

CCG-C-21-12517

**COAL MINE RISK ASSESSMENT
FOR LAND AT THE FORMER
PRESCOT POLICE STATION
DERBY STREET
PRESCOT
MERSEYSIDE
L34**

SEPTEMBER 2021

Prepared for:

PRIMA GROUP

Telephone: 07921 814 416

By:

CC GEOTECHNICAL LIMITED

Unit 1

Deltic Way

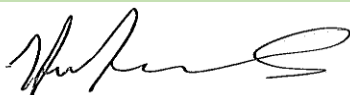
Knowsley Industrial Estate

L33 7BA

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DOCUMENT CONTROL FORM

Client:	Prima group
Project Title:	Coal Mine Risk Assessment for land at the former Prescott Police Station, Derby Street, Prescott, Merseyside, L34
Reference Number:	CCG-C-21-12517
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For and behalf of CC GEOTECHNICAL LTD	
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1.0 INTRODUCTION

CC GEOTECHNICAL LIMITED (CCG) was commissioned by **PRIMA GROUP** to prepare a Coal Mining Risk Assessment, in connection with the proposed partial redevelopment of land located to the north of Derby Street, Prescott, L34 3LG.

It is understood that an existing Police Station is to be retained and modified / converted for residential use.

It is understood that an existing Police Station fronting on to Derby Street is to be retained and modified / converted for residential land use.

It is further proposed that the land to the rear of the Police Station is to be developed by the construction of 6nr 2.5-storey town houses constructed of traditional brick elevations under pitched roofing materials together with associated newly created hard paved access / egress roadway, off-road car parking facilities and front and rear private gardens.

The existing and proposed layouts are as annotated on **PRIMA GROUP** architectural drawings contained herein.

The development lies within the jurisdiction of **KNOWSLEY METROPOLITAN BOROUGH COUNCIL**

As the site is located in an area underlain by productive coal measures, a Coal Mining Risk Assessment (CMRA) was required to assess if the site is at risk of surface instability or other risk factors resulting from historical coal mining activities.

The CMRA was required to demonstrate to **KNOWSLEY METROPOLITAN BOROUGH COUNCIL** that coal mining information has been considered by the applicant, and that any issues of potential surface instability have been identified and, if warranted by the assessment, will be considered in the scope of any resulting intrusive site investigation, if required.

It must be borne in mind that the data and opinions contained in this report should be read in conjunction with the **CCG** Notes on Limitations contained herein.

2.0 SITE LOCATION

The site is located immediately to the north of Derby Street, Prescott, L34 3LG as shown on **CCG** Drawing No. CCG-C-21-12517-1 contained herein. The **ORDNANCE SURVEY** coordinates for the approximate site centre are 346312 392867. It stands at an approximate elevation of c.72ma Ordnance Datum.

3.0 COAL MINING RISK ASSESSMENT

Coal mining may present hazards to proposed development in a number of ways. Such hazards may currently exist or may be caused as a result of the construction of the proposed development, or could occur at some time in the future, and may include:

- Collapse of shallow historical coal workings
- Collapse of or risk of entry into historical shafts or adits
- Gas emissions from historical coal mines including methane and/or carbon dioxide
- Spontaneous combustion or ignition of coal which may lead to underground heating and production of CO₂
- Transmission of gases to adjacent properties
- Coal mining subsidence
- Water emissions from historical coal mine workings

In assessing mining related risks at this site, the following sources of information were consulted:

- BGS Geology Sheet 097 Runcorn (1980), 1:50 000 and 1:10 000 Scale Solid and Drift Editions
- Solid geology extract showing positions of coal outcrops/inferred sub-crops and recorded mine entries in relation to development site (presented in Appendix A)
- Knowsley District Coal Mining Development Referral Area 1:50000@A1 (presented in B)
- Knowsley District Specific Surface Coal Resources Plan 1:50000@A1 (presented in Appendix B)
- Knowsley District Surface Coal Mining Risk Plan 1:50000@A1 (presented in Appendix B)
- **COAL AUTHORITY** CON29M Residential Mining Report (Reference No. 51002654128001, dated September 2021), Presented in Appendix B)
- **COAL AUTHORITY** Interactive Mine Entry Viewer (<http://coal.decc.gov.uk/en/coal/cms/publications/data/map/map.aspx>) (Accessed: September 2021)

