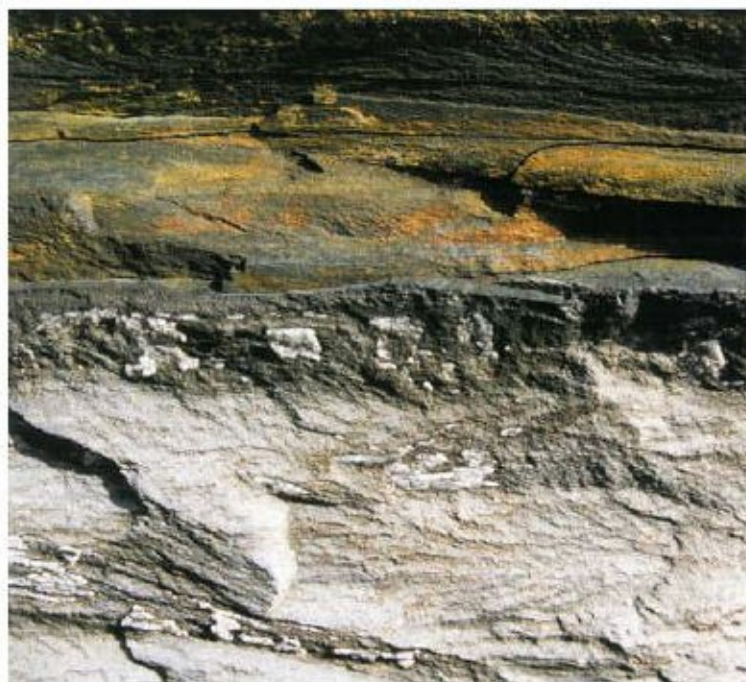


Shieldaig Road, Glasgow

Mining Stability Report including Coal Mining Risk Assessment

April 2018



JWHROSS

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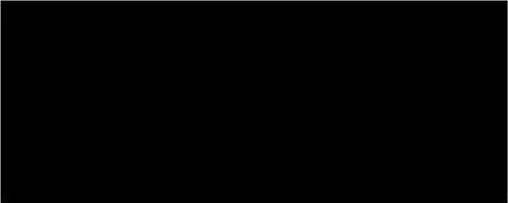
CLIENT: Scottish Water

PROJECT TITLE: Shieldaig Road, Glasgow

REPORT TITLE: Mining Stability Report including Coal Mining Risk Assessment

PROJECT REFERENCE: 125602/GL/J/R1

Issue and Approval Schedule:

ISSUE 1	Name	Signature	Date
Prepared by	Donald Robertson Senior Mining Engineer		06/04/2018
Reviewed by	Dave Milne Senior Mining Engineer		06/04/2018
Approved by	Alan Blair Partner		06/04/201/8

Revision Record:

Issue	Date	Status	Description	By	Chk	App
2						
3						
4						
5						

This report has been prepared in accordance with procedure OP/P02 of our integrated Quality and Environmental Management System

This document has been prepared in accordance with the instructions of the Client, Scottish Water, for the Client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

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Appendix 1

Drawing No. 125602/9001 – Site Location Plan

Appendix 2

Drawing No. 125602/9002 – Composite Site Plan

Appendix 3

Coal Authority Mining Report, dated 20th March 2018 – Ref: 51001813709001

1.0 Title

Report relative to the mining stability under and adjacent to the Subjects referred to as Shieldaig Road, Glasgow (including Coal Mining Risk Assessment).

2.0 Instructions

This Report has been prepared by JWH Ross in accordance with the instruction of Scottish Water; email dated 20th March 2018 refers.

The extent of past mining in minerals other than coal, e.g., ironstone, fireclay and limestone, within Central Scotland is considerable, and often overlooked. This report addresses mining stability in relation to all mineral extraction. It is particularly noted that subsidence damage caused by the extraction of minerals other than coal is not covered by the Coal Mining (Subsidence) Act 1991.

This Report includes a Coal Mining Risk Assessment, as may be required under the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008, where a project is located within a Coal Mining Development Referral Area.

3.0 Limitations

This Report is for the private and confidential use of the Client(s) for whom the Report is undertaken and should not be reproduced in whole or in part, or relied upon by third parties for any use whatsoever. JWH Ross accepts no duty or responsibility (including negligence) to any party other than the stated Client(s) and disclaims all liability of any nature whatsoever to any such party in respect of this Report.

The Report is based on the geological and mining records at present available. The contents of the Report are believed to be accurate but since mining records and information for this District may be incomplete, we cannot accept responsibility for any insufficiency or inaccuracy in the information provided.

We must advise that this Report only examines the solid geology and associated minerals; it is not to be construed as inferring that the engineering or chemical properties of the natural or man-made superficial deposits are satisfactory or otherwise, since these latter matters are outwith the scope of our Brief.

4.0 Subjects

The Subjects comprise the site of a proposed SUDS pond, swale and two pipelines, at Aultbea Street and Glentanar Road in the Milton area of Glasgow, as shown on appended Drawing No. 125602/9002. The Subjects are approximately centred on National Grid co-ordinates E258763 N669734.

