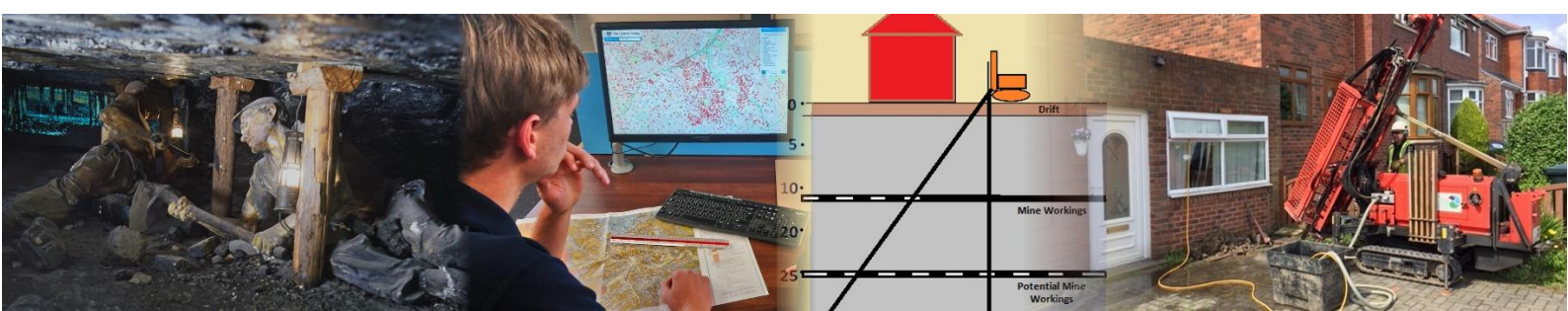




GEOLOGICAL
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DRILLING & DATA ACQUISITION



GEOINVESTIGATE LIMITED

Coal Mining Risk Assessment (CMRA)

LOCATION	Acrefair Sports & Social Club, Bethania Road, Wrexham, Acrefair LL14 3TR
ISSUE DATE	5 October 2021
FOR	Joseph Moss
CLIENT REF.	
OUR REF.	G21375

Prepared by

A handwritten signature in black ink, appearing to read "Richie Moore".

Richie Moore
BSc (Hons), MCSM MSc, FGS
Geo-environmental Engineer

Checked by

A handwritten signature in black ink, appearing to read "Ross Nicolson".

Ross Nicolson BSc(Hons) MSc(Eng) CEng MIMMM
Principal Geotechnical Engineer

SUMMARY FINDINGS

OUTCOME MITIGATION REQUIRED (YES/NO?)

YES. Mitigation is needed to the outside Seating & adjacent Playground areas as set out in Section 3 of this report - requiring the possible relocation of the front 'Seating Area' and the 'Playground' and the safeguarding of these areas if relocated within the areas of mine shaft ZOI identified in this report with anchored geo-grid net.

However, NO mitigation of the Seating and adjacent Playground is required if these areas are relocated within the site wholly outside demarcated mine shaft ZOIs.

NO mitigation is required with regard to the proposed slightly re-modelled existing car parking area or the minor conversion of the existing social club buildings to restaurant and bar.

In conclusion we see no reason why Planning Permission should not be granted with respect to coal mining legacy issues and the recommendations made in this CMRA are carried out at a later date before construction commences.

WHAT TO DO NEXT

NO further intrusive investigation required unless the CA upon reviewing this CMRA report considers that drilling would provide additional useful information drift/bedrock depth enabling improved mine shaft proximity hazard modelling though in our opinion this action is optional in this instance.

Geoinvestigate can provide advice and assistance with help with finding suitable site investigation & drilling contractors. Call us on 01642 713779 or email enquiries@geoinvestigate.co.uk.

1. CMRA INTRODUCTION

Site Location and Description:

The approximate centre of this site is at National Grid Reference E 327891, N 343273 with an elevation of about 140m AOD. The boundary shown in RED on the Coal Authority (CA) report provided in Appendix A corresponds with the planning application area.

Google Satellite and Street View imagery shows the site is currently occupied by Acrefair Sports & Social Club including existing club buildings and hall, existing large tarmac carparking/hardstanding and a large grassed/landscape area (see images in Appendix B).

It is proposed to carry out minor internal structural alterations to the club buildings, converting it to a bar & restaurant with a new open air children's play area/ 'Playground' and additional 'Seating Area' to the front of the building and additional seating to the rear. The existing car park area will remain essentially unchanged with possible minor extension of its width up to the east site boundary. The current west line of the carpark will be reduced by 2 or 3m.

Site location and development plans are provided in Appendix C.

The OS map record from 1872 shows the site occupied by a large area of made ground/spoil heap crossed by several waste tramways. The materials in the heap may perhaps originate from the New British Iron Works and coal mining activity. The heap extends southeast over previous sloping ground/hillside.

A reservoir, Shafts (Coal), Railway, Coke Ovens, Brick & Tile Works, Kilns, and Fire Clay Works occur adjacent to the site. Plas-Kynaston Foundry (Iron) and Tref-y-nant Fire Clay Works are present in the distant surrounding area.

By 1899 the spoil heap appears to be disused, and the ground has become re-vegetated between 1912 and 1962. A smaller building/clubhouse is shown within the site between 1962 and 1977, subsequently extended.

The OS map record provides no evidence that the site itself has been subject to pitting/quarrying or surface mining activity though historical mining activity and multiple coal mine shafts are recorded in the nearby surrounding area. The site has been subject to extensive infilling and raising of an original slope.

A brief, limited desk top inspection of buildings, roads and walls in the site vicinity using Google Street View found no obvious visible surface evidence indicative of mining subsidence.

Description & Layout of Proposed Development: It is proposed to carry out minor internal structural alterations to the existing Social Club buildings, converting it to a bar & restaurant with a new open air children's play area and additional seating to the front of the building and additional seating to the rear. The existing car park area will remain essentially unchanged with minor positional changes (see Appendix C)

Risk Methodology Applied: This document and the risk assessment methodology adopted herein is based on CA publication RISK BASED APPROACH TO DEVELOPMENT MANAGEMENT - GUIDANCE FOR DEVELOPERS Version 3, 2014 and Version 4 - 2017. The template contained therein is adopted with minor amendments made by Geoinvestigate Limited.