4.0 SUMMARY OF THE DOCUMENTED GEOLOGY & HISTORICAL MINING

4.1 Solid & Drift Geology

The geology of the site is summarised on **BRITISH GEOLOGICAL SURVEY (BGS)** Sheet No.097 Runcorn (2007): 1:50000 Scale: Solid and Drift Editions. These indicate the site is devoid of natural drift cover. However, given the presence of natural drift deposits comprising impermeable diamicton (boulder clay) of glacial origin (*Late-Quaternary Epoch - Devensian Age*), there is a potential for the presence of unrecorded drift deposits to be present.

The documented solid geology comprises the Pennine Lower Coal Measures Formation (*formerly the Lower Coal Measures*) of the Pennine Coal Measures Group comprising interbedded argillaceous mudstone, siltstones, fluvial sandstones and productive coal measure, of the Upper Carboniferous Period (*Silesian: Westphalian A: Langsettian Age*).

The study site is located within an area where ancient earth movements have caused significant displacements and miss-alignments of the underlying country rock and nearby associated coal seams. Hence the general dip of the solid geology within the surrounding area is seen on the **BGS** mapping data is seen to vary between 8°-30° in a south / south-westerly direction.

4.2 Geological Lines of Weakness – Faults, Marine Bands, Coal Seams

As illustrated on the appended **BGS** solid geology extract, there are numerous geological lines of weakness (*i.e. faults, coal seams, etc.*) within the surrounding area, the nearest being geological fault which extends on a north – south alignment immediately to the east of the study site.

As illustrated on the **BGS** solid geology mapping information, 2nr seams of coal sub-crop within close proximity to the sites northern and southern boundaries.

Coal seams sub cropping on and within 500m of the study site comprise the following:

1. Un-named coal seam sub cropping c.65m north of the study site
2. Un-named coal seam sub cropping c.40m south of the study site
3. Un-named coal seam sub cropping c.111m south of the study site
4. Rushy Park Coal sub cropping c.164m north of the study site
5. Arley Coal sub cropping c.381m north of the study site
6. Un-named coal seam sub cropping c.238m south of the study site
7. Un-named coal seam sub cropping c.286m south of the study site
8. Un named coal seam sub cropping c.366m southwest of the study site
9. Sir John Coal sub cropping c.420m southwest of the study site

Given the general dip of the underlying solid geology, it is assumed that both the Rushy Park and Arley Coal seams will extend beneath the study site

Furthermore, given that the coal seams within the surrounding area are identifiable by name, there is a potential that these may have been worked in the past.

4.2 Radon Data

The '*Indicative Atlas of Radon in England and Wales*' (Miles. J.C.H *et.al*, 2007) Map 13 '*Northern Welsh Marches and Liverpool*, shows the site to be situated within an area where it is believed that less than 1% of the properties within the area are affected by Radon and therefore no Radon Protection Measures will be required for new structures in contact with the ground.

5.0 HISTORICAL COAL MINING ACTIVITIES

5.1 Historical Coal Mining/Mine Entries

The **COAL AUTHORITY** Mine Inventory Viewer confirm the presence of numerous mine entries within the surrounding area, with the nearest documented mine entry (shaft) being located c.15m east of the site (CA Reference No. 346392-008, OS coordinates: 346350 392892).

5.2 Coal Authority Report Summary

Geological mapping, the **COAL AUTHORITY** Gazetteer and the **COAL AUTHORITY** Coal Mine Inventory Viewer confirm the site lies within the Knowsley District Development Referral Area, and therefore located within an area which may be affected at the surface by historical coal mining activity. Based on this assessment, a **COAL AUTHORITY** Coal Mining Report was procured (Report Reference No. 51002654128001, dated September 2021), presented in Appendix B, and summarised hereunder:

5.2.1 Historical Underground Coal Mining Activities & Assessment of Risk

- The site is in the likely zone of influence from workings in 1nr coal seam (Arley Coal) standing at c.66m below the site, land worked 1850. Any movements associated with these workings should have ceased by now.
- The site is located within an area where there is a potential for shallow coal (<30m) to have been worked using underground mining methods
- There are no records pertaining to the presence of spine roadways being present at shallow depth

