.85	N	102
		Extremely weak light grey MIDSTONE.				
	11.85	END OF BOREHOLE				

Licence No.

App No

Authorised Abstract

U.P.h.

Dia.	5.11	G.P.d.
Depth	820	m. G. a.
Lining	2' x 18"	
Well sinker	1500	
Date	1939	
R.M.L.	13	
R.M.L.		



Appendix E

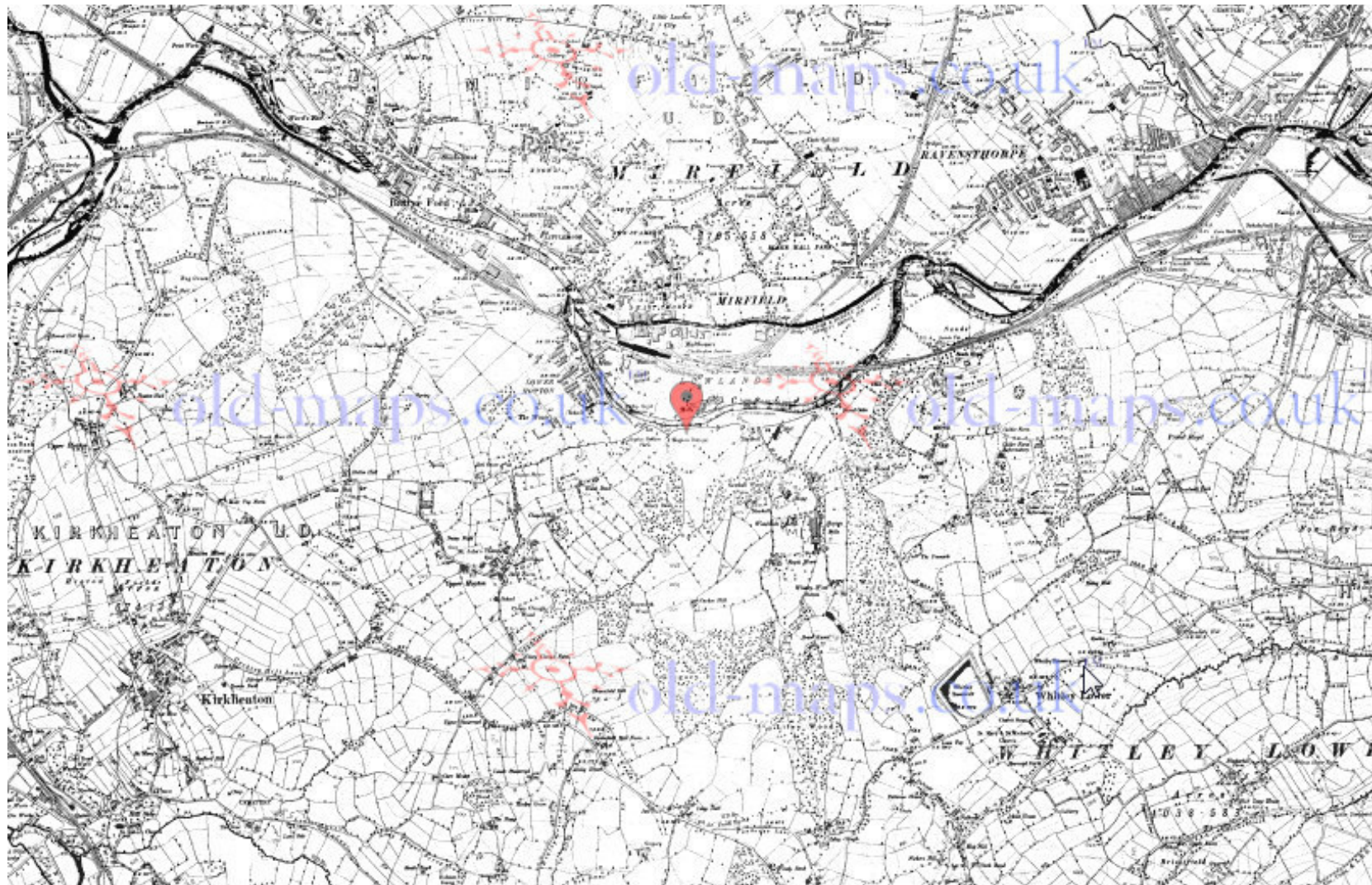
Historic Ordnance Survey Maps



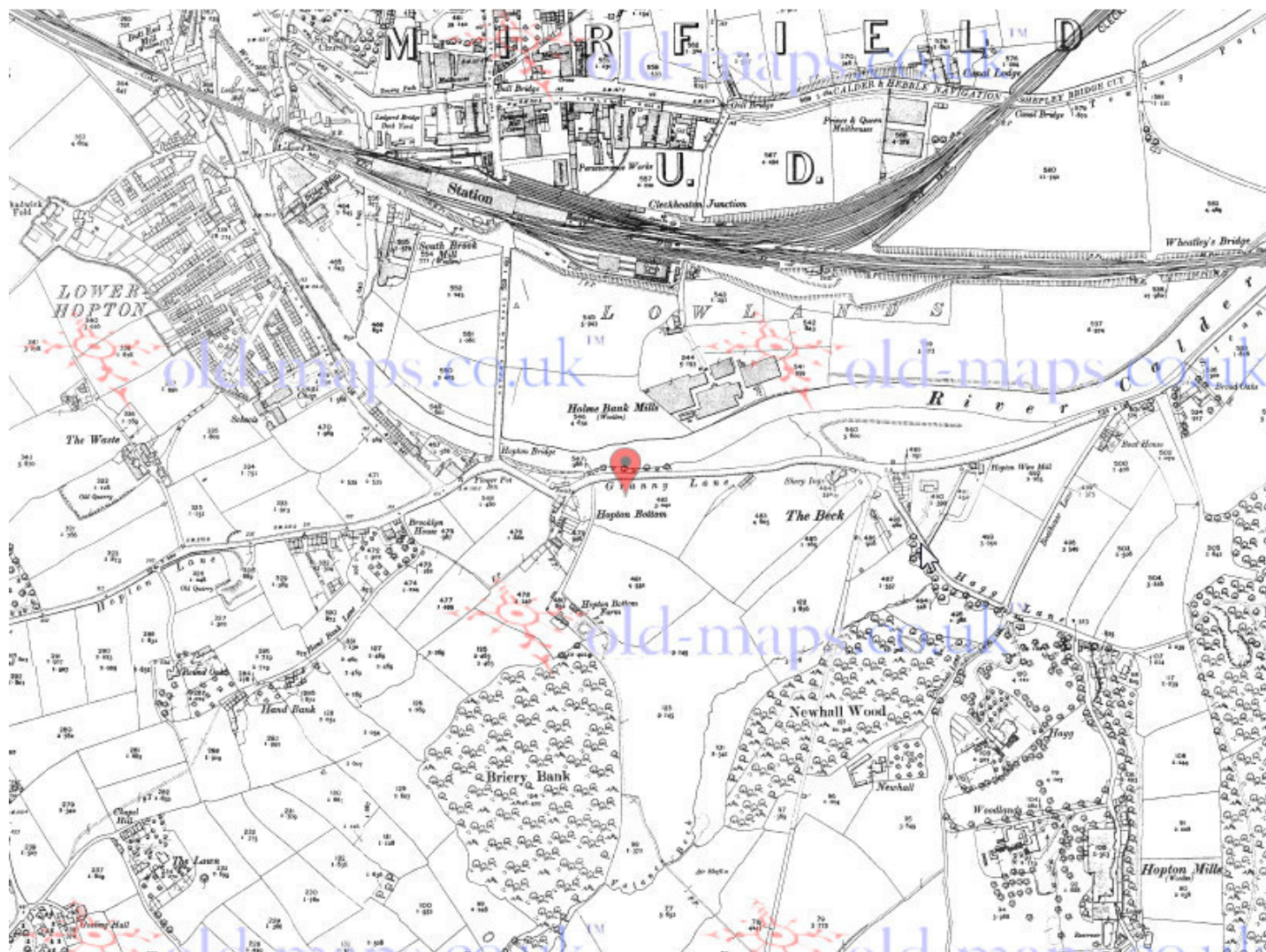
