



Coal Mining Risk Assessment Report R-B1205

Backfields House, Upper York Street, Bristol
BS2 8QJ

December 2020

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Client:

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Upper York Street
Bristol
BS2 8QJ

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Historical Borehole Location Plan

1.INTRODUCTION

1.1 Instruction

Wessex and West Ground Investigation Limited (WWGI) was instructed by Emmaus Bristol (the Client) to undertake a Coal Mining Risk Assessment for Backfields House, Upper York Street, St. Pauls, Bristol. The instruction to proceed is contained in email correspondence, reference P. Steward, dated 18th December 2020.

1.2 Brief and Report Scope

The general specification for the works was provided by the Client and incorporated the brief to carry out a coal mining risk assessment to satisfy the risk-based approach to development management in the defined Development High Risk Area.

This report presents a Coal Mining Risk Assessment of the site and the proposed development.

All information collected has been used to provide an interpretation of the ground conditions, with recommendations on the risk from coal mine workings beneath the site for the proposed development.

1.3 Limitations

The recommendations and opinions expressed in this report are based on the information provided within the appendices. WWGI take no responsibility for conditions that have not been confirmed by exploratory holes, or which occur between them. Information provided from sources is taken in good faith and WWGI cannot guarantee its accuracy.

The report has been prepared exclusively for the Client for the site area indicated, and for the purpose stated. WWGI accepts no responsibility for any site, client or type of development not indicated in this report.

1.4 Site Location & Description

The site is situated in the St. Pauls area of Bristol at National Grid Reference ST591737. The site is shown in the aerial photograph below and on the Site Location Plan presented in Appendix C.

Aerial Photograph of Site Location

Site



The site located on Upper York Street in St. Pauls and at the time of writing comprises a two-storey multi-use commercial unit with office space, warehouse space and shop units.

1.5 Proposed Development

It is proposed to construct a roof-top extension for residential use to create a three-storey building.

2. PHASE I – DESK BASED COAL MINING RISK ASSESSMENT

2.1 General

The following sections provide a preliminary coal mining risk assessment for the site based on available desk study information.

2.2 Sources of Information

The following sources have been used in the preparation of this report.

- British Geological Survey, Natural Environment Research Council, 1:50000 geological maps series of England and Wales, Sheet 264 Bristol - Solid and Drift (2004);
- British Geological Survey, Natural Environment Research Council, 1:63360 geological maps series of England and Wales, Special Sheet Bristol District – Solid and Drift (1999);
- British Geological Survey, Natural Environment Research Council, Onshore GeoIndex website. Accessed December 2020;
- The Coal Authority Report 51002335743001 '*BACKFIELDS HOUSE, BACKFIELDS HOUSE, UPPER YORK STREET, ST PAULS, BRISTOL, BS2 8QJ, BRISTOL*'. 18th December 2020;
- Coal Authority Interactive Map Viewer. Accessed December 2020;
- WWGI historical records

2.3 Published Geology

The published geological maps of the area record the site to be underlain by the Redcliffe Sandstone Member of the Triassic Sidmouth Mudstone Formation. The parent unit of the Sidmouth Mudstone Formation is the Mercia Mudstone Group. Superficial deposits are not recorded to underlie the site.

The Redcliffe Sandstone Member is a red, calcareous and ferruginous sandstone deposited in fluvial environments. It is commonly decalcified at shallow depths which result in uncemented sands. The unit is up to 65m thick with an unconformable lower

boundary with Carboniferous mudstones and sandstones. The Redcliffe Sandstone is not recorded as dipping to any great degree in any direction.

The Carboniferous strata underlying the site at depth are recorded as generally dipping in a southerly and/or south-easterly direction at angles of up to 30 degrees. The Ashton Little Coal and Ashton Great Coal are recorded to be present in close proximity to the site. These seams are recorded as being 0.60m and 0.90m thick respectively.

2.4 BGS Borehole Records

Historical borehole records pertinent to the site are summarised in the table below and their approximate location is presented within Appendix C.