5.0 Researches

In connection with this investigation we have researched and taken into account information from the undernoted sources:-

- Published geological maps, namely, County Series Lanarkshire I SW, National Grid Series NS 56 NW; British Geological Survey 1:50,000 series, sheet 30E Glasgow (solid and drift) – 1993; and the BGS online Geindex.
- Historical Ordnance Survey topographical maps prepared to scales of 1:2500 and 1:10560;
- Memoirs of the Economic Geology of the Central Coalfields of Scotland, Area IV, published in 1920;
- Abandonment plan catalogues, mine plan records and previous mineral investigation Reports held in the mining Archives of JWH Ross;
- Non-confidential borehole data held by the British Geological Survey;
- Coal Authority Mining Report, dated 20th March 2018 – Ref: 51001813709001.

6.0 Geology

The upper solid strata underlying the Subjects belong to the Limestone Coal Formation from the Carboniferous Period and dip generally in a north-easterly direction at a gradient of around 6 degrees from the horizontal. The foregoing Series of rocks are sedimentary in origin and are represented by cyclic sequences of sandstone, siltstone and mudstone, interspersed with occasional ironstones and many seams of coal.

In order that the relationship of each mineral horizon may be better appreciated, we have shown below in tabular form the general succession together with the average thickness and approximate depth to each of the principal seams in this area, with the Possil Main Coal taken as a convenient datum.

SEAM	AVERAGE THICKNESS (m)	APPROXIMATE DEPTH (m)
<i>Possil Main Coal</i>	0.5	0 - datum
<i>Dumbreck Cloven Coal</i>	0.6	5.5
<i>Glasgow Shale Coal</i>	0.6	16.5
<i>Jubilee Coal</i>	0.8	22
<i>Knightswood Gas Coal</i>	0.6	29

NB – This section is given as a guide as seam thicknesses and strata intervals vary across the District

The National Grid Series Geological map indicates that all of the above listed mineral seams outcrop through the site, the lines of outcrop generally trending in a northwest – southeast direction.

The Possil Main Coal outcrops through the northern part of the site, across Aultbea Street approximately at the junction with Hillswick Crescent, this outcrop position having been confirmed by mine abandonment plans pertaining to this seam.

The outcrop positions of the remaining seams are all conjectural, with the lowest seam in the sequence, the Knightswood Gas Coal, indicated to outcrop through the southern part of the proposed pipeline on Glentinar Road, and the Dumbreck Cloven Coal, Glasgow Shale Coal and Jubilee Coal outcropping at intervening positions. The conjectural outcrop positions as derived from National Grid Series Geological Map NS 56 NW are shown on appended drawing 125602/9002.

Accordingly, the abovementioned mineral seams will all be present beneath the site at shallow depth close to their respective lines of outcrop, becoming deeper with dip direction towards the north east.

The 1:50,000 scale Ordnance Survey Drift Geology Map Sheet 30E indicates that superficial deposits beneath the site will comprise glacial till, with made ground being present particularly beneath Glentamar Road in the southern half of the site. Previous boreholes sunk in the area indicate that the thickness of superficial deposits is variable and may generally range between 4 and 10 metres, the greater thickness being in the north beneath Aultbea Street.

7.0 Past Mining

Our search of Abandonment Plan Catalogues, other “unsigned” plans held by the Coal Authority, together with mining records and plans held in the Archives of JWH Ross reveals that the Possil Main and Glasgow Shale Coals were previously mined in this area. In particular, the Possil Main Coal was worked beneath the northern part of the proposed pipeline route where it runs along Aultbea Street between Shieldaig Road and Hillswick Crescent. These operations were carried out via the Longwall method of mining from the nearby Overpossil Colliery until their cessation in 1882. The recorded workings in the Glasgow Shale Coal, carried out from the same colliery, are indicated to lie to the east of the site, outwith influencing distance of the proposed development.

At this juncture we should explain that where the Longwall method of mining is employed the seam is completely extracted and the strata overlying the mined area are allowed to collapse. As a result thereof, subsidence of the ground surface is usually complete shortly after the extraction of the seam. Access roadways are provided and maintained through the worked out area, but these roadways quickly collapse after maintenance of them ceases, except in the case of workings at shallow depths where, depending on the nature of the superincumbent strata, they may remain intact for a considerable period after the cessation of workings. In such cases when the old underground roadways eventually collapse, isolated plump holes or sits may appear on the surface ground.

The mine abandonment plans do not show any seam levels and a lack of previous borehole information in this part of the site prevents us from accurately ascertaining the depth to these workings. However, the mine abandonment plan shows a mine entry referred to as Kenmure No.5 pit situated to the north of the site which shows a depth to the Possil Main Coal of 13 fathoms (23.8m), as well as showing the outcrop of the Possil Main Coal further south as indicated on Drawing No. 125602/9002. Extrapolation between these features suggests that the depth to workings in the Possil Main Coal beneath the proposed northern pipeline may be in the region of 10 to 18 metres below ground level.

The plotted extents of recorded workings in the Possil Main and Glasgow Shale Coals are indicated on appended Drawing No. 125602/9002.

We must point out that the winning and working of the minerals in this locality commenced an extremely long time ago before it became a statutory requirement to keep plans of mines (1850) and to lodge with the Secretary of State all plans of abandoned mines (1872). Consequently, mine plan records are incomplete and the possibility of early uncharted extraction must be fully considered.

In this regard, the abovementioned mine abandonment plans from the Overpossil Colliery, which indicate workings in the Glasgow Shale Coal to the east of the site, show a section of the workings which were terminated upon encountering “waste”. This terminology is indicative of earlier unrecorded working of the Shale Coal having taken place up-dip of the recorded workings and therefore the possibility exists that unrecorded workings could extend westwards towards the outcrop of the seam. Two non-confidential boreholes held in the archive of the BGS and sunk close to the conjectural outcrop line of the Glasgow Shale Coal where it runs beneath the Allied Bakeries Building, showed

evidence of workings at or very close to outcrop and it therefore follows that shallow workings may be present in the Glasgow Shale Coal beneath the proposed SUDS features.

