LYONS CMC
COAL MINING & GEOTECHNICAL CONSULTANCY
Web: www.lyonscmc.co.uk
Email: mark@lyonscmc.co.uk
Mob: 07887555580

Developments by Boutique
108a Intake Road
Barnsley
S75 2HY

Date: 8th January 2025
Your ref: (S71 4QU)
My Ref: SI 00370

FOR THE ATTENTION OF MARK DUNLAVEY

Dear Mark,

COAL MINING RISK INTERPRETATION REPORT – FOLLOWING THE SITE INVESTIGATION FOR PROPOSED RESIDENTIAL DEVELOPMENT AT ROYSTON WORKING MENS CLUB, CHURCH STREET, ROYSTON, BARNSLEY S71 4QU

I am pleased to supply the following report for the above named project and trust that this satisfies your requirements. Please do not hesitate to contact myself at any time for further clarification or advice.

Yours Sincerely,

M Lyons

M. Lyons
Consultant Mining Engineer
BSci CSci MIMMM

Contents

1. Introduction

Planning permission is being considered for residential development at the above location subject to the mining legacy risks been fully realised and mitigated from on site, if necessary. Cape Site Services has now undertaken this work via an intrusive site investigation of 3 boreholes, the location of which is outlined on plan no. 00370/B – as attached and illustrated in appendix 5.2.

2. Scope of the Report

The mining legacy risks to the development are as follows:

- Instability from shallow underground coal workings
- Uncharted mine entries
- Fugitive gas emissions

As such, these risks need to be properly determined to ensure sound stability for the development. A borehole investigation consisting of between 3 to 6 holes was deemed a reasonable level of investigation in the outset regarding potential void migration given the scale and nature of development combined with the available geological and mining information. A watching brief would also be implemented for any signs of mine entries.

It should be noted that this investigation is focused mainly on determining stability from potential shallow historic coal workings and will only provide limited information regarding the risks of uncharted mine entries.

3. Site Investigation

3.1 Methodology

Prior to the intrusive site investigation, a search for utilities was undertaken both via online data providers and physically on site using a Cable Avoidance Tool (CAT). Boreholes were marked out with tape measure from boundary lines as illustrated on plan no. 00370/B outlined in appendix 5.2. As part of the mine entry watching brief, a pre survey was undertaken with no visible evidence of any unchartered mine entries.

An investigation utilising a tracked Beretta Rotary Drill Rig equipped with 2m long 75mm diameter drill rods was deemed appropriate in this instance along with water flush techniques to analyse returns and minimise any risks associated with mine gas emissions and spontaneous combustion. Gas monitoring equipment would be employed during works for risks associated with Methane, Carbon Monoxide, Oxygen, Carbon Dioxide and Hydrogen Sulphide. Prior agreement had been secured for these works from the Coal Authority -permit ref: 29253 – as attached for reference in appendix 5.4.

Considering the geological/mining details and our CMRA report ref: CMRA 00370 dated 3rd September 2023; boreholes were decided to be taken to the base of the Sharlston Top coal seam or to 15m if not encountered.

The works were to be supervised by the Drilling Engineers Mr. S. Fish and Mr I. Wiles, and overseen by the Principal Engineer Mr. M. Lyons.

3.2 Interpretation of Findings

Beneath surface hardcore all boreholes proved firm dark brown/grey clays becoming brown and silty to; 2.5m deep in BH1; 2.4m deep in BH2 & 2.7m deep in BH3; below which bedrock was determined as dark grey silty mudstone. The mudstone with occasional brown stained bands continued to full depth of 15m in all holes with no coal seam encountered in any hole. Drilling was firm throughout with no loss of flush. Given the absence of a coal seam within these triangulated points across the site no further boreholes were deemed necessary.

No signs of underground shallow workings or unstable ground were encountered at any of the three borehole locations and no fugitive gases were detected at any point during the drilling operations.

The logs match well which would infer no signs of any geological faulting between the borehole locations.

4. CONCLUSIONS AND RECOMMENDATIONS

1) The geology appears somewhat different to that conjectured and the anticipated Sharlston Top coal seam is either not present at all (if already outcropped) or in excess of 15m deep. In either circumstance the site will be stable from the shallow mining aspect and no further associated considerations are necessary. As such usual foundations can be considered which appropriately consider the clay deposits – which can be addressed at the building control stage of the development should it progress.