BGS Borehole ID	Location relative to site (m)	Depth (mbgl)	Depths and Summary of Ground Conditions Recorded
ST57SE276	On-site	35.05m*	GL – 6.10m Red marl and blue clay 6.10 – 9.45m Clay and stone 9.45 – 14.75m Red marl 14.75 – 15.55m Sandstone 15.55 – 16.75m Sandstone and marl 16.75 – 22.75m Marl and stone 22.75 – 32.60m Marl 32.60 – 35.05m Rock
ST57SE29	65m SE	21.33m*	GL – 21.33m Red marl and sandstone
ST57SE252	65m SE	21.34m*	Red Sand and Sandstone
ST57SE295	70m W	2.80m	GL – 0.50m Made Ground 0.50 – 2.50m Mercia Mudstone Group 2.50 – 2.80m Redcliffe Sandstone Member
ST57SE296	70m W	2.85m	GL – 0.30m Made Ground 0.30 – 2.75m Mercia Mudstone Group 2.75 – 2.85m Redcliffe Sandstone Member
ST57SE275	65m NW	21.70m*	GL – 0.07m Concrete 0.07 – 3.65m Red Clay 3.65 – 5.35m Red Sand 5.35 – 13.10m Red Sandstone 13.10 – 17.35m Sand and stones 17.35 – 18.45m Red Clay 18.45 – 21.70m Rock
ST57SE28	60m NW	21.70m*	GL – 0.07m Made Ground 0.07 – 3.65m Red Clay 3.65 – 9.45m Red sand and sandstone 9.45 – 17.35m Sand and stones 17.35 – 21.50m Red Clay 21.50 – 21.70m Rock

BGS Borehole ID	Location relative to site (m)	Depth (mbgl)	Depths and Summary of Ground Conditions Recorded
ST57SE262	100m ESE	37.10m*	GL – 10.35m Red Stone 10.35 – 13.70m Red sandstone 13.70 – 17.05m Red Marl 17.05 – 26.50m Red Sandstone 26.50 – 28.65m Marl 28.65 – 29.55m Coal 29.55 – 30.50m Clay 30.50 – 37.10m Millstone Grit
ST57SE30	120m ESE	37.10	GL – 9.15m unclear 9.15 – 10.35m Red Stone 10.35 – 13.75m Red Sandstone 13.75 – 17.10m Red Marl 17.10 – 26.55m Red sandstone 26.55 – 28.65m Marl 28.65 – 29.60m Coal 29.60 – 30.50m Clay 30.50 – 37.10m Millstone Grit

* Denotes depths converted from imperial to metric. Depths are measured from the original ground level at the borehole location not Ordnance Datum.

The historical borehole records align the ground conditions in the local area with the published geological mapping. Borehole ST57SE262 records coal being encountered at a depth of 28.65m below ground level with no record of workings made. Borehole ST27SE30 records coal to be encountered at a depth of 28.65m below ground level with no record of workings being made. Notes made with borehole record ST27SE30 identifies the seam encountered to be the Ashton Great Vein. However, the note also identifies the possibility that the seam is the Ashton Little Vein.

2.5 Coal Authority Interactive Map

The Coal Authority Interactive Map indicates the site is within a Coal Mining Report Area and a Development High Risk Area. The records also indicate the site is within a surface resource area, defined as areas of coal resources capable of being extracted by surface mining methods.

The records do not indicate the site to be in close proximity to any recorded mine entries and is not within an area covered by the abandoned mines catalogue. Past and current surface mining and past shallow mine workings are not recorded within 500m of the site boundary.

2.6 WWGI Records

As part of a previous investigation for a project located on Upper York Street, a coal mining archive report from the Bristol Coalmining Archives Ltd, was commissioned by WWGI. The report, and summarised in the following sections.

2.6.1 Past Mining Activity

The archive has no record of the seams underlying the site of being worked and they are unlikely to be worked in the future. The Ashton Great Coal dips to the east and therefore any workings will be unlikely to exert an influence on the site even if worked previously.

The nearest workings to the site boundary are those of Pennywell Road Colliery, which worked a number of seams from the 1840s until closure in 1911. Abandonment plans record the workings stop approximately 500m to the east of site.

2.6.2 Shafts and Adits

The archives do not record any shafts or adits within 100m of the site boundary

2.7 Coal Mining Report

As part of the investigation, a coal mining archive report, from The Coal Authority, was interrogated by WWGI. The report, reference 51002335743001, dated 18th December 2020 is included in the Appendices to this report, and summarised in the following sections.

2.7.1 Underground Coal Mining

The site is not within a surface area that could be affected by past or present underground mining. However, the site is in an area where the Coal Authority believe there is coal at, or close to, the surface. This coal may have been worked at some time in the past.

The site is not in the likely zone of influence of any present or future planned underground coal workings. However, under section 46 of the Coal Mining Subsidence Act 1991, notice has been given that the land is at risk of subsidence.