A single historic borehole, sunk beneath the northern end of the current Allied Bakeries building on Glentinar Road, indicates evidence of a working which may be present at the level of the Jubilee Coal, although this seam appears to have been logged as intact coal in other boreholes drilled in the area.

Two further previous boreholes, sunk in the vicinity of Glentinar Road at the northern end of the proposed southern pipeline, indicate workings at the level of the Knightswood Gas Coal at depths of between 21 and 23 metres. The same seam was logged as intact coal at shallower depths in boreholes sunk further south, however it is our opinion that there is currently insufficient evidence to rule out the possibility of shallow unrecorded workings being present in the Knightswood Gas Coal close to outcrop.

We have found no evidence of unrecorded workings being present in the Dumbreck Cloven Coal in the area, with information on this seam in general being limited.

8.0 JWH Ross Past Mining Risk Assessment

The information provided above in Section 6 (Geology) and Section 7 (Past Mining) and Section 8 (Site Investigation) forms the basis for the current assessment of mining instability risk.

8.1 Definition

“Risk” is a combination of the likelihood of an “occurrence” and the assessment of the severity of the consequences. This can be discussed with reference to a variety of scenarios, i.e., risk to life, risk to property and risk of financial loss.

The magnitude of risk relative to each scenario will depend on a number of factors (such as accessibility to personnel, existence of structures or the interruption of services). In addition the perception of risk will depend on such considerations as the background knowledge of the persons involved and the degree of their involvement.

The assessment of risk to proposed or existing surface development from subsidence effects due to historic mining is a difficult process requiring significant professional judgement and experience. This process is complicated by the fact that the information needed to make an assessment with a high degree of confidence is incomplete and involves uncertainty.

Unless otherwise stated, the JWH Ross risk rating of potential mining subsidence makes the following presumptions that the risk:

- is derived from underground mineral workings (including coal);
- excludes the risk of mine entries (covered separately in our separate section on old shafts and adits);
- relates to typical residential development;
- excludes likelihood of occurrence within a timeframe.

8.2 Recorded Mine workings

Where “Abandonment” or “Unsigned” mine plan record information exists, the principal contributing factors that influence the assessment of potential future mining subsidence are:

- The thickness of the mineral;
- The inclination of the strata;
- The extraction height of the workings;
- The number of seams worked and any interaction between them;
- The mining technique utilised;
- The extraction ratio;
- Roof conditions;
- The date of the workings;
- The extent of mine workings and the perceived accuracy thereof;
- The layout of the workings in relation to the proposed development;
- The thickness and nature of overlying rock strata;
- The thickness and nature of overlying superficial deposits;
- The condition of the working (void, collapsed, partially collapsed);
- The influence of geological faults and igneous intrusions;
- Information obtained from boreholes.

8.3 Unrecorded Mine Workings

Early mining was somewhat secretive due to lack of legislation regarding the keeping of plan record and rivalry between mining companies. Early mining was also generally at shallow depth in the best and thickest seams.

Under “Past Mining” section of the Coal Authority Report may be/is contained the sentence “*However you may wish to know that the property is in an area where coal is believed to exist at or close to the surface that may have been worked at some time in the past*”. This is a direct reference to the possible presence of unrecorded extraction, i.e., workings that may have taken place prior to the time that it became a statutory requirement to keep or lodge Abandonment Plans.

An assessment of the potential for shallow unrecorded workings to exist must take into account additional wider ranging information sources and factors, including but not limited to:

- The degree of economic importance of the relevant seams to the early mineral operators
- Local thickness and quality of the seam(s) in question
- Evidence that may be obtained from plan record information in the wider surrounding area, e.g., did the down-dip recorded workings encounter “old waste”?
- The position of known old pit shafts and adits in the locality in relation to geological structure and recorded/unrecorded mining

- Borehole data on a wider basis providing information on the thickness and quality of the seam

8.4 JWH Ross Risk Rating Table

The table that follows below presents a summarised risk assessment of past mining activity (including coal mining) taking into account the information set out in the previous sections of this Report.

Column A represents the likelihood of an abandoned mine working being present (within the uppermost sequence of strata) under or within lateral influencing distance of the site. The 0 – 5 rating below is based on the following:

- 0 – Underlying strata sequence known to be devoid of workable seams
- 1 – no workable seams recorded or suspected
- 2 – workable seam present, but no workings recorded. Unrecorded extraction unlikely
- 3 – workable seam present - condition unknown
- 4 – workable seam present and unrecorded workings suspected
- 5 – workings recorded or unrecorded workings established

Column B represents the estimated depth range. The 0 – 5 rating is based on the following:

- 0 – seam/workings outwith critical depth
- 1 – seam/workings at or just within critical depth
- 2 – seam/workings with relatively high ratio of overlying rock strata to extraction height
- 3 – seam/workings with relatively low ratio of overlying rock strata to extraction height
- 4 – seam/workings close to outcrop
- 5 – seam/workings at outcrop

N.B. Critical depth is normally taken to equate to overlying rock strata being 10 times the extraction height, however, this can vary considerably due to the influence of other factors, e.g., the method of extraction.