2. ASSESSMENT OF SITE SPECIFIC COAL MINING ISSUES

The table below summarises the potential risks associated with coal mining legacy for the proposed development site, identified from list sources of information.

Coal Mining Issues	Yes	No	Risk Assessment/Remarks
Past underground coal mining	Yes		2.1.1 (refer below)
Probable unrecorded shallow workings		No	2.1.2
Spine roadways at shallow depth		No	
Outcrop		No	2.1.2
Mine entries	Yes		2.1.3
Geological faults, fissures and breaklines		No	
Opencast Mines		No	
Coal Mining Subsidence		No	
Mine Gas		No	2.1.4
Site investigations		No	

Note: For those coal mining issues above identified as "Yes" or highlighted "YELLOW" a more detailed discussion and assessment are made of the risks to the application site and the proposed development.

2.1 DETAILED DISCUSSION & ASSESSMENT RESPONSE

2.1.1 Past Underground Mining

According to the Coal Authority report in Appendix A, two levels of recorded/past underground mine workings occur beneath the property within the Firecamp Coal seam at depths of 43m and 48m, dipping 8.1 degrees southeast with an extraction thickness of 200cm.

The CAs online interactive map service identifies the Firecamp Coal as seam code LB022D and according to this source the proposed development area is underlain by panel A0PE. Therefore, recorded workings at 48m depth or (- 92m OD) are expected beneath the development rather than 43m.

In our opinion, such working is likely to lie too deep to impact surface ground stability in the development area.

The absence of recorded shallow working below the site does not mean that shallower unrecorded mine working does not exist beneath the development area that the CA have no records of. Mine maps and other documents can get lost or destroyed over the years and if mining was very old there may be no records about it whatsoever and memories fade quickly.

2.1.2 Probable Unrecorded Shallow Workings

According to the CA report the site **does not fall within an area of probable unrecorded shallow workings**. The CA define Probable Unrecorded Shallow Workings as "Areas where the Coal Authority believes there to be unrecorded coal working that exist at or close to the surface" (i.e., less than 30m).

The location of the site is shown on the extract of BGS solid geology map presented in Appendix D. The tentative elevation of the site relative to the vertical geology column is shown below the map. The drift/soil horizon above the solid geology bedrock is not shown on the column.

The geology map indicates that drift/soil cover is Devensian Till (Diamicton) of unknown thickness at this locality.

Mine shaft 327343-386 located some 90m south of the site records drift thickness of 9.9m and a similar thickness of drift may be expected at the site. The rubbish filled depression of this shaft was found in 1971.

The BGS geology map indicates the site is underlain by bedrock of Pennine Lower Coal Measures Formation comprising mudstone, siltstone, and sandstone with coal seams.

According to the geology map the site falls between outcrop of the M and FG (Fireclay Group) seams and may be immediately underlain by an unnamed coal seam occurring between the two. Consequently, the development may be underlain by workings of Fireclay Coal at 48m depth with possibly a further unnamed shallower coal seam above this.

The CA record underground coal working beneath the site at 48m depth or - 92m OD with no recorded working above this at shallower depth.

BGS borehole logs SJ24SE 676 - 687 (687 approx. collar height 124.4m AOD) located some 270m southwest of the site records drift/bedrock depth ranging from 4.00m to 6.90m.

Borehole 676 was terminated at 34m depth or - 90m OD and records thin poor-quality coal at 16.50m depth (-107.9m OD) and again at 31.50m (- 92.9m OD). Because the site and borehole 676 fall on broadly similar geological strike this borehole may perhaps record those coal horizons lying above the workings in the Fireclay Coal. If so, it is our opinion that these coal horizons are too narrow to have been mined, hence perhaps the CAs conclusion that there is no probable unrecorded shallow working beneath the property. Geoinvestigate concurs with this assessment.

BGS borehole log 676 is provided in Appendix E and its location is plotted on the BGS extract in Appendix D.

Consequently, in our opinion surface ground stability within the development area is not impacted by underground seam mine working and the site is safe with regard to such working. However, the development is subject to mine shaft proximity hazard.

2.1.3 Mine Entries

Several mine shafts are located in the vicinity of the site. Two shafts, 327343-533 and 527 are located some 12m from the existing buildings and 18m from the existing car park, respectively. Both shafts are untreated with assumed diameters of 2m and departure/positional uncertainty of 10m. The proposed outdoor front 'Seating Area' is potentially located over shaft 533 and a portion of the children's Playground lies within its departure zone and could therefore be underlain by this shaft.

The departure zone of shaft 533 clips the edge of the existing carpark but not the new slightly remodelled carpark.

The departure zone of 527 lies at the northern end of the site and its departure zone does not encroach upon the carpark or the Playground. Consequently, in our opinion 533 has a more critical bearing on the development than 527.

Drift/bedrock depth at the site may be 10m.

Whether or not ground stability is affected within the development area depends on several factors used to calculate mine shaft zone of influence (ZOI).

The zones of influence of shafts 527 & 533 are calculated as follows

$$ZOI_{(radius)} = \frac{1}{2}Sd + D + Dd$$

Where Sd = Shaft diameter

D = Departure

Dd = Drift depth

Therefore, the outer ZOI for mine entries 527 & 533 are the same namely radii of 21.90m from each shaft centre plot.

The 10m departure zones and the ZOIs for these mine entries are shown in Appendix F. Both ZOIs and the departure zone of 533 encroach upon the 'Playground' while the ZOI of 533 impacts a large area of carpark, whereas the impact of 527 on the carpark is negligible.

The seating area to the rear of the building is not affected by either mine shaft.

The existing building lies beyond the departure zone of shaft 533 and is unlikely to be underlain by this shaft though it falls within its outer ZOI.

With regard to the impact of the shafts, it is our opinion that if possible, drilling is required adjacent to both shafts 533 and 527 to accurately establish the ZOIs of each. However, drilling is optional.

It is possible that drilling may reduce the ZOIs of both shafts. On the other hand, if deeper drift is found the ZOIs will increase in area though the departure zones will remain the same. In our opinion the departure zone is more important than the maximum ZOI in the context of this development.