2.7.2 Opencast 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 200m of the boundary of an opencast site from which coal is being removed by opencast methods. The site is not within 800m of the boundary of an opencast site for which a license to remove coal by opencast methods has been granted.

2.7.3 Mine Entries

There are no recorded mine entries recorded by the Coal Mining Report within 20m of the site. There are no known mine entries within 500m of the site according to the Coal Authority interactive map.

2.7.4 Coal Mining Subsidence

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

2.7.5 Mine Gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the site.

2.8 Identification and Assessment of Site-Specific Coal Mining Risks

The following table summarises the potential risks associated with coal mining legacy for the proposed development site, identified from the sources listed and summarised in the above sections.

Coal Mining Issue	Recorded On Site	Recorded within 20m of boundary	Unrecorded but probable	Risk Assessment
Underground coal mining (recorded at shallow depths)	No	No		Very low / negligible
Underground coal mining (probable at shallow depths)	No	No	Outcrop on site recorded, no record of historical working	Low
Mine entries (shafts and adits)	No	No		Very low / negligible
Coal mining geology (fissures)	No	No		Very low / negligible
Record of past mine gas emissions or potential	No	No		Very low / negligible
Recorded coal mining surface hazard (outcrop workings)	No	No		Very low / negligible
Surface mining (opencast workings)	No	No		Very low / negligible
Risk of Combustion in Coal	No	No		Very low /

Seam				negligible
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Based on the information above, it is possible that there are workable coal seams present at or near surface. However, it is considered that the risk of surface or near surface hazards and mine entries is likely to be low based upon:

1. The site is not directly underlain by coal bearing strata and as such, the likelihood of outcrop workings is very low and supported by the absence of recorded mine entries at or in proximity to the site;
2. Historical boreholes sunk in proximity to the site have not encountered worked coal.
3. Historical boreholes sunk in proximity to the site encountered a 0.90m thick seam – possibly the Ashton Great Coal – without record of workings.
4. The Ashton Great Coal dips away from the site and as such workings will not underly the site.
5. The lack of historical working records underlying the site or within 500m of the site boundary;
6. The age of the existing structure and a lack of movement demonstrated.

It can be concluded the risk of coal mine workings beneath the site at shallow depth is very low.

3.CONCLUSION AND MITIGATION

Based on the above sections it can be concluded there is a very low risk from coal mining to the proposed redevelopment and mitigation measures are not required.

APPENDIX A

Coal Mining Report



The Coal
Authority

CON29M

coal mining report

BACKFIELDS HOUSE, BACKFIELDS HOUSE, UPPER YORK STREET, ST PAULS,
BRISTOL, BS2 8QJ, BRISTOL



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
www.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**.

Your reference: **GS-7377998**
Our reference: **51002335743001**
Date: **18 December 2020**

Client name:
GROUNDSURE LIMITED

If you require any further assistance please
contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



The Law
Society

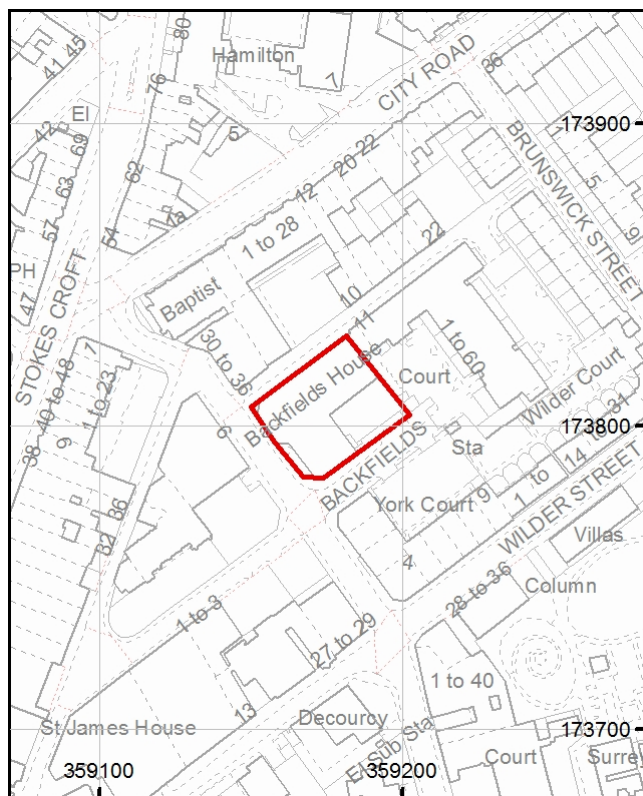
Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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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 not within a surface area that could be affected by any past recorded underground coal mining.