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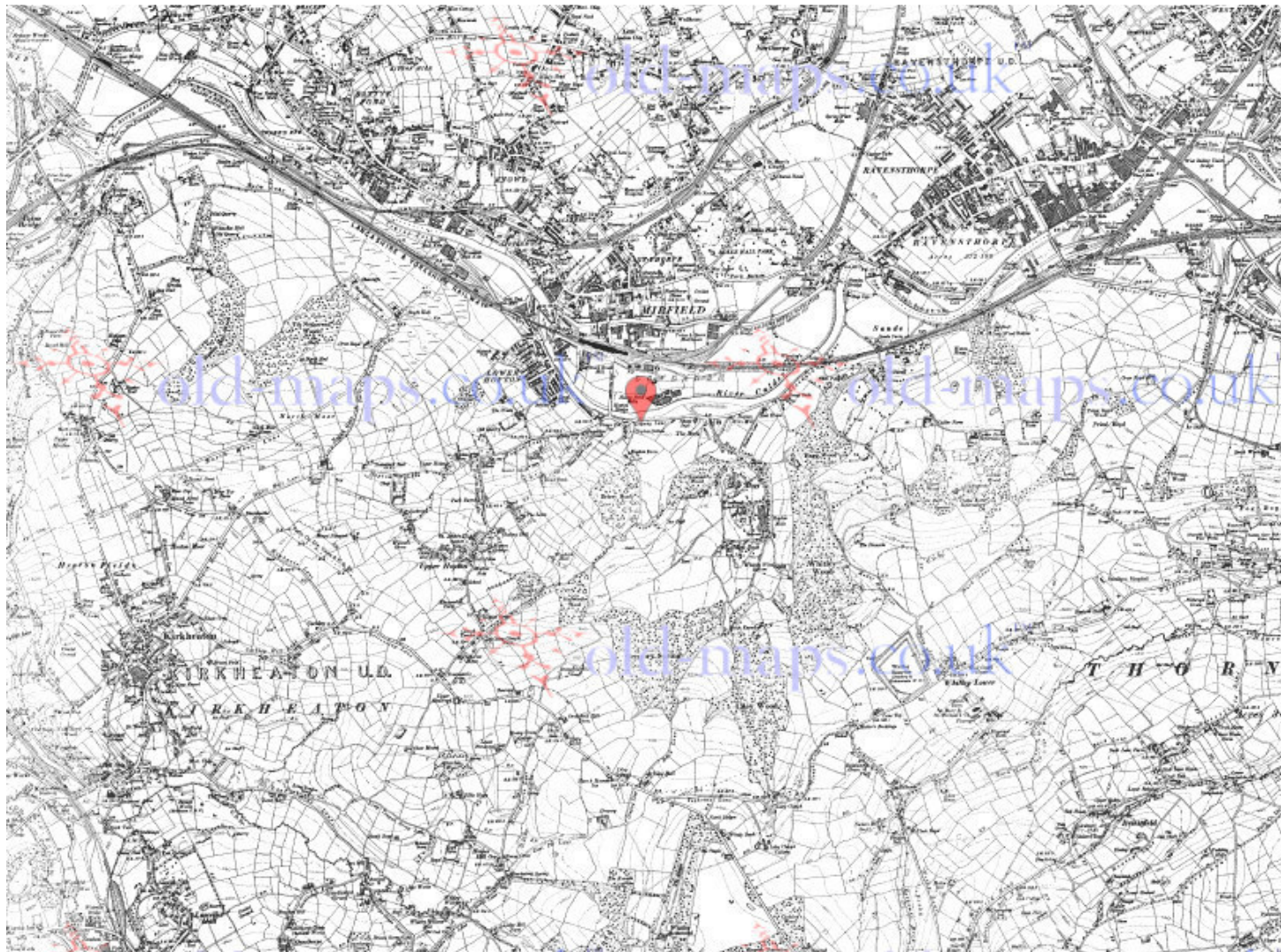
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1894