5.2.2 Abandoned Mine Catalogue Numbers

The following Abandoned Mine Plan Catalogue numbers intersect with some, or all, of the enquiry boundary:

Table 1: Abandoned Mine Plan Catalogue

NW831	NW853	NW821
16820		

5.2.3 Outcrops

The following out crops within the surrounding area include:

Table 2: Outcrops

Seam Name	Mineral	Seam Workable	Distance to Outcrop (m)	Direction to Outcrop	Bearing of Outcrop
Plodder	Coal	Yes	33.3	NE	132

- The **COAL AUTHORITY** mining report states that there are no geological faults, fissures and/or break lines within the study site, the nearest geological fault, trending on a south - west alignment is positioned c.10m east of the eastern site boundary.
- The site is not in the likely zone of influence at the surface from any present underground coal mining
- The site is not in an area for which the **COAL AUTHORITY** is determining to grant a licence to remove coal using underground methods
- The site is not in an area that is likely to be affected at the surface from any planned future workings. However, reserves of coal do exist in the local area which may be worked at some point in the future
- No notice of the risk of the land being affected by subsidence has been given under Section 46 of the Coal Mining Subsidence Act 1991

5.2.4 Historical Mine Entries

- The **COAL AUTHORITY** Mining Report states that there is 1nr mine entry within 50m of the study site. This being positioned c.15m east of the site (CA Reference No. 346392-008, OS coordinates: 346350 392892)
- Notwithstanding the above, the **COAL AUTHORITY** records may be incomplete, and consequently, there may exist in the local area mine entries of which the **COAL AUTHORITY** has no knowledge.

5.2.5 Geological Lines of Weakness

- There are no geological faults, fissures and/or break lines within the site boundary

5.2.6 Coal Mining Geology

- The **COAL AUTHORITY** is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining

5.2.7 Open Cast Mining

- The site is not within the boundary of an opencast site from which coal has been extracted using opencast methods
- The site is not within 200m of the boundary from which coal is being extracted by opencast methods
- The site is not in an area for which the **COAL AUTHORITY** is determining to grant a licence to extract coal using opencast methods

5.2.8 Coal Mining Subsidence

- The **COAL AUTHORITY** has not received a damage notice or claim for the subject site, or any property within 50m of the site boundary since October 1994

5.2.9 Mine Gas Emissions

- There are no records pertaining to mine gas emissions which required remedial actions by the **COAL AUTHORITY**, under its Emergency Call Out Procedures

5.2.10 Hazards Related to Coal Mining

- The site has not been subject to remedial works, by or on behalf of the **COAL AUTHORITY**, under its Emergency Surface Hazard Call Out Procedures

The **COAL AUTHORITY** Report concludes by stating that a prudent developer would seek appropriate technical advice regarding underlying ground conditions prior to the commencement of any development.

6.0 SUMMARY RISK

By reference to the information sources listed above a risk assessment was constructed as tabulated in Table 1 hereunder:

Table 3: Summary of Coal Mining Information

Potential Hazards	Source	Comments
Is the site within a Coal Mining Referral Area?	Knowsley Coal Mining Development Referral Area 1:50000@A1 Knowsley Specific Coal Mining Risk Plan 1:50000@A1	Mapping indicates a strong probability that the site lies over an area of coal mining as defined on the Knowsley District Plan of Coal Mining Development Referral Area, & Knowsley District Specific Coal Mining Risk Plan
Is the site within a Surface Mining Resource Area?	Knowsley Surface Coal Resources Plan 1:50000@A1	Mapping indicates that the site is not within an area of surface mining resources as defined on the Knowsley District Surface Mining Coal Resource Area
Is the site within the likely zone of influence of present underground coal mining?	Coal Authority Consultants Coal Mining Report (Reference No. 51002654128001	Report indicates that the property is not within the likely zone of influence of any present underground coal workings
Is the site within the likely zone of influence of past underground coal mining?	Coal Authority Non-Residential Coal & Brine Report (Reference No. 51002654128001	Report indicates that the property is in the likely zone of influence at the surface from historical underground workings
Is there a possibility of unrecorded shallow mine workings and/or mine entries?	Coal Authority Consultants Coal Mining Report (Reference No. 51002654128001 BGS mapping Sheet 097: Runcorn (1980)	The property is in an area where the Coal Authority believes there is coal at, or close to, the surface which may have been worked in the past. Where shallow seams (<30mbgl) are present then a presumption of a risk of unrecorded workings should be made BGS Solid & Drift mapping data shows numerous named seams of coal within close proximity, with the nearest named coal seam being the Rushy Park Coal which sub crops c.164m north of the study site Other coal seams within 500m of the study site comprise: • Un-named coal seam sub cropping c.65m north of the study site • Un-named coal seam sub cropping c.40m south of the study site • Un-named coal seam sub cropping c.111m south of the study site • Rushy Park Coal sub cropping c.164m north of the study site • Arley Coal sub cropping c.381m north of the study site • Un-named coal seam sub cropping c.238m south of the study site • Un-named coal seam sub cropping c.286m south of the study site • Un named coal seam sub cropping c.366m southwest of the study site • Sir John Coal sub cropping c.420m southwest of the study site The general dip of the solid geology is documented vary between 8° -30° in a south / south-westerly direction. Give the presence of named coal seams sub-cropping within close proximity of the study site, it has to be assumed that the site is underlain by coal seams which may have been worked in the past. Given the general dip of the underlying solid geology, it is assumed that both the Rushy Park and Arley Coal seams will extend beneath the study site The Coal Authority Interactive Mine Entry Inventory Records indicates that there are numerous mine entries within 500m of the study site, the nearest being positioned c.15m east of the site (CA Ref' No. 346392-008, OS coordinates: 346350 392892)
Is there a record of mine gas emissions within the site boundary?	Coal Authority Consultants Coal Mining Report (Reference No. 51002654128001	Report indicates that there are no records of the property ever having been affected by mine gas emissions
Is the proposed development in an area for which the Coal Authority is determining or has granted a license to remove coal by underground methods?	Coal Authority Consultants Coal Mining Report Authority Consultants Coal Mining Report (Reference No. 51002654128001	Report indicates that the property is not in an area for which a licence has been granted to remove coal by underground methods
Are there any known faults or other lines of weakness due to coal mining at the site?	BGS mapping Sheet 097: Runcorn (1980)	There are records pertaining to a geological fault within the southern section of the site
Has the site been subject to any remedial works by or on behalf of the Coal Authority under its	Coal Authority Consultants Coal Mining Report (Reference No. 51002654128001	Report indicates that the site has not been subject to remedial works by or on behalf of the Authority under its Emergency Surface Hazard Call Out procedures

surface hazard call out procedures?		
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7.0 MINE RISK ASSESSMENT CONCLUSIONS & RECOMMENDATIONS

The conclusion of the foregoing assessment is that it is highly possible that the site is at risk of surface instability.

In the absence of any existing site investigation information pertaining directly to the site or its immediate surroundings, it could not be conclusively demonstrated that the site is not underlain by collapsible voids, and hence a ground investigation is recommended. Workings in the shallow seams, if present, are likely to be pillar and stall and/or longwall, and for confidence in the investigation findings, and given that coal sub-cropping occurs within the immediate area, given the size of the site, it is recommended that 4nr boreholes be sunk in the underlying bedrock strata to c.30mbgl by rotary open hole drilling methods using water flush in the bedrock (coal bearing) strata.

Written permission of the **COAL AUTHORITY** must be obtained before commencing any intrusive investigation.

The purpose of the boreholes is to determine the thickness and strength of the drift and bedrock strata at the 3nr locations – **BGS** mapping indicates the site is devoid of natural drift cover, however, there is a potential for the presence of un-recorded drift deposits to be present. If present, the thickness and properties of these deposits will be relevant to the overall assessment of risk of instability – and to probe in the solid strata for the presence of voided or weak zones associated with coal workings and the potential for void migration to the surface.

Boreholes should be intermittently monitored for ground gas composition as the drilling works are advanced.