However 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.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.

www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



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

APPENDIX B

Historical Borehole Log Sheets

RECORD OF WELL (SHAFT OR BORE)

British Geological Survey

British Geological Survey

British Geological Survey

At

J. G. Lockley

Town or Village

Brighthelm

County

Exact site

NO SITE

ST 5918 7381

Six-inch quarter sheet

(A published sketch-map or a tracing from a map is very desirable)

in parish of

Level of ground surface above sea-level (O.D.) 4 ft. If well starts below ground surface, state how far 86 ft.

Shaft 4 ft., diameter. Bore 4 ft. Diameter of bore: at top 4 ins.; at bottom 4 ins.

Details of permanent lining tubes (internal diameters preferred) 50 ft x 5 in

British Geological Survey

Water struck at depths of (feet)

Rest-level of water 10 below top of well 10 feet. Suction at 10 feet. Yield on 10 hours' test

1000 gallons per hour (with pump of capacity g.p.h.); depressing water level to 10 feet

below top. Time of recovery hrs. Amount normally pumped daily g.p.h. for hours.

Quality (attach copy of analysis if available)

Sunk by C. Isler & Co. for Mr.

Date of well 1887

Information from C. Isler

(For Survey use only).
GEOLOGICAL
CLASSIFICATION.

NATURE OF STRATA
(and any additional remarks).

THICKNESS

DEPTH

Feet. Inches. Feet. Inches.

Red marl & blue clay

Clay & stone

Rock

Red marl & stone

foundations

Peatstone & marl

Marl & stone

Marl

Rock

No site.

1° N.S. 264

ST/ST/SF

5920.7377

No. 22

British Geological Survey

British Geological Survey

No. 27, Kingsdown, Bristol.

Box approx 20' deep. It was 16 feet deep.

Box is in Red Chert sand & gravel.

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

RECORD OF WELL (SHAFT OR BORE)

(attach copy of analysis if available)

British Geological Survey

British Geological Survey

British Geological Survey

At **WILDER STREET IRON WORKS**

ST 5919 7376

Town or Village **BRISTOL 2.**

County **GLOS**

Six-inch quarter sheet

71 SEE

For Mr. **WILLIAM SHERRING.**

State whether owner, tenant, builder, contractor, consultant, etc. :-

British Geological Survey

Address (if different from above)

Level of ground surface

above sea-level (O.D.) **ft.**

If well-top is not at ground level, state how far (above; below; **ft.**)

SHAFT **ft.**; diameter **ft.**; Details of headings

British Geological Survey

British Geological Survey

British Geological Survey

BORE **ft.**; diameter of bore: at top **ins.**; at bottom **ins.**

Details of permanent lining tubes

Water struck at depths of **ft. below well-top.**

Rest-level of water **ft. above well-top.**

pumping at **galls. per** with depression to **ft. below well-top.**

Recovery to rest-level in **mins. hours**

Capacity of pump **g.p.h.** Date of measurements

Description of permanent pumping equipment:

Make and/or type

Motive power

Capacity **gallons per hour.**

Suction at **ft.**

Amount pumped **galls. per day.** Estimated consumption **galls. per week.**

Well made by **Date of well**

Information from **The firm for G.A.K.**

British Geological Survey

British Geological Survey

British Geological Survey

ADDITIONAL NOTES

*Bore approx 70' deep. In use. No further details.
The bore is in Red Lion Road & London.*

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

LOG OF STRATA OVERLEAF.

GEOLOGICAL SURVEY AND MUSEUM,
SOUTH KENSINGTON,
LONDON, S.W.7.

Date Received

1" O.S. Map No.