2) No signs of any mine entries were observed during the investigation, however slight risks are always present within the exposed coalfield for discovering such features. Watching briefs would be prudent during future ground works for any associated signs of either an old mine shaft or adit. The Coal Authority should be notified where any such feature is suspected.

3) No fugitive gases were encountered, and given the clay deposits and findings the risk of such to impact on development is considered low.

This report and future development proposals should be submitted to the regulators for their approval prior to any works taking place.

I trust that this satisfies your requirements, however please do not hesitate to contact myself at any time for further clarification or advice.

Yours Sincerely,

M Lyons

M. Lyons
Consultant Mining Engineer
BSc Csci MIMMM

Enc.

5 Appendix

5.1 References

5.1.1 CIRIA C758D ‘Abandoned mine workings manual’.

5.1.2 British Standards Institution: BS 5930:2015 ‘Code of practice for ground investigations’ BSI 2015.

5.1.3 British Standards Institution: BS EN ISO 14688-1: 2002 + A1 2013 ‘Geotechnical Investigation and Testing – Identification and Classification of Soil – Part 1 – Identification and Description. BSI 2013.

5.1.4 British Standards Institution: BS EN ISO 14689-1: 2003 ‘Geotechnical Investigation and Testing – Identification and Classification of Rock – Part 1 – Identification and Description. BSI 2003. Incorporating Corrigendum No. 1 February 2007.

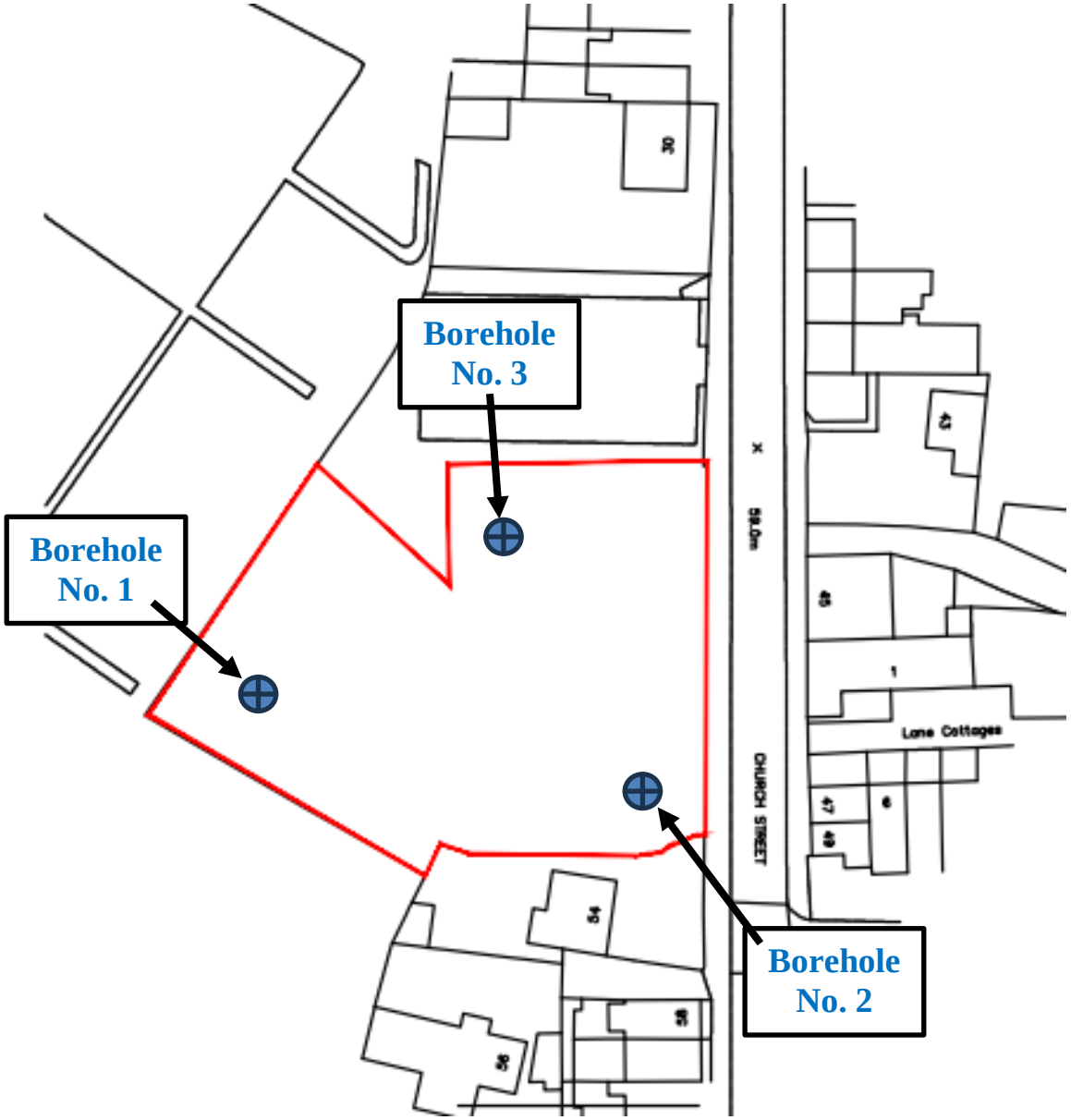
5.1.5 British Standards Institution: BS 10175 ‘The Investigation of Potentially Contaminated Sites. Codes of Practice’. BSI 2011+A1 2013.