Column C represents the overall Risk Rating ($C = A \times B$). The 0 – 25 rating is a simplified classification system which may allow the site to be “cleared” with regard to the development or may identify aspects that should be considered in more detail or investigated further. The 0 – 25 rating provides the following general risk category:

- 0 Negligible
- 1 – 5 Very low
- 6 – 10 Low
- 11 – 15 Moderate
- 16 – 20 High
- 21 – 25 Very High

The implications of the above categories in relation to the current proposals/situation is expanded in the Summary/Conclusions Section at the end of this Report.

Table 1 - Past Mining Risk Assessment

Shieldaig Road, Glasgow	Column A Likelihood of workings.	Column B Estimated depth range	Column C (A x B) Overall Risk Rating
Assessed Category of Northern Pipeline (Aultbea Street)	5	3 - 4	<u>15 - 20</u>
Assessed Category of Southern Pipeline (Glentinar Road)	4	3 - 5	<u>12 - 20</u>
Assessed Category of Proposed SUDs Pond and Swale	3	4 - 5	<u>12 - 20</u>

9.0 Future Mining

It is our understanding that there is no underground mining presently taking place under or in proximity to the site. On the basis of current economics, available technology and planning regulations, we consider that the possibility of underground mining can be ruled out in the foreseeable future.

10.0 Old Pit Shafts/Adits

The Coal Authority Report indicates that there is one mine entry present within 20 metres of the site, situated to the east of Glentinar Road, beneath the current Allied Bakeries factory building. The Coal Authority's reference for this old shaft is 258669-004.

The source for the shaft's position is the first edition County Series geological map Lanarkshire I SW, dated 1870, upon which the shaft is shown by means of a small circle and annotated as: *Old Coal Pit, 7fms to Gas Coal*. To the best of our knowledge this is the only source plan for the shaft and it is not indicated on any of the available mine abandonment plans utilised in our researches.

It is worth noting that shaft positions on geological maps are recorded for information only, having never been intended by the publisher to be considered with any degree of accuracy. When plotted to scale in relation to present day topographic layout we find that the area covered by the representative symbol is often far greater than the likely dimensions of the shaft that it is to represent, and hence the plotted position is a best-fit and may not be entirely accurate.

In order to establish the optimum position of the shaft it is necessary to correlate the surface features from the original map insofar as possible with a sequence of later map editions, in order eventually to arrive at the position in relation to the modern day surface layout. Having carried out the above work, our best plotted position is shown on the appended Drawing No 125602/9002.

We have no knowledge of any measures taken to secure this shaft at the time of abandonment, but should advise that it was not uncommon only to partially infill such features when mining operations

ceased. Subsequently, the filling in the shaft may collapse and a substantial crater can be formed at ground level as the superficial deposits gain entry to the shaft.

After taking into account the likely thickness of the surrounding superficial deposits, as derived from previous boreholes sunk in the immediate surrounding area, we have ascertained that the probable zone of influence of the shaft will have a radius in the order of 5 - 6 metres from the centre of the shaft location. Assuming that the plotted position of the shaft is reasonably accurate, its location will be some 21 metres from the proposed pipeline route, and even allowing for a suitable margin of error we have assessed that this old pit shaft is highly unlikely to be a source of risk to the development.

11.0 Mine Gas Emissions

The Coal Authority have confirmed that they have no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

It should be noted that the risk of mine gas in areas of past mining activity cannot fully be ruled out without further investigation, and that in the event of mine gas being present, gas preclusion measures may be required for any proposed development.

12.0 Conclusions

Our overall past mining risk assessment places the site of the Subjects in a category ranging between Moderate and High for all of the proposed areas to be developed. In relation to the current proposal, i.e., the installation of two Scottish Water pipelines, a SUDS pond and a swale, as shown on appended Drawing 125602/9002, this may be reasonably interpreted and expanded as follows:

Northern Pipeline at Aultbea Street

Our research has shown that longwall workings are recorded beneath this section of the site in the Possil Main Coal, and that they will be present at shallow depth such that any future convergence of strata at the level of the workings may present a risk of surface subsidence. We have indicated by means of hatching on appended Drawing No. 125602/9002 the stretch of northern pipeline which will be subject to surface instability due to recorded workings in the Possil Main Coal. The more southerly part of the northern pipeline is likely to be unaffected by mineral instability, with unrecorded workings considered unlikely in the Dumbreck Cloven Coal, and the Glasgow Shale Coal being present at sufficient depths to preclude the effects of any future collapse of possible unrecorded workings from manifesting at the surface.

Southern Pipeline at Glentinar Road

The presence of unrecorded workings has been established in the Knightswood Gas Coal beneath this section of the site, although their full extent cannot be ascertained from the borehole information currently available. Should the seam be found to be worked directly beneath the proposed southern pipeline route there will be insufficient superincumbent rock strata to preclude the potential effects of collapse at the level of the workings from manifesting at the surface as subsidence or settlement. We have indicated by means of hatching on appended Drawing No. 125602/9002 the approximate stretch of pipeline which may be subject to surface instability due to possible shallow workings in the Knightswood Gas Coal, however we must reiterate that the outcrop line upon which this area is based is conjectural.