In the absence of drilling information, it is our opinion that as a precaution the proposed Seating Area should, if possible, be located outside the 10m departure zone of shaft 533. Preferably the seating area should be located outside the ZOIs of both shafts. However, the seating area could perhaps be located within the departure zone of shaft 533 providing this area is safeguarded with an anchored geo net covering and this proposal is acceptable to the CA.

Even so whether the notion of potentially sitting over an untreated mine entry would be acceptable to the business's clientele is another matter for careful consideration for the restaurant management. If unacceptable, this seating area should be moved wholly beyond the departure zone of shaft 533 and if located in the outer ZOI should as a precaution be safeguard with an anchored geo-grid net buried and hidden below the topsoil and turf layer.

Potentially much more controversial is the 'Playground', which currently partially encroaches upon the departure zone of shaft 533 and could be underlain by this shaft, and where shallow excavation into the ground may be required to fix play apparatus.

In our opinion, it is quite likely that this Playground area cannot be located within the departure zone of either 533 or 527 and preferably be located beyond the maximum ZOIs of both. However, if this is not possible the Playground may (subject to the approval of the CA) be located in the outer ZOI of either 527 or 533 providing as a precaution this area is safeguarded with anchored geo-grid net.

In our opinion, as the existing carpark would normally be exempt from consideration of mine working hazard providing only minor surface upgrading work is undertaken, so nothing further needs to be done to this area with respect to mitigating the proximity of shaft 533. This is because the new car park is located 13m from shaft 533 and 3m beyond its departure zone.

In our opinion, because the proposed restaurant is an existing building and it falls at the margin of the departure zone of shaft 533 but within its ZOI no retrofitted mitigation is required, nor would it be practical to carry this out.

2.1.4 Mine Gas

No mine gas incident or remediation is recorded within 500m of the proposed development and typically, in the UK mine gas is Low risk. Consequently, mine gas problems are not expected arising from the continuing use of the existing buildings which have been occupied for over 50 years without incident when they are converted to restaurant use.

3. SUMMARY AND OUTCOME

It is the conclusion of this CMRA that the proposed development at the site is not impacted by surface ground stability issues arising from underground seam mine working. Therefore, no further mitigation neither drilling, special foundation design nor grouting is required in this respect.

On the other hand, mine shaft 533 impacts ground stability in the proposed children's 'Playground' and the adjacent outdoor 'Seating Area'.

While according to the Coal Authority mine shaft ground instability is an infrequent occurrence and low/very risk it is our opinion mitigation is required with regard to safeguarding the 'Playground' and the adjacent Seating Area' from mine shaft hazard posed by shaft 533 located within the property. In this respect (subject to approval of the CA) it is our opinion that preferably both facilities should be relocated outside the departure zones and ZOIs of 533 and shaft 527 as well.

However, given the possible site constraints the 'Seating Area' may perhaps (subject to CA approval) be in the departure zone of shaft 533, providing it is safeguarded with anchored geo-grid or alternatively it may be moved wholly outside it into the outer ZOI of 533.

Because the Playground is likely to be more controversial, in our opinion, it may need to be moved wholly outside the departure zone of 533 and located in its outer ZOI and similarly protected with an anchored geo-grid covering.

In our opinion, NO MITIGATION is required nor is practical with respect to the existing carpark area or in respect of the minor alterations to the existing site buildings and their conversion to a restaurant/bar and the proximity of both carpark and restaurant to shaft 533.

The proposed second seating area to the rear of the restaurant is not impacted from mine shaft proximity hazard.

While additional drilling investigation at the site with the purpose of locating drift/bedrock depth would be welcomed, particularly if it reduced the ZOI of both shafts it is not essential as it will not change the departure zones of the mine shafts, which in our opinion is most important in the assessment of the ground stability risk posed by mine shaft proximity hazard.

4. MITIGATION STRATEGY PROPOSED AND CONCLUSION

Mitigation required to the outside Seating & adjacent Playground areas as set out in Section 3 of this report - requiring the possible relocation within the site of the front 'Seating Area' and the 'Playground' and the safeguarding of these areas if relocated within the areas of mine shaft ZOI identified in this report with anchored geo-grid net.

No mitigation is required with regard to the proposed slightly re-modelled existing car parking area or the minor conversion of the existing social club buildings to restaurant.

In conclusion we see no reason why Planning Permission should not be granted with respect to coal mining legacy issues and the recommendations/works made in this CMRA are carried out at a later date before construction commences.

Appendices:

- A. CA Consultants Coal Mining Report issued 20 September 2021 ref. 51002675512001.
- B. Site Images.
- C. Site location and proposed development plan.
- D. Extracts of BGS Geology Map, Sheet 121 - Wrexham at 1:50000 scale.
- E. BGS Borehole Log.
- F. Mine Entry ZOI.

APPENDIX A
COAL AUTHORITY REPORT



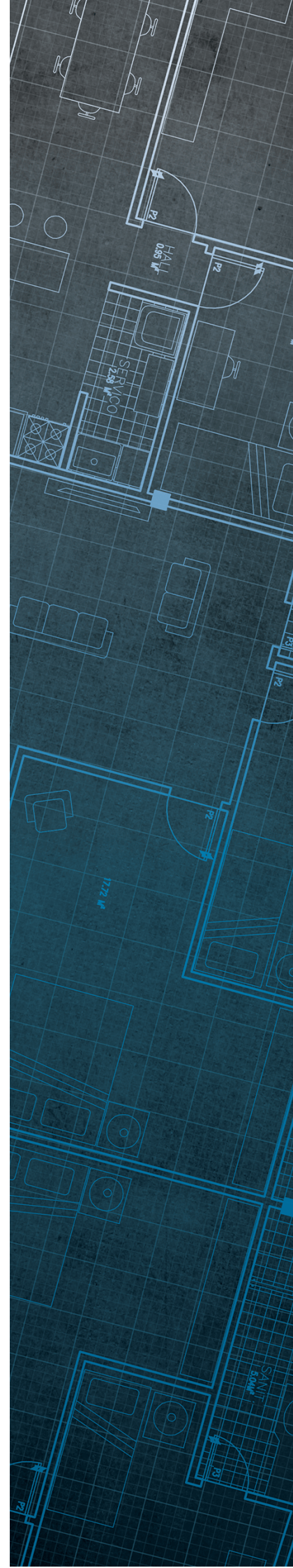
The Coal
Authority

Consultants Coal Mining Report

Acrefair Sports And Social Club
Limited
Sports And Social Club
Bethania Road
Acrefair
Wrexham
LL14 3TR