5.1.6 British Standards Institution: BS EN ISO 22476-3: 2005 + A1 2011 ‘Geological Investigating and Testing. Field Testing. Standard Penetration Test’.

5.1.7 British Stardard 1377:1990 Parts 1-9 ‘Methods of Test for Soils for Civil Engineering Purposes’.

5.2 Borehole Location Plan No. 00370/B

LAND AT ROYSTON WORKING MENS CLUB, CHURCH STREET, ROYSTON, BARNSLEY S71 4QU
Site Investigation
Borehole Location Plan
(NTS)



5.3 Drilling Log Sheets

Client: **Mark Dunlavey** **Lyons CMC**	**Site: Land at Royston Working Mens Club, Church Street, Royston Barnsley. S71 4QU**		**Cape Site Services unit 2, rear of Castle Buildings Carlton Road, Barnsley, S71 3HX**
Date: 18/12/2024	**Method:** **water flush**	**Permit No:** **29253**	
Driller: Ian Wiles		**Driller Assistant: Richard Hawkins, Simon Fish, Jonathon Doughty**	
		Page No: 1	

Measurements In Meters

BH No:	FROM	TO	THICKNESS	DESCRIPTION
1				
	0	0.3	0.3	Tarnac hardcore
	0.3	0.7	0.4	Clay dark grey brown
	0.7	2.5	1.8	Clay grey brown silty
	2.5	5	2.5	Mudstone dark grey silty
	5	15	10	mudstone grey silty some brown staining
2				
	0	0.3	0.3	Tarnac hardcore
	0.3	0.6	0.3	Clay dark grey brown
	0.6	2.4	1.8	Clay grey brown silty
	2.4	4.9	2.5	Mudstone dark grey silty
	4.9	15	10.1	mudstone grey silty some brown staining
3				
	0	0.3	0.3	Paving/hardcore
	0.3	1.8	1.5	Clay dark grey brown
	1.8	2.7	0.9	Clay grey brown silty
	2.7	5.1	2.4	Mudstone dark grey silty
	5.1	15	9.9	mudstone grey silty some brown staining

5.4 Coal Authority Permit

The Coal Authority

Permit to Enter or Disturb Coal Authority Interests

Permit 29253

Name and Address of Permit Holder:

Mark Dunlavey
57 Intake Lane
Barnsley
S75 2HX

Site Location:

Land at
Royston Working Mens Club
Church Street
Royston
Barnsley
S71 4QU

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Ground investigation by six boreholes to 15m to determine nature of shallow coal seams within the Authority's interests at the identified site location above as shown on the Grant Permit Boundary (overleaf) for the period of **12 months** from the granted date shown below. *The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Permit Holder's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.*

Conditions:

- *Manned entry (i.e.) into mine entries/workings) is strictly prohibited.*
- *Water flush*
- *Gas Monitoring CO, CH_4, CO_2, O_2, H_2S at borehole and rig*
- *Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works*
- *Appropriate borehole sealing without delay and to withstand site level changes*

Signed: Izaak Hayes Granted Date: **12/12/2024**

For and on behalf of The Coal Authority

Nominated Representative: Izaak Hayes, Permitting Manager;
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG
Tel: 01623 637450; E-Mail: permissions@coal.gov.uk