SUDS Pond and Swale

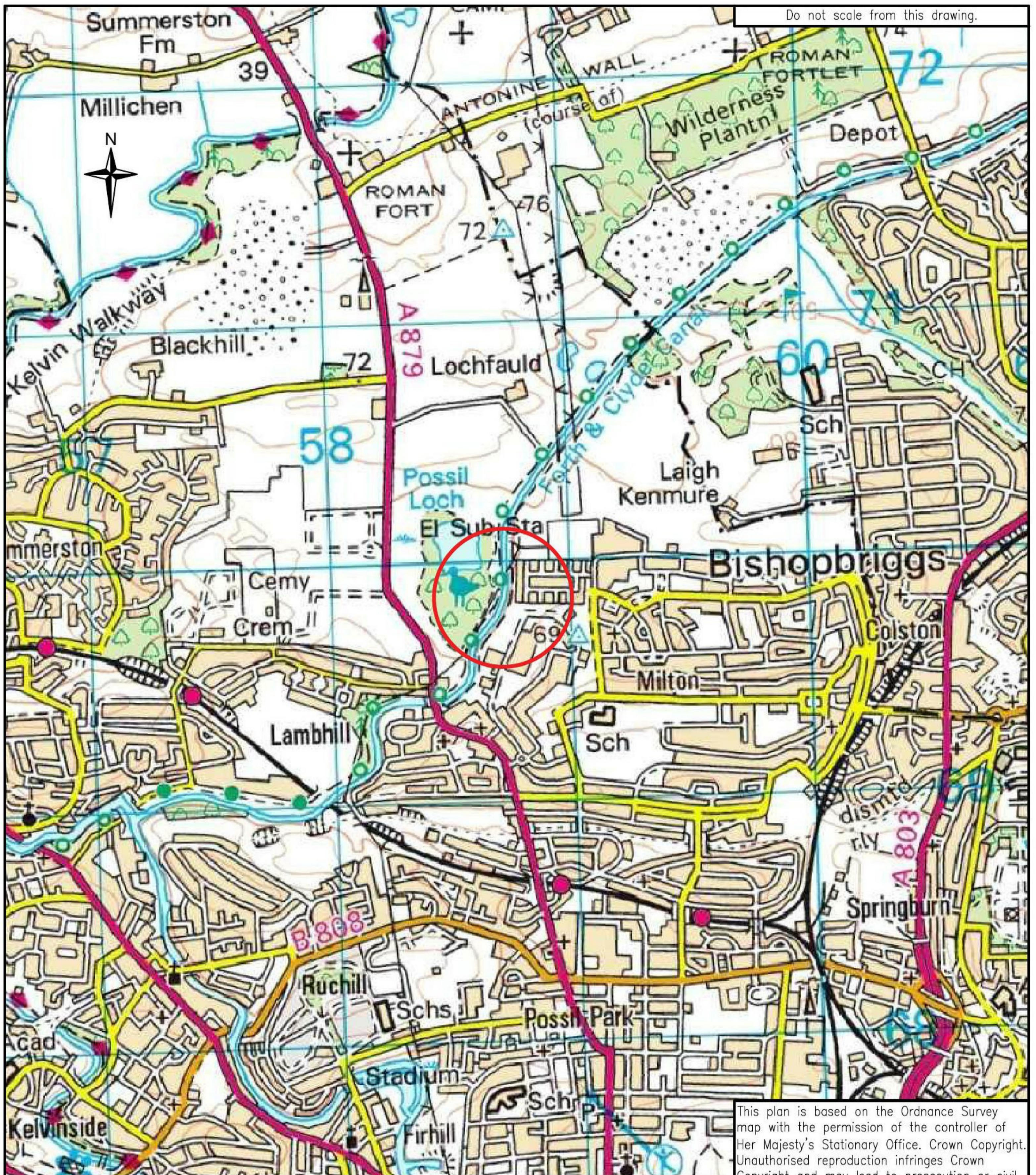
Whilst no recorded workings are present beneath the proposed SUDs and Swale, the Jubilee Coal and Shale Coal are both conjectured to outcrop through this section of the site while the Knightswood Gas Coal will also be present at relatively shallow depth. Evidence from previous boreholes in the area suggests that all of these seams may have been worked by unrecorded means and in the event that workings are present in any of these seams at this location there will be an appreciable risk of surface subsidence. However, considering this area's intended use as a drainage feature, which as far as we understand it does not involve any structural development, the risk from mineral subsidence or settlement may be acceptable.

NB. For old Pit Shafts, see Section 10.0

Appendix 1

Drawing No. 125602/9001 – Site Location plan





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Rev.	Date	Description	Drawn	Checked	Approved

Client:

Project Title:
SHIELDSAIG ROAD, GLASGOW

Drawing Title:
SITE LOCATION PLAN

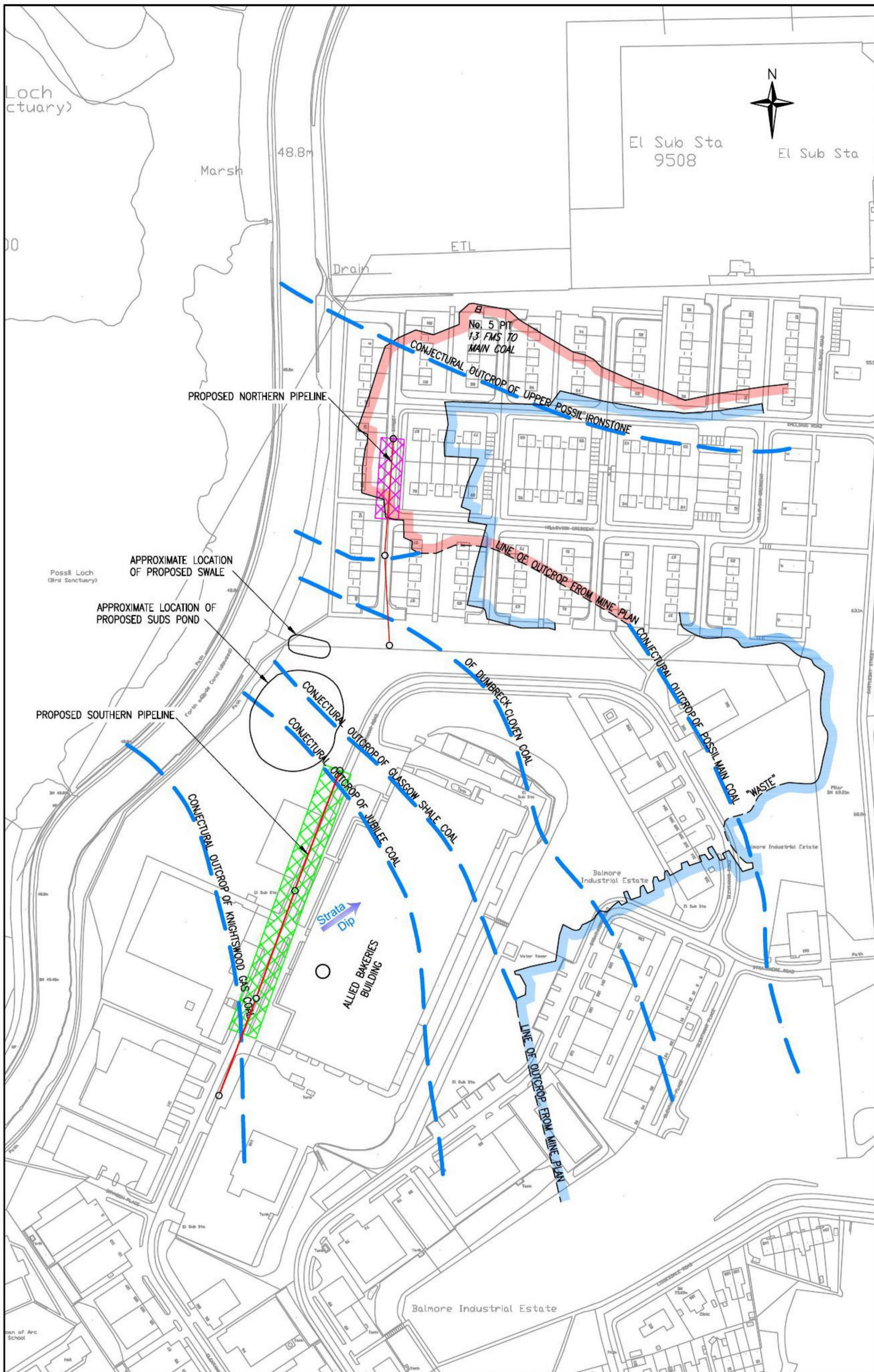
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225 Bath Street,
GLASGOW, G2 4GZ
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Drawn: SY	Checked: DR	Approved: DM
Date: 05/04/18	Date: 05/04/18	Date: 05/04/18
Drawing No.: 125602/9001		Revision: —

Appendix 2

Drawing No. 125602/9002 – Composite Site Plan



- Do not scale from this drawing.
- LEGEND**
- CONJECTURAL OUTCROP LINE FROM NATIONAL GRID SERIES GEOLOGICAL MAP NS 56 NE
 - RECORDED EXTENT OF WORKINGS IN POSSIL MAIN COAL
 - RECORDED EXTENT OF WORKINGS IN GLASGOW SHALE COAL
 - X AREA OF INSTABILITY IN RELATION TO RECORDED WORKINGS IN THE POSSIL MAIN COAL
 - X AREA OF INSTABILITY IN RELATION TO POSSIBLE UNRECORDED WORKINGS IN THE KNIGHTSWOOD GAS COAL
 - PLOTTED POSITION OF OLD COAL PIT FROM FIRST EDITION COUNTY SERIES GEOLOGICAL MAP LANARKSHIRE I SW (1870)

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Rev.	Date	Description	Drawn	Checked	Approved

Project Title: SHIELDAIG ROAD, GLASGOW
Drawing Title: COMPOSITE SITE PLAN

JWHROSS

225 Bath Street,
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Scale at A3: 1:2500	Status: For Report	
Drawn: SY	Checked: DR	Approved: DM
Date: 05/04/18	Date: 05/04/18	Date: 05/04/18
Drawing No.: 125602/9002		Revision: -