Date of enquiry:	20 September 2021
Date enquiry received:	20 September 2021
Issue date:	20 September 2021

Our reference:	51002675512001
Your reference:	G21375



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GEOINVESTIGATE

Enquiry address

Acrefair Sports And Social Club Limited
Sports And Social Club
Bethania Road
Acrefair
Wrexham
LL14 3TR

How to contact us

0345 762 6848 (UK)
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200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

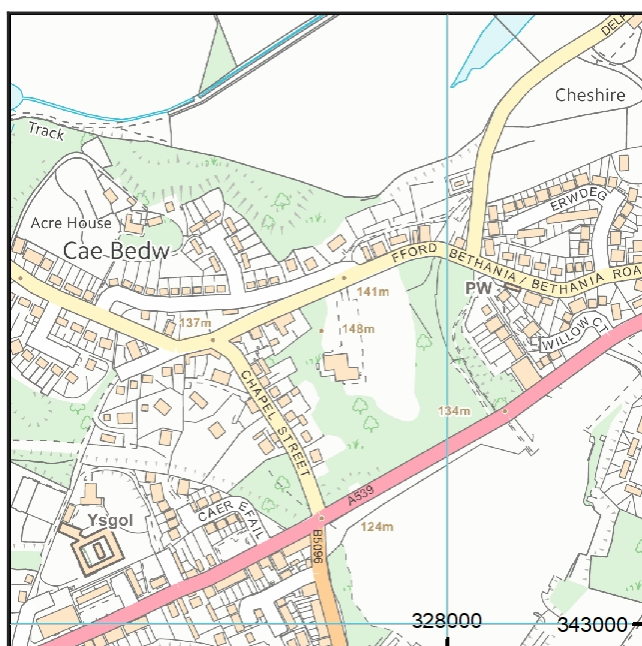
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Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
ACREFAIR/RUABON	FIRECAMP	Coal	A0PD	43	Beneath Property	8.1	South-East	200	1880
ACREFAIR/RUABON	FIRECAMP	Coal	A0PE	48	Beneath Property	8.1	South-East	200	1880
unnamed	STONE	Coal	38VI	51	West	8.1	South-East	60	1912
unnamed	STONE	Coal	38VM	53	North	8.1	South-East	60	1912
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	382N	65	South-West	9.0	East	110	1862
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	7H2M	68	South-West	9.0	East	110	1862
unnamed	WALL AND BENCH	Coal	380O	87	North	7.0	South-East	110	1868

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	327343-114	327828 343406		Coal	
Shaft	327343-115	327878 343396		Coal	
Shaft	327343-116	327890 343438		Coal	
Shaft	327343-197	327763 343326		Coal	
Shaft	327343-198	327787 343281		Coal	
Shaft	327343-199	327951 343297		Coal	
Shaft	327343-200	327864 343177		Coal	
Shaft	327343-300	327806 343392		Coal	
Shaft	327343-360	327958 343444		Coal	
Shaft	327343-383	327833 343221		Coal	
Shaft	327343-385	327907 343184		Coal	
Shaft	327343-386	327890 343162	Exposed by Wrexham R.D.C when building public W.C's in October 1971. The excavation revealed a depression filled with rubbish but no sign of shaft lining. The area was immediately fenced off but we have no record of any subsequent treatment.	Coal	
Shaft	327343-403	327813 343204		Coal	
Shaft	327343-526	327944 343371		Coal	
Shaft	327343-527	327866 343328		Coal	
Shaft	327343-532	327909 343224		Coal	
Shaft	327343-533	327881 343297		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

2334	5916	14884
NW1411	NW1503	16713
17956	0	NW1423

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

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.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

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

Withdrawal of support notices

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.

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.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