Site marked (use symbol) on 1" Map on 6" Map

British Geological Survey

British Geological Survey

British Geological Survey


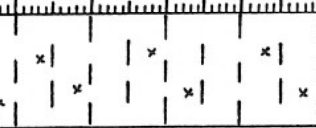
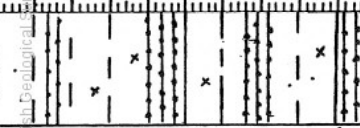
BOREHOLE No. One
British Geological Survey

Description of Strata	STRATA CHANGE		S.P.T. C.P.T. N-VALUE	SAMPLES		WATER LEVEL M
	LEGEND	DEPTH M		DEPTH M	TYPE	
<div>MADE GROUND</div> <div>Brick rubble, concrete fragments and black, silty clay</div>						
<div>KEUPER MARL</div> <div>Soft red slightly silty CLAY</div> <div>- firm dark red slightly sandy</div> <div>- firm/stiff</div>		1.00		0.50	B	
<div>- increasing sand content</div> <div>- occasional fine sand partings</div>		2.00		1.00	U	
<div>REDCLIFFE SANDSTONE</div> <div>Medium hard calcareous SANDSTONE</div>		3.00		1.50	U	
		4.00		2.00	U	
		5.00		2.50	J/W	
<div>BOREHOLE DIAMETER : 125mm</div> <div>MINING TUBES : </div> <div>GROUND LEVEL : Basement Floor</div> <div>REMARKS : Mining bit unable to penetrate below 2.80m.</div>						
Date. October, 1983	BOREHOLE LOG					Report S.436

LOCATION : 40-48 Stokes Croft, Bristol.

BOREHOLE No. Two

DATE OF BORING: 24.10.1983

Description of Strata	STRATA CHANGE		S.P.T. C.P.T. N-VALUE	SAMPLES		WATER LEVEL M	DEPTH of CASING M
	LEGEND	DEPTH M		DEPTH M	TYPE		
MADE GROUND Stone slab floor Cobbles and bricks floor							
KEUPER MARL Stiff slightly moist red slightly silty CLAY - very stiff dark red, friable - very stiff/hard - very stiff		1.00		0.50 1.00 1.50 2.00 2.50	U U U J J		
REDCLIFFE SANDSTONE							

BOREHOLE DIAMETER : 125mm

LINING TUBES :

GROUND LEVEL :

REMARKS :

Cellar Floor
No ground water struck

British Geological Survey

Σ - Water strike
Σ - Water (standing level)
W - Water Sample
B/J - Bulk/Jar Sample
S.P.T. - Standard Penetration Test
C.P.T. - Cone Penetration Test
(U) - Undisturbed Sample (38mm & 100mm)

Date.
October, 1983

BOREHOLE LOG

Report No.
S.436



Borehole Scan Viewer

BGS ID: 388877 : BGS
Reference: ST57SE275
British National Grid
(27700) : 359110,173850

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borehole](#)

264

84

1 N.S. 264
2 O.S.
3 G.S.
4 Rel.

RECORD OF WELL (SHAFT OR BORE)

At R. W. Miller & Co. Upper Yorks St.
 Town or Village Bristol County ST57140 Six-inch quarter sheet 751E
 Exact site ST 5911 7385 in parish of _____
 (A rough sketch-map or a tracing from a map is very desirable)

Level of ground surface above sea-level (O.D.) _____ ft. If well starts below ground surface, state how far _____ ft.
 Shaft _____ ft., diameter _____ ft. Bore _____ ft. Diameter of bore: at top _____ ins.; at bottom _____ ins.
 Details of permanent lining tubes (internal diameters preferred) 20' x 5" for 1'9"

Water struck at depths of (feet) _____

Rest-level of water ^{below} ~~above~~ top of well 30 feet. Suction at _____ feet. Yield on _____ hours' test _____ days' test _____
 _____ gallons per _____ (with pump of capacity _____ g.p.h.); depressing water level to _____ feet
 below top. Time of recovery _____ hrs. Amount normally pumped daily _____ g.p.h. for _____ hours.

Quality (attach copy of analysis, if available)
C. Isler & Co.
 Sunk by _____ for Mr. _____ Date of well _____
 Information from **C. Isler**

(For Survey use only). GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS		DEPTH	
		Feet.	Inches.	Feet.	Inches.
	Concrete		3		
	Red clay	11	9		
	" Sand	5	6		
	" sandstone	25	6		
	Sand & stones	14		57	0
? Red stained c.n.	Red clay	13	5		
? Ch. sat.	Rock		9	71	3
G.A.K.					
Nov. 1948					



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Borehole Scan Viewer

BGS ID: 388620 : BGS
Reference: ST57SE28
British National Grid
(27700) : 359130,173850


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[Report an issue with this borehole](#)


 ST 57 / SE

1st N.S. 264
 ST 57 SE
No 28
5913.7385

R.W. Miller, Upper York St, Bristol.
 c L.S.D.

1983m

Water bore. Made by C. Jones.