Appendix 3

Coal Authority Mining Report, dated 20th March 2018 – Ref: 51001813709001



The Coal
Authority

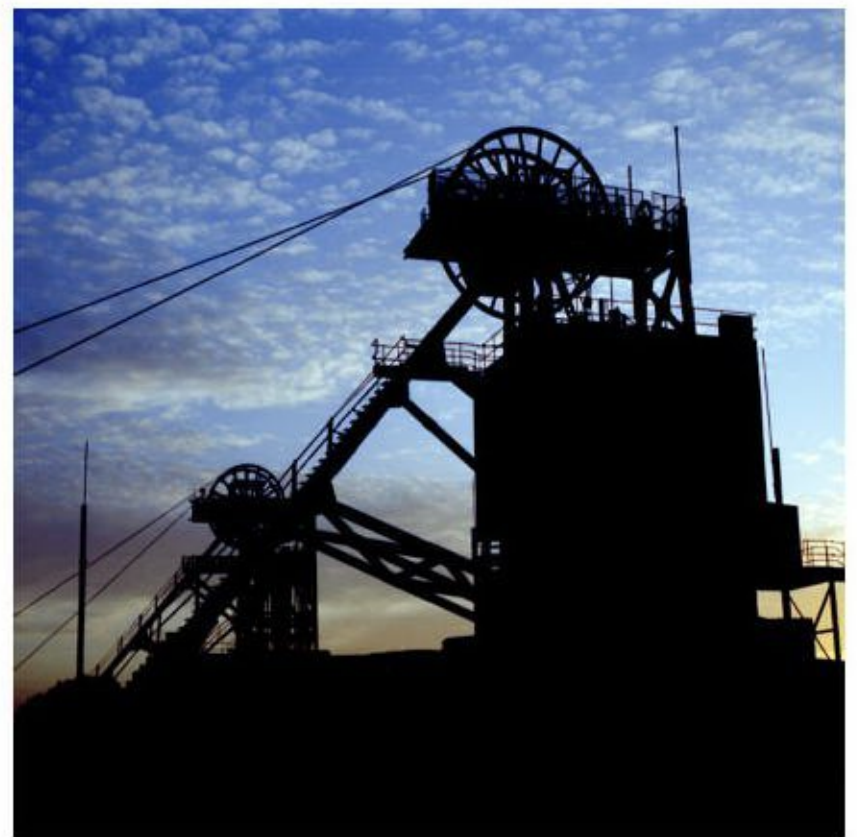
Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

SHIELDSDAIG ROAD
GLASGOW (UNITARY DISTRICT)

Date of enquiry: 20 March 2018
Date enquiry received: 20 March 2018
Issue date: 20 March 2018

Our reference: 51001813709001
Your reference: ShIELDSDAIG ROAD



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

FAIRHURST

Enquiry address

SHIELDSAIG ROAD, GLASGOW (UNITARY DISTRICT)


How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

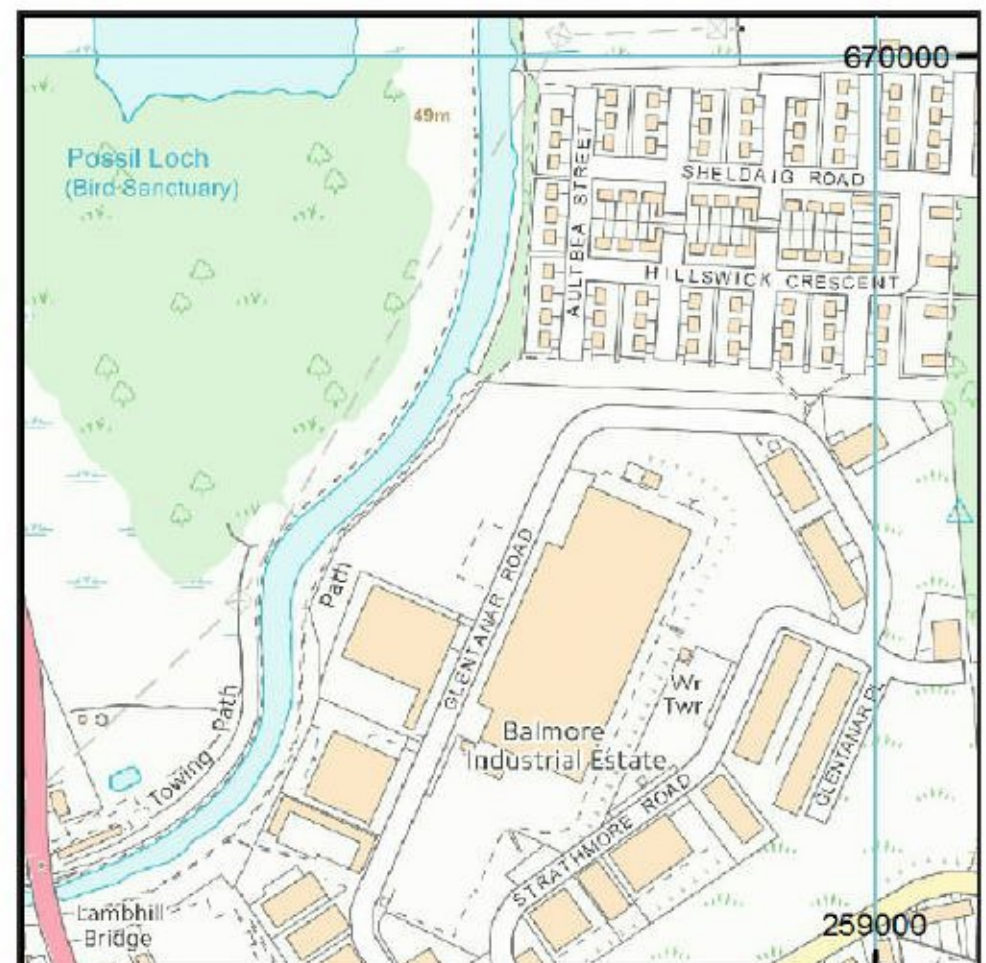
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	Yes
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

Further recommended reports
Mine entry interpretive report
Mine entry plan and data sheets

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at shallow depth, and last worked in 1882.