345 762 6848 (UK)
44 (0)1623 637 000 (International)
www.groundstability.com

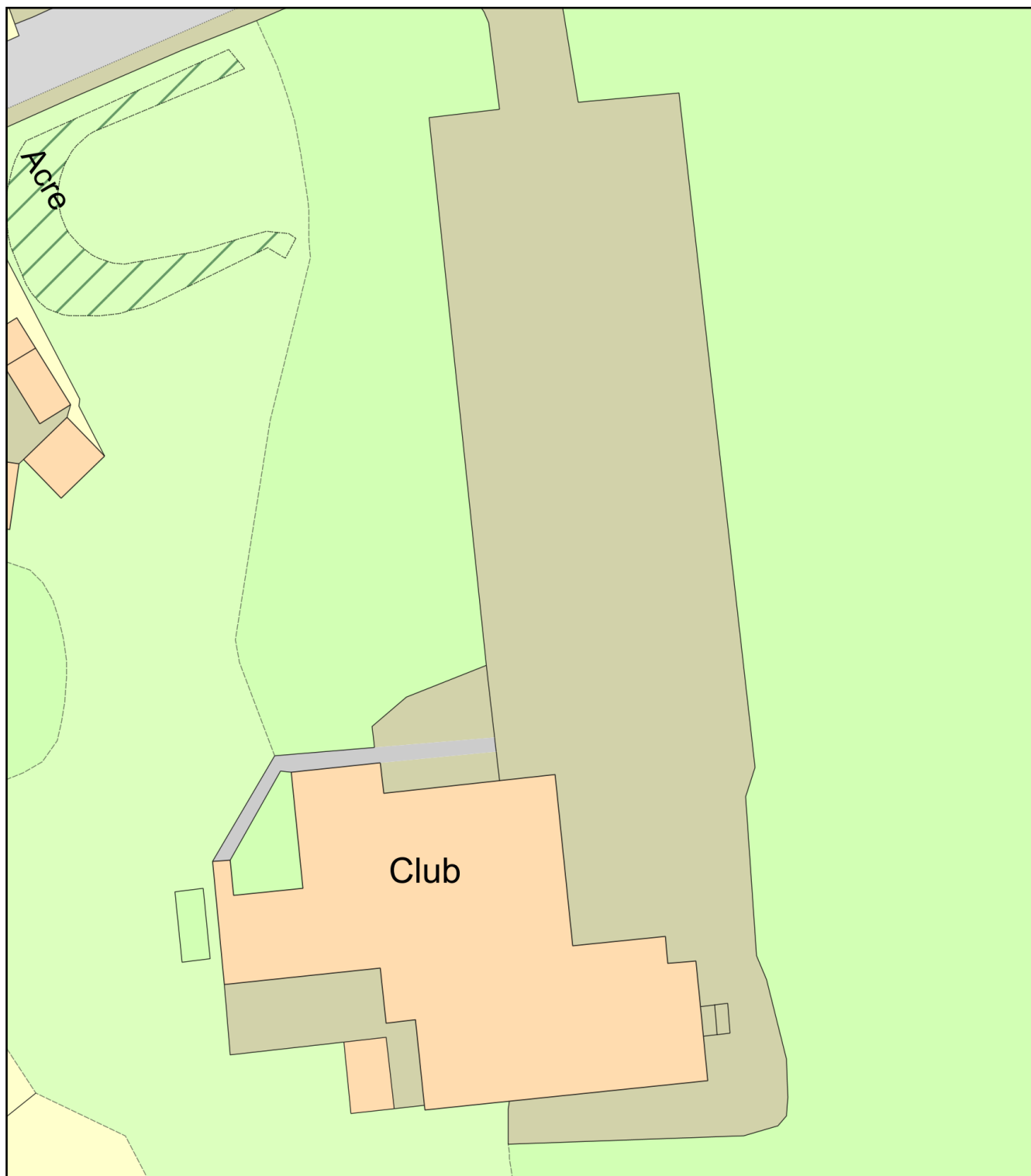
APPENDIX B SITE IMAGES

APPROXIMATE SITE LOCATION



APPENDIX C
SITE LOCATION AND PROPOSED DEVELOPMENT PLAN

Acrefair Sports and Social Club



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Metres

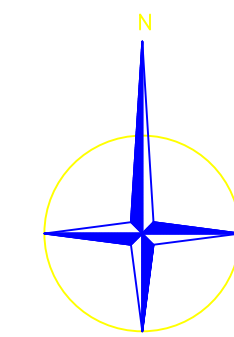
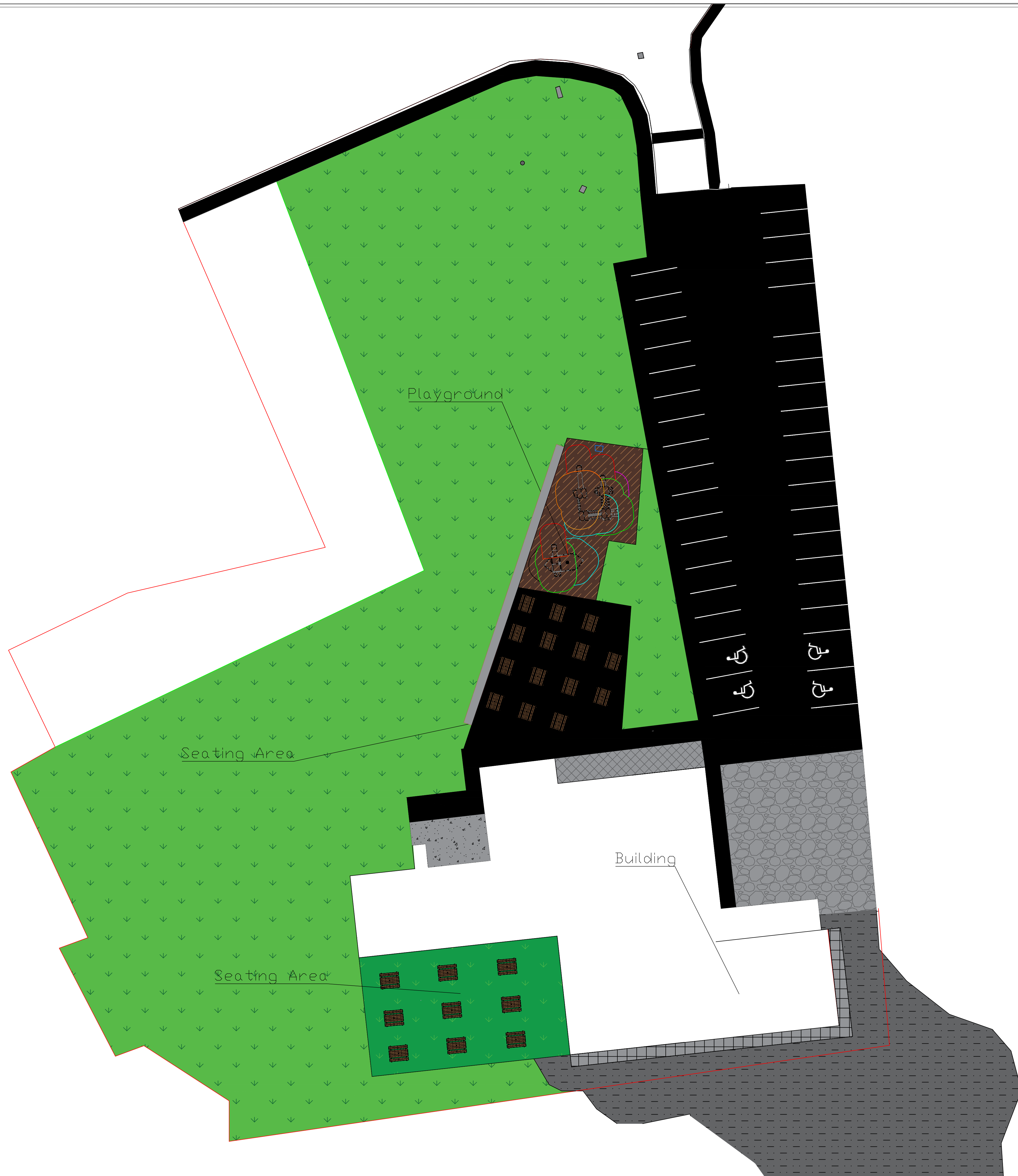