1907



1908



1919-1922



1933



1938



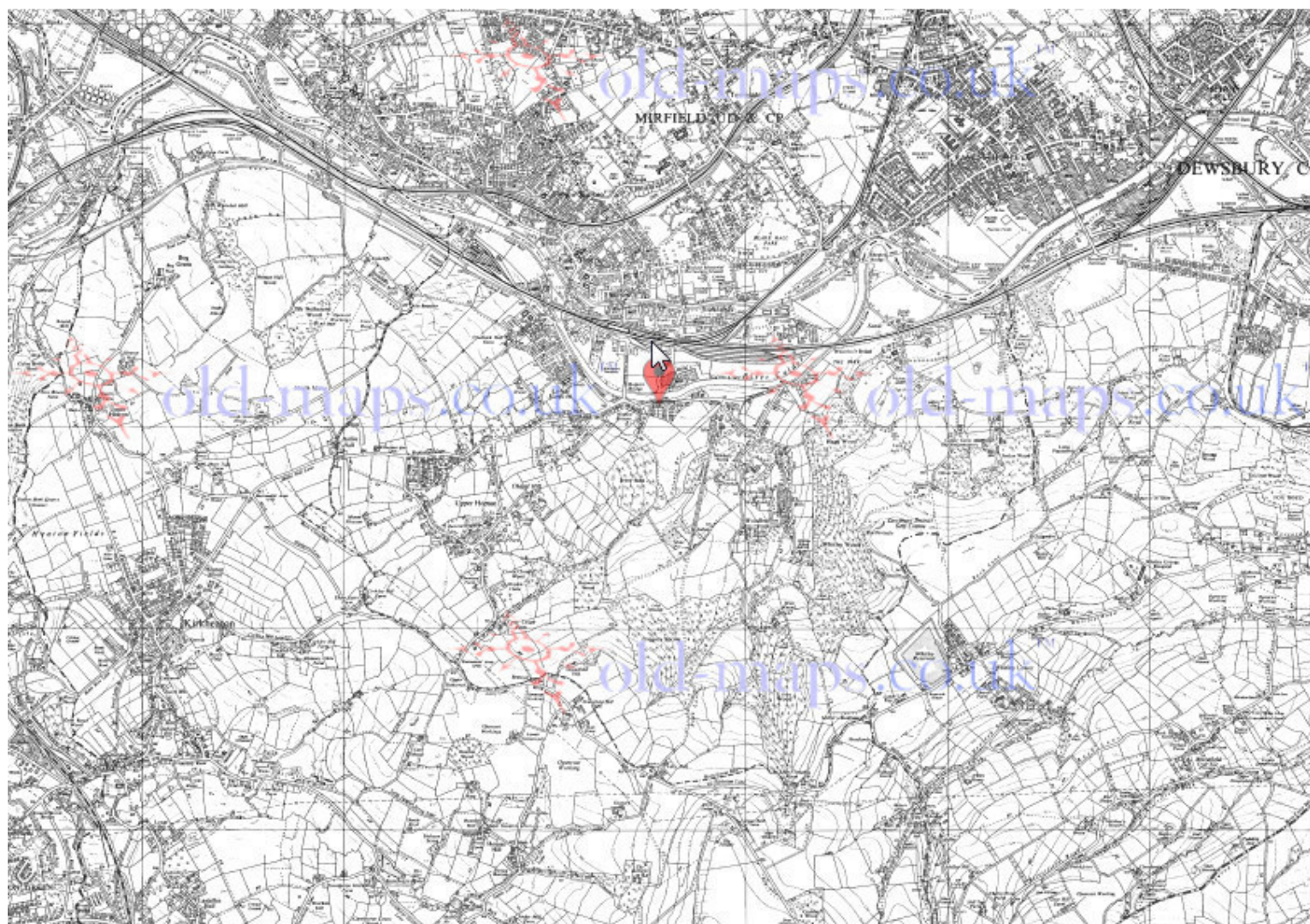