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 plans to grant a licence to remove coal using 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

Within, or within 20 metres of, the boundary of the property there is 1 mine entry, the approximate position of which is shown on the enquiry boundary plot.

There is no record of what steps, if any, have been taken to treat the mine entry.

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

For an additional fee, the Coal Authority can provide a Mine Entry Interpretive Report. The report will provide a separate assessment for the mine entry/entries referred to in this report. It gives an opinion on the likelihood of mining subsidence damage caused from ground movement as a consequence of the mine entry/entries. It also gives details of the remedies available for subsidence damage where the mine entry was sunk in connection with coal mining.

Please note that it may not be possible to produce a report if the main building to the property

cannot be identified from Coal Authority plans (ie for development sites and new build).

For further advice on how to order this additional information please visit www.groundstability.com.

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 31st 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 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.

Comments on the Coal Authority information

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The boundary plot shows the approximate location of the disused mine entry/entries referred to in this report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991*). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by visiting www.groundstability.com.

If you wish to discuss the relevance of any of the information contained in this report, you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wish to examine the source plans from which the information has been taken, these are available to view, free of charge, at our Head Office in Mansfield. To book an appointment please ring 01623 637225. Should you or your advisor wish to carry out a physical investigation that may enter, disturb or interfere with any disused mine entry, prior permission of the owner must be sought. For coal mine entries, the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). Our emergency telephone number is 01623 646333.

*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.

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore 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 good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

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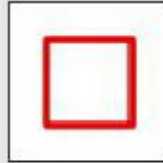
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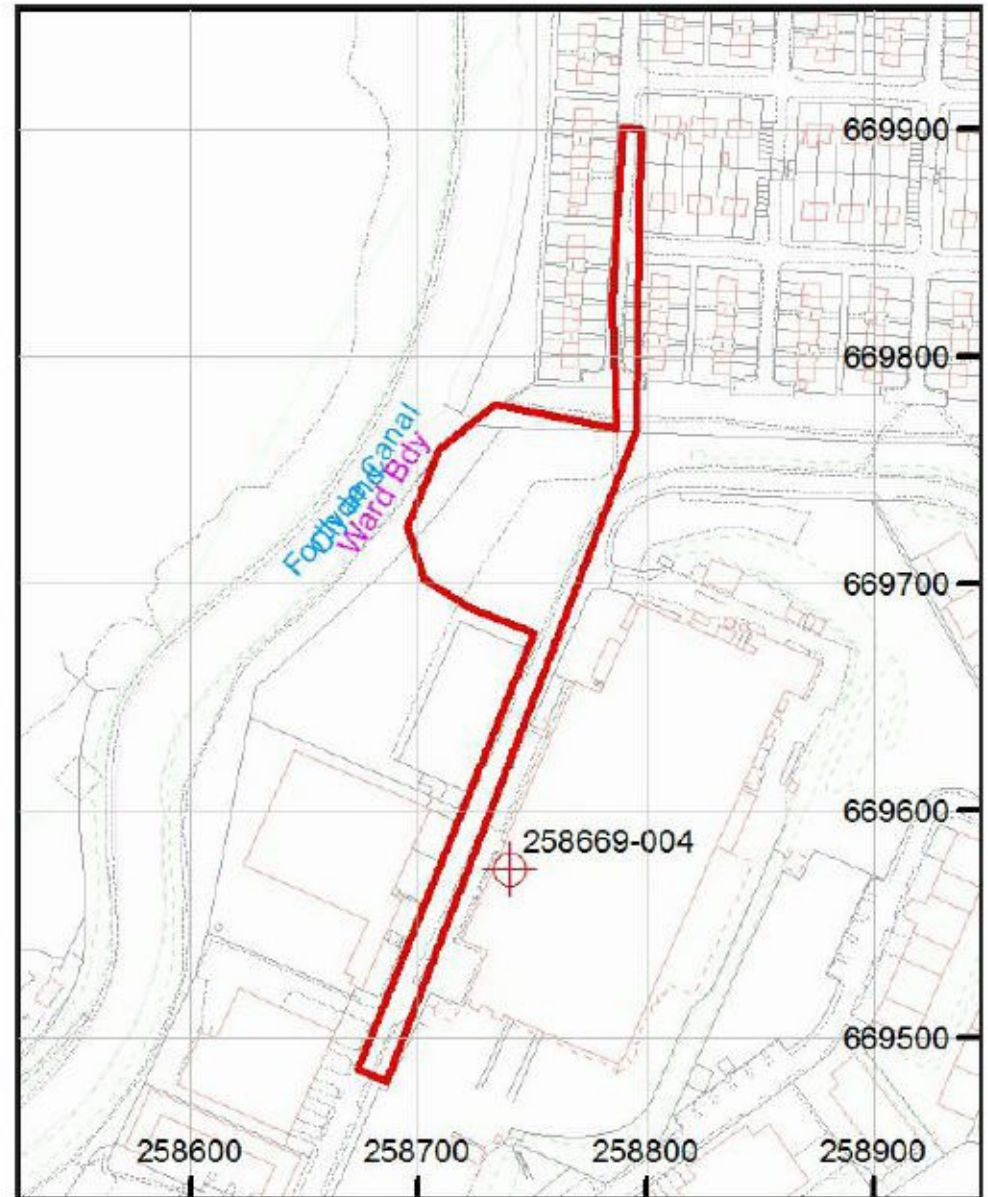
Enquiry boundary

Key

Approximate position of enquiry boundary shown



Disused mineshaft




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