Plan Produced for: N R J Venues Ltd

Date Produced: 03 Jun 2021

Plan Reference Number: TQRQM21154123521004

Scale: 1:500 @ A4



PLAN GRID NORTH

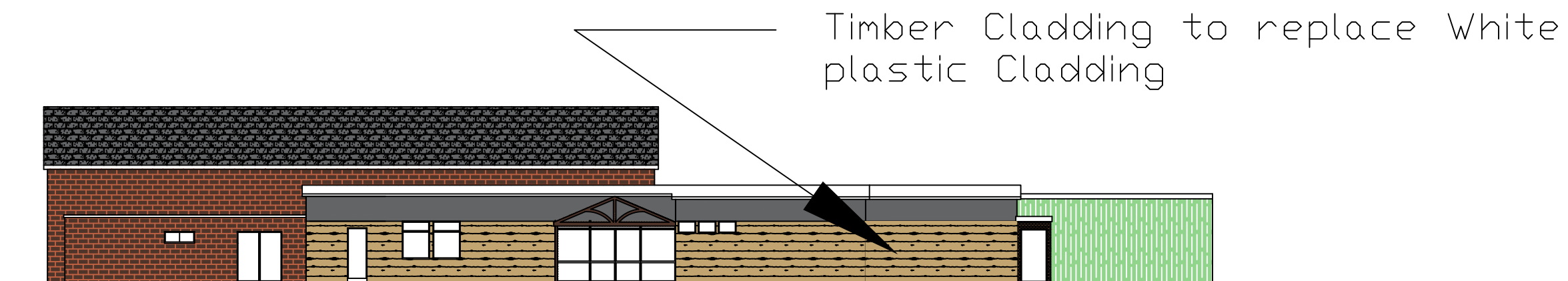
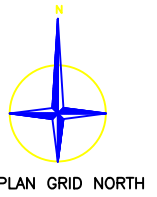


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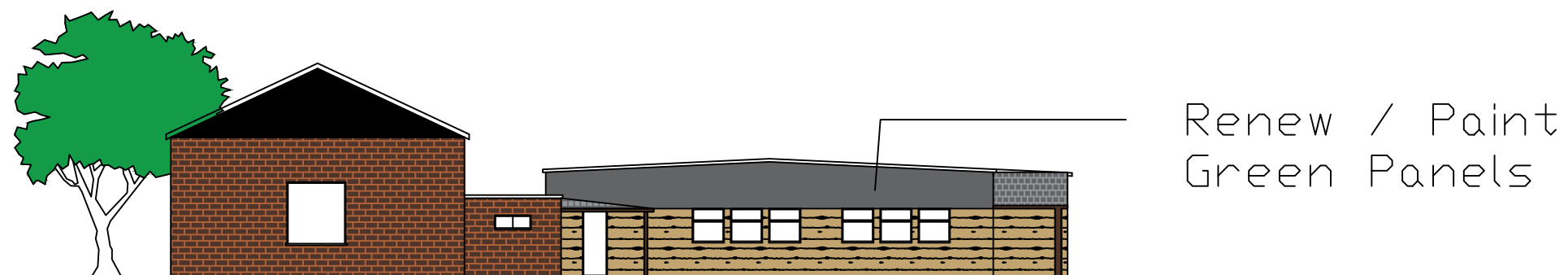
Client

Project Title
Acrefair Sports and Social Club

Scale 1:100 - A1	Date 11-05-2021	Job No 001
Surveyed	Drawn J.M	Checked J.M



Front Elevation



Side Elevation

REV	REV NOTES	DATE

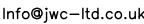
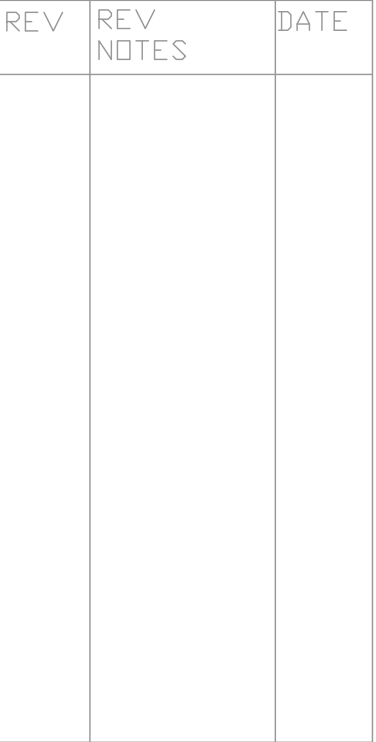