1955-1956



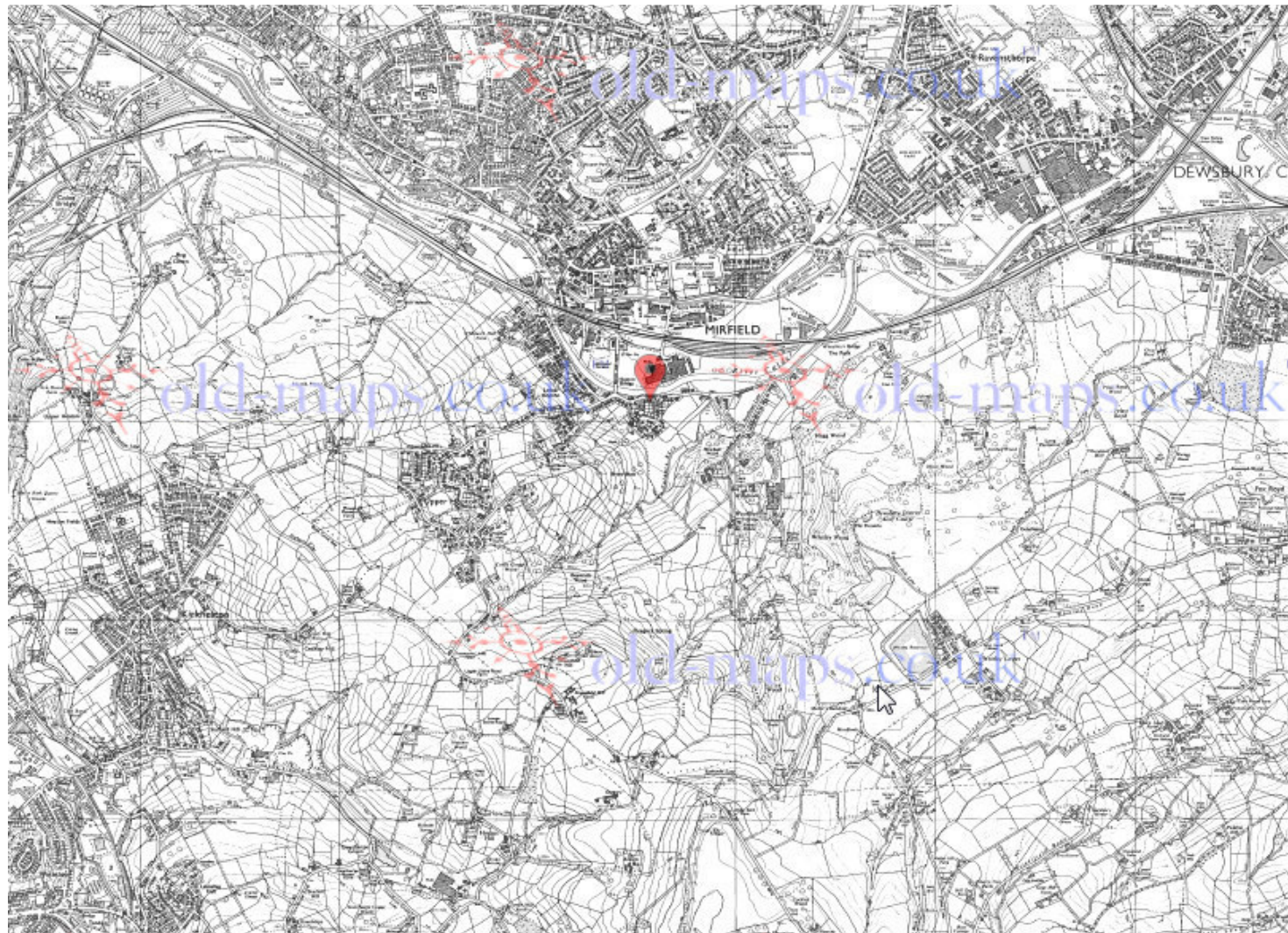
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