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CAPITOL PARK – PHASE 2, BARNSLEY, SOUTH YORKSHIRE

CARNELL MANAGEMENT SERVICES LTD

COAL MINING RISK ASSESSMENT

11933-WMS-ZZ-XX-RP-C-30901-S8-P1

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Sheppard Lockton House
Cafferata Way
Newark-on-Trent
Nottinghamshire NG24 2TN

Tel: 01636 704361
Fax: 01636 702809
W: wm-saunders.co.uk

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Prepared by: W. Dixon BSc (Hons) MSc FGS **Date:** June 2019

RECORD OF AMENDMENTS TO DOCUMENT

Ref	Description	Date
P1	Initial Issue	June 2019

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Introduction

William Saunders are appointed by Carnell Management Services Ltd in connection with the proposed light-industrial development at Capitol Park, Barnsley.

This report has been requested by The Coal Authority as part of their Development Management process, and follows their published requirements.

Stage 1: Obtain Coal Mining Information

A Coal Mining Report was obtained from The Coal Authority on 15th April 2019, ref 51002104044001. The Coal Authority's interactive mapper as well as the findings of previous proximal intrusive ground investigations have been used to gain knowledge of the site.

Stage 2: Identify what risks Coal Mining poses to the proposed Development

The Coal Authority Con29M Coal Mining Report

The Coal Authority's Mining Report notes that: -

- The site is in a surface area that could be affected by underground mining in 6 seams of coal at 90m to 300m depth, and last worked in 1983. Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.
- The site is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk.
- The site is not within a surface area that could be affected by present underground mining.
- The site is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods. The site is not in an area where a licence has been granted to remove or otherwise work coal using underground methods. The site is not in an area likely to be affected from any planned future underground coal mining. However, reserves of coal exist in the local area which could be worked at some time in the future.

- There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the site.

- 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 from which coal has been removed by opencast methods. The site does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods. The site is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted. There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

- No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence. The Coal Authority has not received a damage notice or claim for the subject site, or any site within 50 metres of the enquiry boundary, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the site. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

- The Coal Authority has no record of a mine gas emission requiring action.

- The site has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

- The site is not in an area where a notice to withdraw support has been given. The site is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

- The site is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

- The site is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

The Coal Authority Interactive Map

The Coal Authority's interactive map viewer has been analysed, this indicates:

- The site is within a development high risk area,
- There is a coal outcrop running through the north-east of the site,
- The entire site is in an area indicated to be affected by probable shallow coal workings,
- There is an area of unlicensed opencast coal workings approx. 30m north,
- The worked coal seams beneath the site are indicated to be dipping between 2 and 4° to the north-east.

Previous Investigations

Several intrusive ground investigations have been carried out on the wider Capitol Park site, some of which include this site. These reports are:

- Sirius Geoenvironmental and Environmental Ltd. September 2005. Final Geo-environmental Appraisal. Land Adjacent to Junction 37, M1, Dodworth, Barnsley.
    - This investigation covers to whole Capitol Park land including this site and was carried out prior to a regrade to construct developable plots.
    - This investigation has been referenced by other reports and has not been made available to William Saunders.
- FWS Consultants and Exploration Associates carried out a ground investigation on the whole Capitol Park site prior to the regrade, the report has not been made available although borehole and trial pit logs can be viewed on the British Geological Survey's online viewer.
- Sub Surface North East Limited. July 2017. Technical Report. Ground Investigation at Capitol Park, Dodworth, Barnsley, South Yorkshire, S75 3TZ for Carnell Management Services Limited (Report No. NE6308).
    - This investigation covers the Carnell Management Services Ltd land to the north of the site, the subject site is not included.
- JPG (Leeds) Ltd. December 2018. Engineering Statement – v2, Capitol Park, Barnsley, Carnell Land. (Report no. JRP/ES/2450-7.v2).
    - This site-specific report aims to review the reports by Sirius and Sub Surface and tie together information and advise on development constraints resulting from ground conditions.

Information and conclusions from the JPG review and the Sub Surface report suggests two seams outcrop beneath the central belt of the site trending WNW-ESE. Due to the north-easterly dip of the

strata, coal seams are likely to be present beneath the north-eastern half of the site at shallow depth and may be present beneath the south-western half at greater depth.

The shallow seams are the Top Haigh Moor seam (upper) and the Low Haigh Moor seam (lower) which are up to 1.19m and 1.02m thick respectively, these are expected to be separated by 4-5m of Haigh Moor Rock. The Lidgett Seam is anticipated to be 30m below the Low Haigh Moor seam, JPG's report states this is not within influencing distance to the surface. Deeper workings are stated to be present in the Flockton, Fenton, Silkstone and Whinmoor seams, these are also too deep to affect the surface.

Overlying the Top Haigh Moor seam is the Swallow Wood seam which may be present across the north-east of the site at very shallow depth, previous boreholes close to the site identified this seam to be split into three leaves from 1.6m to 4.5m depth.