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Client

Project Title
Acrefair Sports and Social Club

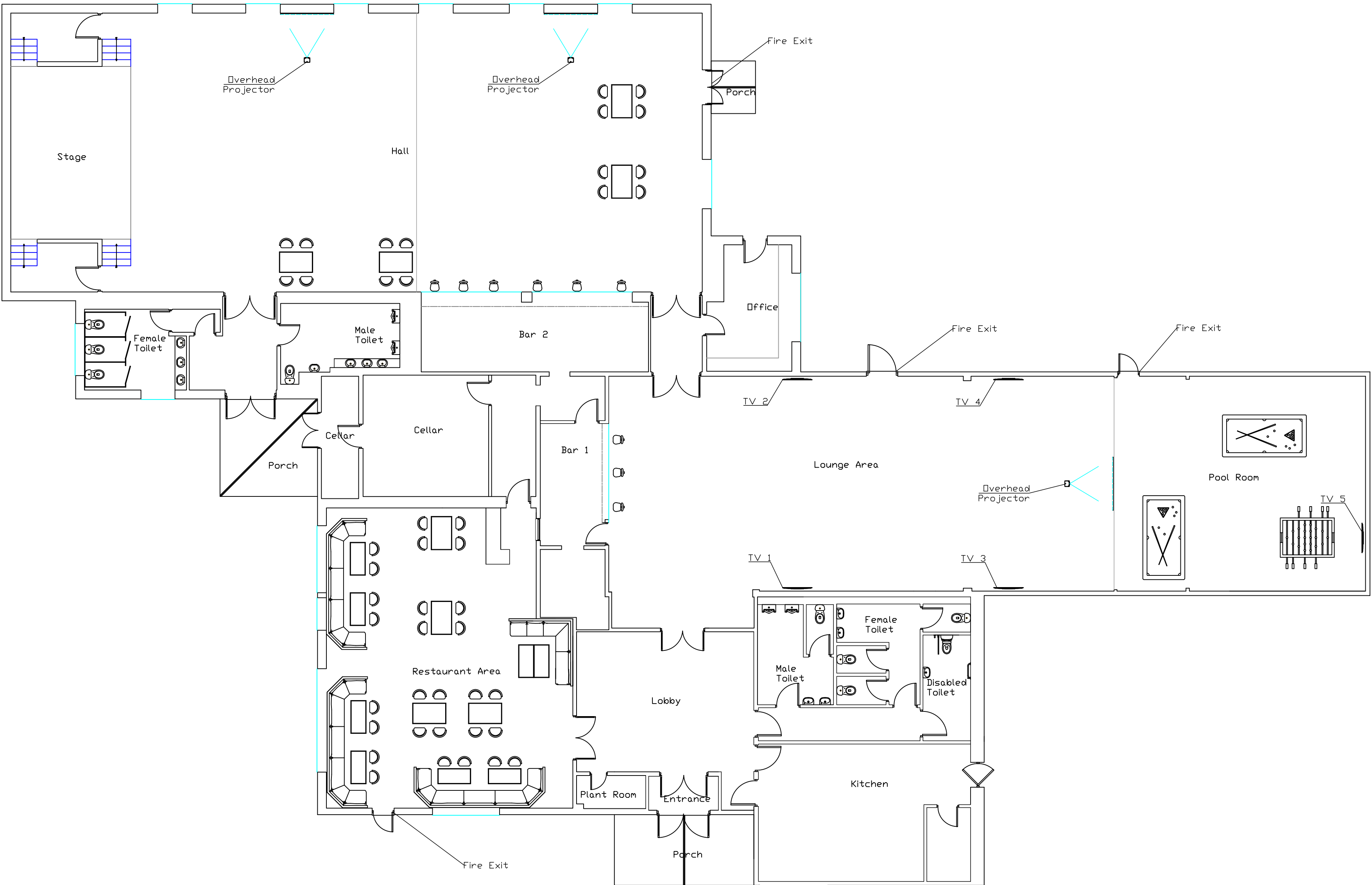
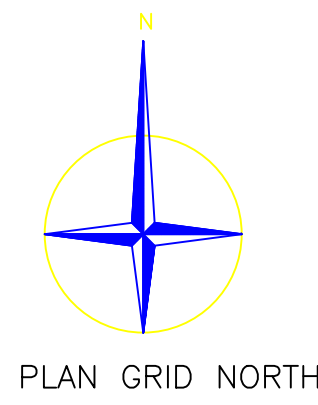
Scale 1:200 - A3	Date 11-05-2021	Job No 001
Surveyed	Drawn J.M	Checked J.M



Client

Project Title
Acrefair Sports and Social Club

Scale 1:150 - A3	Date 11-05-2021	Job No 001
Surveyed	Drawn J.M	Checked J.M



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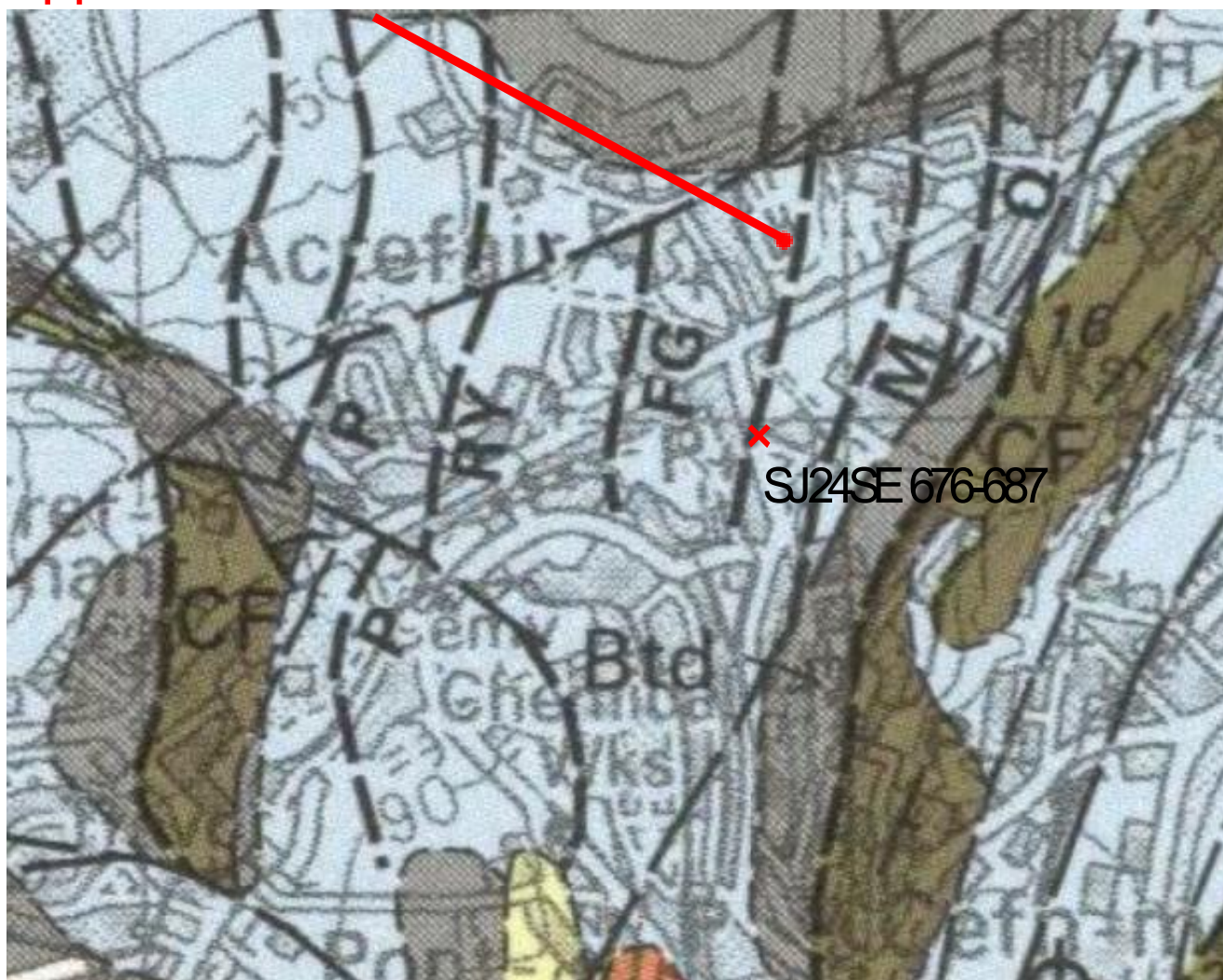
Project Title
Acrefair Sports and Social Club