	Thickness	Depth
Made ground	0 ft 3 in	
T.M. 1	'Red clay'	11 ft 9 in
	Red sand & sandstone	31 ft 0
	Sand & stone	14 ft.
Red sand & stone	57.0 ft	17.39m
Red sand & stone	70 ft 6 in	
Red sand & stone	13 ft 6 in	
Red sand & stone	9 in	
Red sand & stone	71 ft 3 in	21.75m



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scans.bgs.ac.uk/sobi_scans/boreholes/388620/images/10711381.html

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At Mesto Carter

Town or Village Bristol County County

Exact site ST 5926 7380

..... in parish of.....

Level of ground surface above sea-level (O.D.) 48 ft. If well starts below ground surface, state how far ft.

Shaft.....ft. Bore.....ft. Diameter of bore: at top.....ins.; at bottom.....ins.

Details of permanent lining tubes (internal diameters preferred).

Water struck at depths of (feet).

Rest-level of water below top of well 33 feet.

360 gallons per (with pump of capacity g.p.h.); depressing water level to feet below top. Amount normally pumped daily g.p.h. for hours.

Quality (attach copy of analysis if available)

Sunk by **C. Isler & Co.** for Mr.

Information from **C. Isler**

C. Isler

Date of well 1887

[illegible]



Borehole Scan Viewer

BGS ID: 388622 : BGS
Reference: ST57SE30
British National Grid
(27700) : 359270, 173810

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Report an issue with this
borehole

ST 57 SE / 30

264

N.S. 264
O.S.
Grid
Ref.

RECORD OF WELL (SHAFT OR BORE)

At Messrs Gaster
Town or Village Grindal County _____ Six-inch quarter sheet 85
Exact site _____ (A rough sketch-map or a tracing from a map is very desirable)
_____ in parish of _____
Level of ground surface above sea-level (O.D.) c. 48 ft. If well starts below ground surface, state how far _____ ft.
Shaft _____ ft., diameter _____ ft. Bore _____ ft. Diameter of bore: at top _____ ins.; at bottom _____ ins.
Details of permanent lining tubes (internal diameters preferred) _____
Water struck at depths of (feet) _____
Rest-level of water ~~below~~ ^{above} top of well 33 feet. Suction at _____ feet. Yield on _____ hours' test
360 gallons per _____ (with pump of capacity _____ g.p.h.); depressing water level to _____ feet
below top. Time of recovery _____ hrs. Amount normally pumped daily _____ g.p.h. for _____ hours.
Quality (attach copy of analysis if available) _____
Sunk by C. Isler & Co. for Mr. _____ Date of well 1887
Information from C. Isler

(For Survey use only). GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS		DEPTH	
		Feet.	Inches.	Feet.	Inches.
	Dug well	30			
	Red stone	4		34	
	Red sandstone	11		45	
	Red sand	11		56	
	Red sandstone	29		87	
	Mud	7		94	
	Coal	3		97	
	Clay	3		100	
	Hillstone grit	21	8	121	8
	6" glass 72 S.W.W.				
	Sited on 6" glass 72 S.W.W. by G.B.K.				



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Reference: ST57SE30
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ST/57/30

INS. 264 Kingdown, Bristol. 5927.7381

Water Recd. No. 85. Shut 264

For Memo. Borehole by John W. 1887.

Surface level c. 18 ft. or 14.64m

Base level of water 53 ft. below top of well.

	Feet	Meters	
Top of well	9.15m	30	0
(KEUPER) Red sand.	10.37m	34	0
TRIAS. Red sand.	13.73m	45	0
Red sand.	17.08m	56	0
Red sand.	20.54m	67	0
LOWER COAL	28.67m	94	0
MEASURES	29.59m	97	0
MEASURES	30.50m	100	0
MEASURES	37.11m	121	8



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Reference: ST57SE30
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ST 57SE/30

Wilder St. (Bristol) ~~W. (W. R.)~~

British Geological Survey

British Geological Survey

British Geological Survey

On the published six-inch map (ST 57 SE) the incrop of the Ashton Great Vein has been calculated on the assumption that the 3ft ~~core~~ ^{coal} proved in the Wilder Street Borehole is the Ashton Great Vein. It is possible however that this coal may be the Ashton Little Vein, and the presence of 'Millstone Grit' (i.e. hard quartzitic sandstone) about 3ft (0.9 m) below the ~~core~~ ^{coal} may also indicate this. Quartzitic sandstones are developed about 6ft (1.8 m) below the Ashton Little Vein at Ashton Park (Kellaway, 1967, pp 94-5).