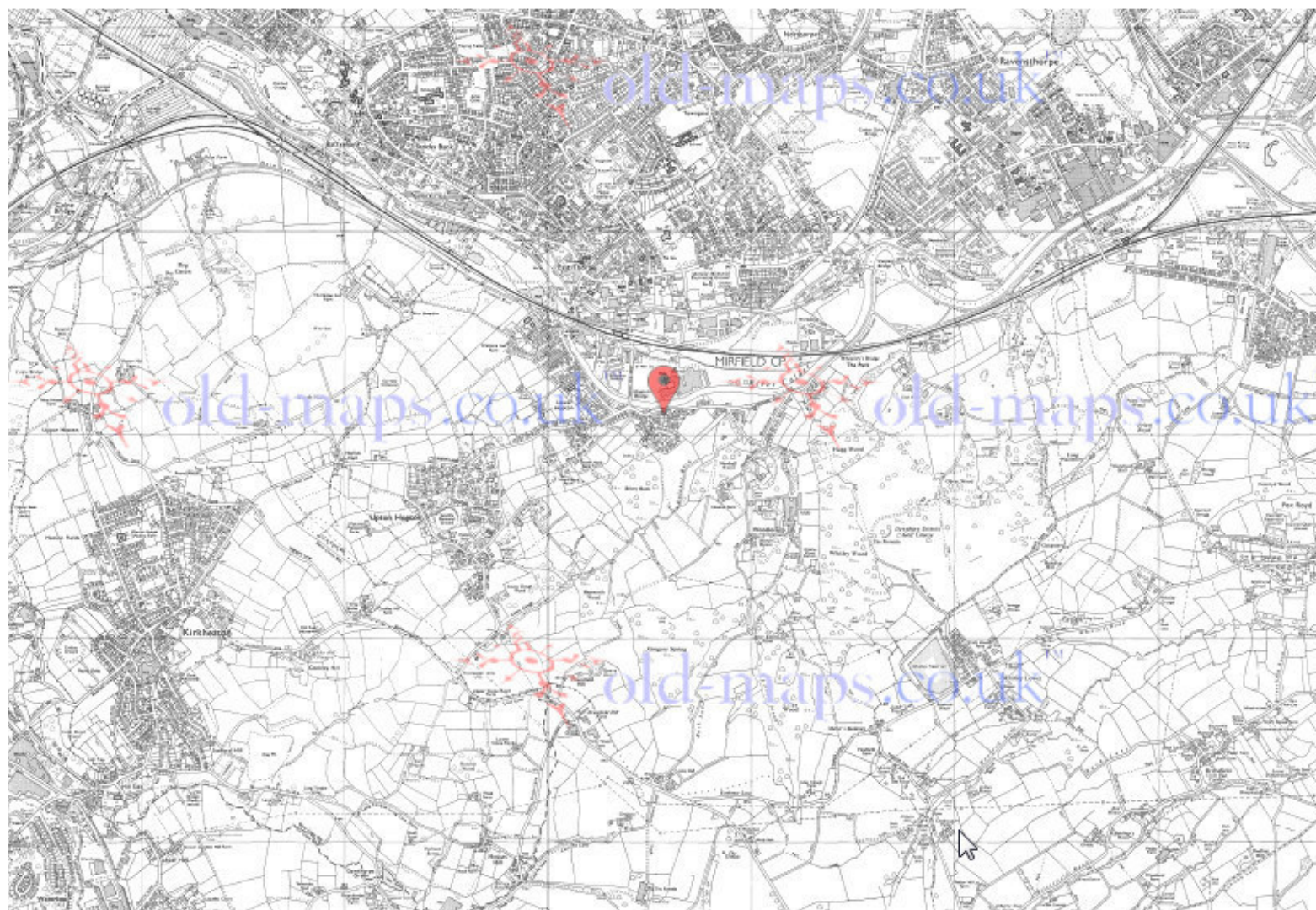
1958



1965-1967



1974-1983



1988-1993