Scale 1:100 – A1	Date 11-05-2021	Job No 001
Surveyed J.M	Drawn J.M	Checked J.M

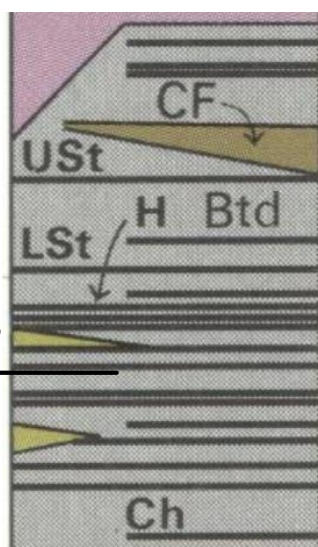
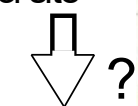
APPENDIX D

EXTRACTS OF BGS GEOLOGY MAP

Approximate Site Location



Tentative elevation of site
relative to vertical
geology section



BY
Cefn Rock

M
FG
RY
LLy

BETTISFIELD Fm
(400-520)
(Productive Coal
Measures)

S = sandstone

APPENDIX E

BGS BOREHOLE LOG

CLIENT: Blue Space Homes Ltd						ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH1			
SITE NAME: King Street			SITE LOCATION: Cefn Mawr, Wrexham								
METHOD OF DRILLING: Rotary Openhole			DIAMETER OF DRILL:			NATIONAL GRID REFERENCE: E 327881 N 342949 676		SHEET NO. 1 of 4			
DRILLING COMPANY: Van Elle			DATE: 25th September 2007					OD LEVEL:			
PROGRESS	CASING	DRILL RUN					STRATA		DESCRIPTION OF STRATA		
Date/Water	Depth/Date	Colour of Fluid Return	Return %	Flush Medium	Type	Size (mm)	Depth (m)	Legend	Description of Strata	Level	
25.09.07		brown/ black		Air					MADE GROUND - Loose backfill of reworked clay, mine waste and coal fragments and some brick.		
							1				1.20
		brown									
							2				
							3				
							4				
							5				5.00
		grey	100						Weak grey MUDSTONE.		
							6				
							7				
							8				
							9				
							10				
								Continued on sheet 2 in same stratum.			
Ashton Bennett Consultancy Clonlea House, Field End Lane, Holmbridge, West Yorks HD9 2NH Tel: 01484 689531 Fax: 01484 689932								DRILLING NOTES: Standpipe installed at 18m bgl.			

CLIENT: Blue Space Homes Ltd							ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME: King Street				SITE LOCATION: Cefn Mawr, Wrexham			BOREHOLE LOG		BH1	
METHOD OF DRILLING: Rotary Openhole				DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.	
DRILLING COMPANY: Van Elle				DATE: 25th September 2007			REFERENCE: E 327881 N 342949		2 of 4	
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Date/Water	Depth/Date	Colour of Fluid Return	Return %	Flush Medium	Type	Size (mm)	Depth (m)	Legend	Description of Strata	Level
				Air					Continued from sheet 1 in same stratum.	
							11			
							12			
							13			
							14			
							15			
							16			
		grey					16.50			
		black	100				16.65		Weak black COAL.	
		grey	100						MUDSTONE	
							17			
							18			
							19			
							20		Continued on sheet 3 in same stratum.	
Ashton Bennett Consultancy Clonlea House, Field End Lane, Holmbridge, West Yorks HD9 2NH Tel: 01484 689531 Fax: 01484 689932								DRILLING NOTES:		

CLIENT:		Blue Space Homes Ltd						ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME:		King Street		SITE LOCATION:				BOREHOLE		BH1	
				Cefn Mawr, Wrexham				LOG			
METHOD OF DRILLING:		British Geological Survey Rotary Openhole		DIAMETER OF DRILL:				British Geological Survey		NATIONAL GRID	
										SHEET NO.	
DRILLING COMPANY:		Van Elle		DATE:				25th September 2007		REFERENCE:	
										3 of 4	
								E 327881 N 342949		OD LEVEL:	
PROGRESS	CASING	DRILL RUN					STRATA		DESCRIPTION OF STRATA		
Date/Water	Depth/Date	Colour of Fluid Return	Return %	Flush Medium	Type	Size (mm)	Depth (m)	Legend	Description of Strata		Level
			100	Air					Continued from sheet 2 in same stratum.		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30		Continued on sheet 4 in same stratum.		
Ashton Bennett Consultancy Clonlea House, Field End Lane, Holmbridge, West Yorks HD9 2NH Tel: 01484 689531 Fax: 01484 689932								DRILLING NOTES:			

CLIENT:		Blue Space Homes Ltd						ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH1	
SITE NAME:		King Street		SITE LOCATION:		Cefn Mawr, Wrexham		NATIONAL GRID		SHEET NO.	
METHOD OF DRILLING:		Rotary Openhole		DIAMETER OF DRILL:				REFERENCE:		4 of 4	
DRILLING COMPANY:		Van Elle		DATE:		25th September 2007		E 327881 N 342949		OD LEVEL:	
PROGRESS	CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA			
Date/Water	Depth/Date	Colour of Fluid Return	Return %	Flush Medium	Type	Size (mm)	Depth (m)	Legend	Description of Strata		Level
			100	Air					Continued from sheet 3 in same stratum.		
							31				
		black	100				31.50				
		grey	100				31.75		Weak black COAL.		
		yellow	100						Weak grey MUDSTONE		
		brown					32 32.00				
									Strong yellow SANDSTONE		
							33				
25.09.07							34 34.00				
									BOREHOLE COMPLETED AT 34.00m bgl.		
							35				
							36				
							37				
							38				
							39				
							40				
Ashton Bennett Consultancy								DRILLING NOTES:			
Clonlea House, Field End Lane, Holmbridge, West Yorks HD9 2NH Tel: 01484 689531 Fax: 01484 689932											

APPENDIX F
MINE ENTRY ZOI