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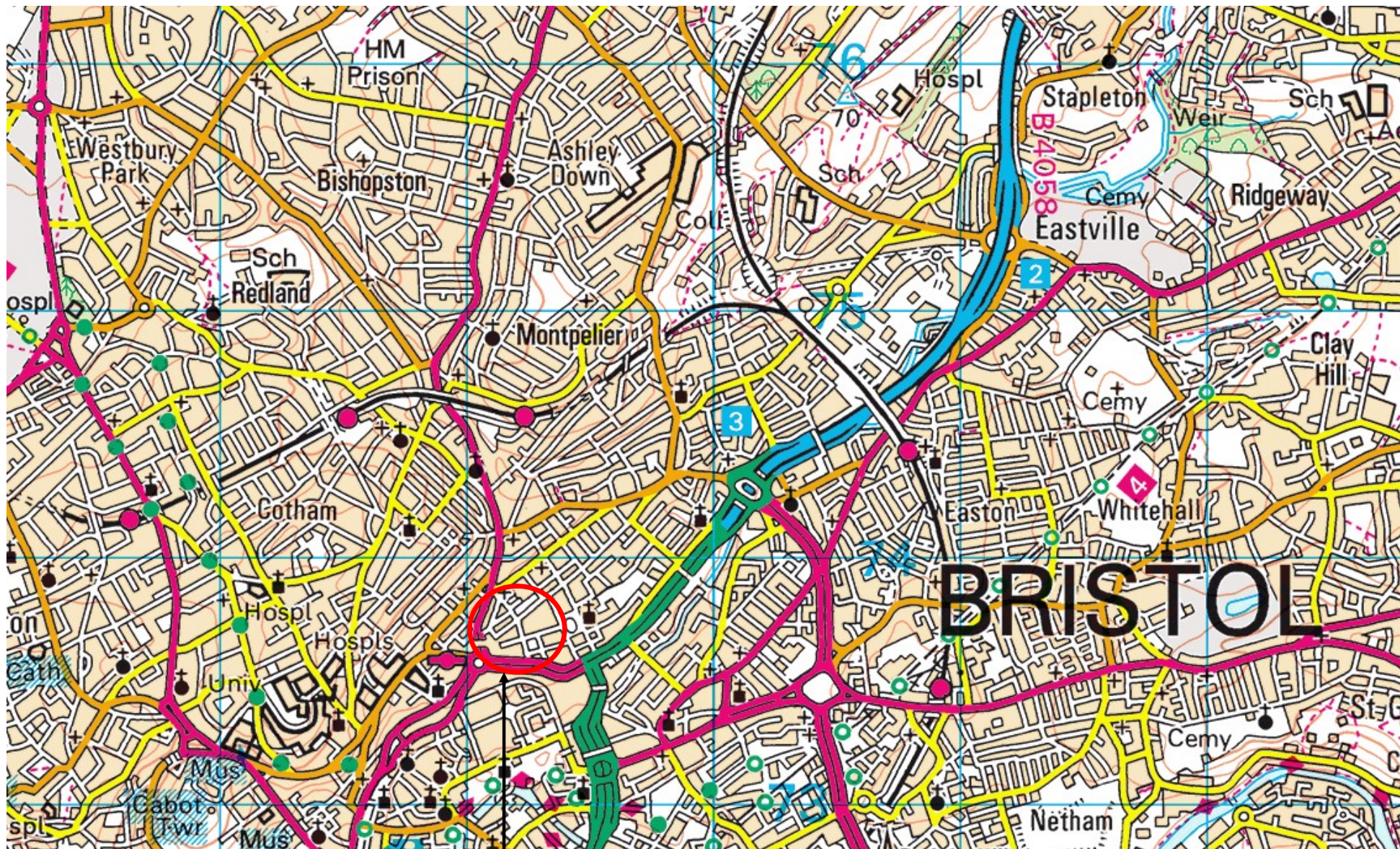
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APPENDIX C