Subsurface concluded there was no obvious evidence of coal workings in any of the boreholes although the Top Haigh Moor seam was thinner and had a missing leaf in the boreholes closest to the site. JPG have overseen investigations across the entire Capitol Park site, they found no obvious evidence of workings. Sirius reported no obvious evidence of coal workings however seams were found to die out across the area, they concluded that the site is only at risk from unrecorded crop workings along outcrops, which may affect the subject site.

Stage 3: Identify how Coal Mining issues have influenced the proposed Development and whether any other mitigation measures are required.

Relevant Coal Mining issues noted at Stage 2 are: -

- The site is in a surface area that could be affected by underground mining in 6 seams of coal at 90m to 300m depth, and last worked in 1983. Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.
- The site is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past.
- Approx. 30m north-east is an area of unlicensed opencast coal workings.

These are addressed as follows:

- The seams that the Coal Authority have stated to have been worked beneath the site are deep and have sufficient competent rock overburden to be considered stable. Additionally, the Coal Authority have stated that any movement of the ground due to coal mining activity is likely to have stopped. No further mitigation is required to address this risk.

- An intrusive ground investigation is to be carried out with borehole locations strategically placed to investigate the outcrops and depths of shallow coal across the entire site. Drilling will be monitored for any signs of workings such as loss of flush or broken ground. Groundworkers will monitor for any signs of coal or shallow workings during construction.

- The site is anticipated to be covered by a layer of clay fill from the Capitol Park re-grade. Any collapse due to underlying coal workings could affect the surface through crown holing or differential settlement. A suitable foundation design will be informed by the findings of the ground investigation, alternatively it may be suitable to remove shallow coal to eliminate the risk.

- As part of the ground investigation, standpipes will be installed at the site to monitor for ground gasses which can be produced from shallow or deeper on or off-site worked coal seams or opencast backfill. Suitable gas protection will be adopted following a period of monitoring, this is likely to comprise six visits over a three-month period although this will be informed by the intrusive investigation.

Prepared by: W. P. Dixon BSc (Hons) MSc FGS
Approved by: A.C. Gibson BEng CEng MICE MCIHT MIRSE
Job No: 11933 Date: 3rd June 2019

The Coal Authority

CON29M
coal mining report

CAPITOL PARK PHASE 2, CAPITOL COURT, DODWORTH, BARNSLEY, SOUTH YORKSHIRE

Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5

Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit www2.groundstability.com

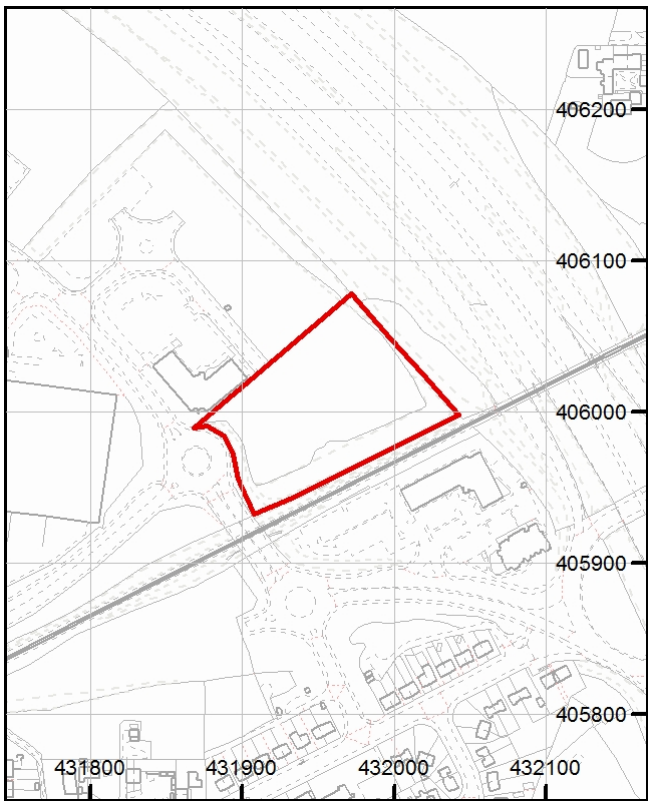
Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see page 3 for further details on Future development.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is **on the coalfield**

Map data

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 6 seams of coal at 90m to 300m depth, and last worked in 1983.

Any movement in the ground due to coal mining activity associated with these workings should have stopped by now.

In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

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.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

The owner therefore shouldn't incur cost or liability from repairs caused by the withdrawal of support from land and/or property in connection with lawful coal mining operations. Usually these actions will not need to involve your insurance company or mortgage lender.



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 01623 646 333. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

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Sheppard Lockton House
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Nottinghamshire NG24 2TN
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Fax: 01636 702809
W: wm-saunders.co.uk

Also at: Leeds : Wirksworth : Lincoln