Site Location Plan
Historical Borehole Location Plan



The Site

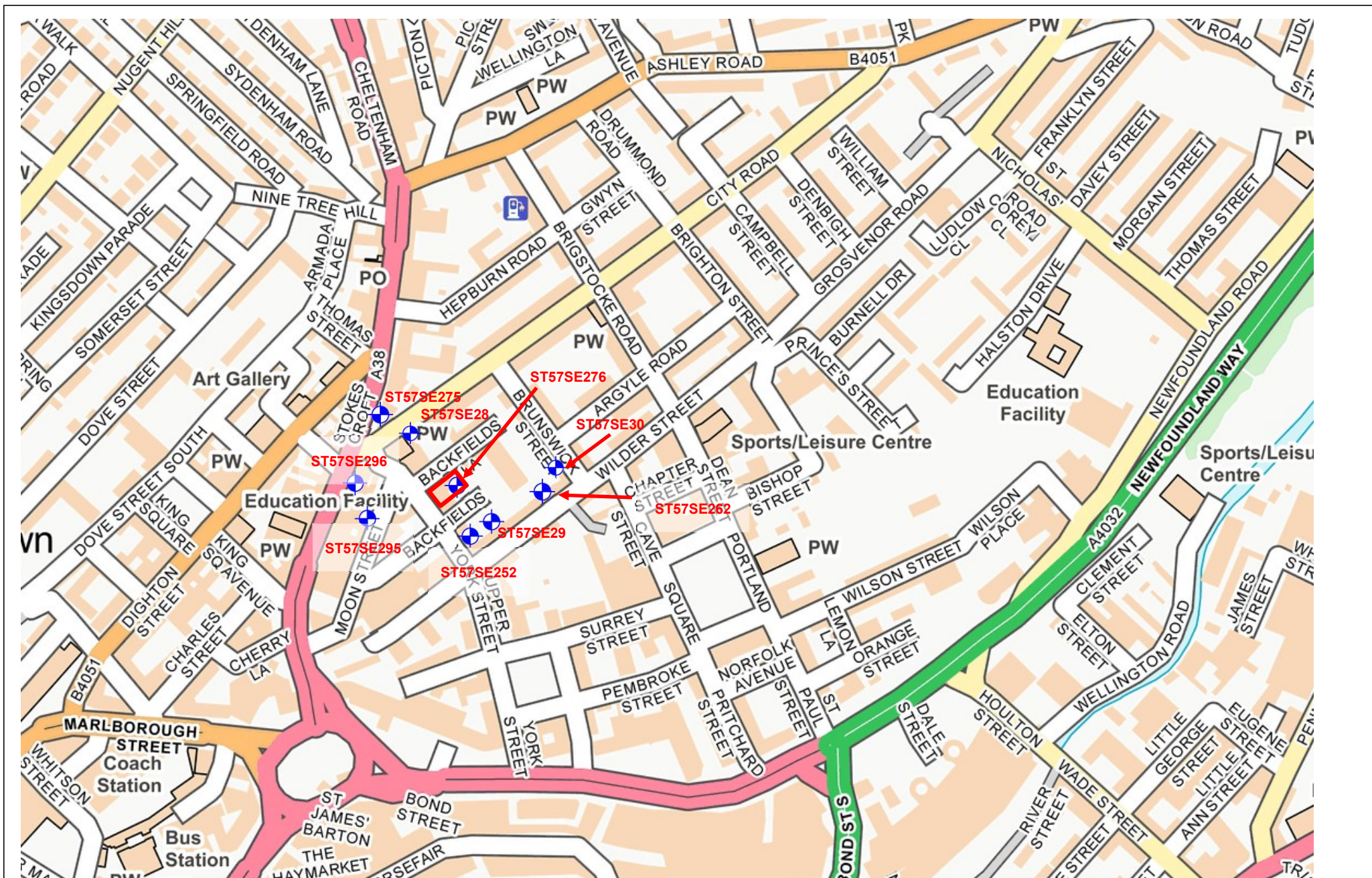
Key

Status Final			
Scale NTS		Current Issue Signatures	
		Author	C. Pristavec
Datum	N/A	Checker	I. Parsons
Grid	N/A	Approver	I. Parsons
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Project Backfields House Coal Mining Risk Assessment	
Title Site Location Plan	




Drawing No.	Project No.	Issue No.
0001	R-B1205	01



Key

 BGS Historical Borehole Location

 The Site

Status		Final	
Scale		Current Issue Signatures	
NTS		Author	C. Pristavec
Datum	N/A	Checker	I. Parsons
Grid	N/A	Approver	I. Parsons
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Project

Backfields House
Coal Mining Risk Assessment

Title

Historical Borehole Location
Plan



Drawing No. 0002 | Project No. R-B1205 | Issue No. 01