Boreholes should be grouted to rockhead on completion using PFA/cement grout. Gas monitoring standpipes should be installed within the drift and should be monitored on at least 4nr occasions for gas composition and flow rate. The results should be assessed against the guidance contained in **CIRIA** Publication C665 'Assessing Risks Posed by Hazardous Ground Gases to Buildings'.

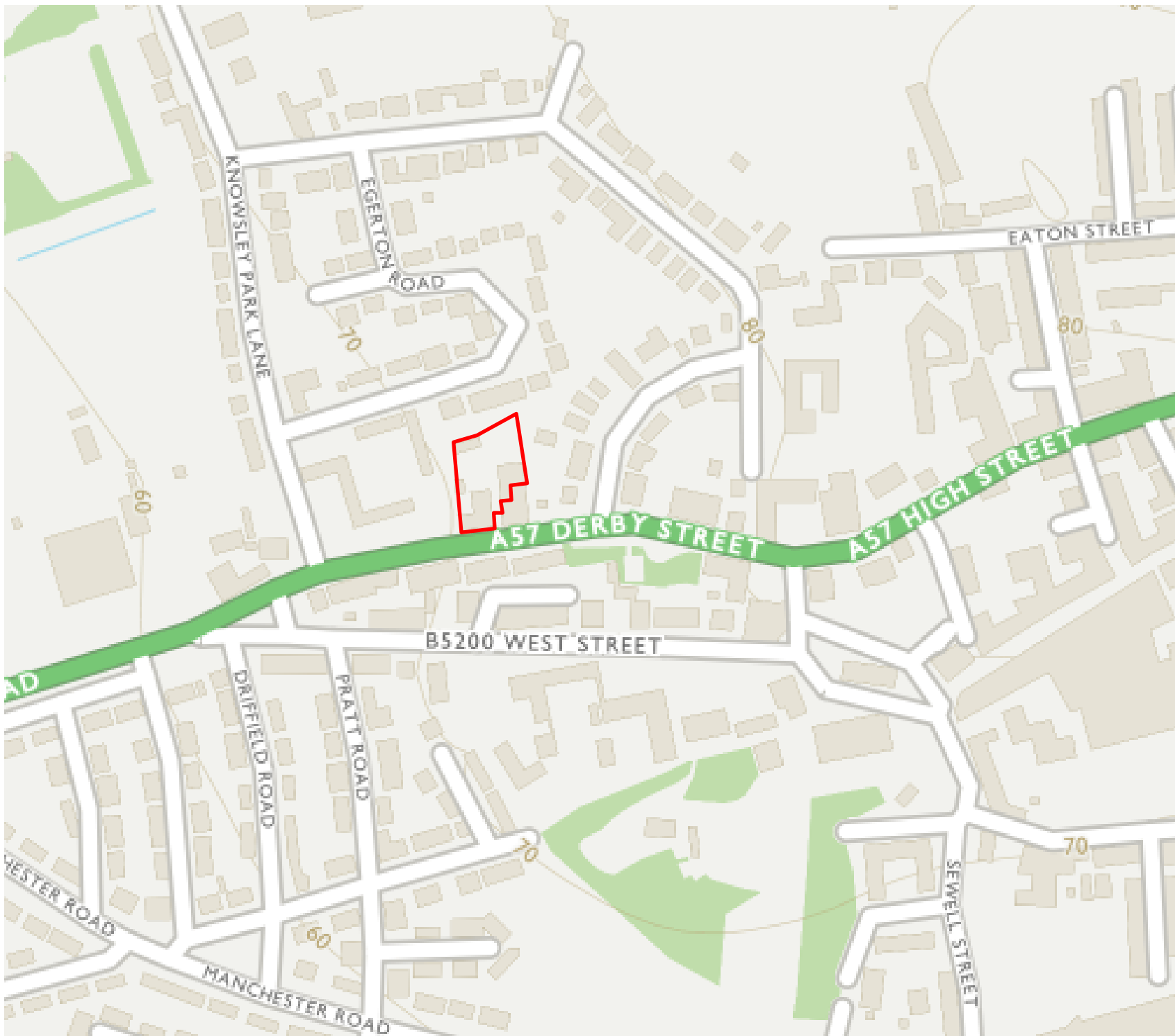
The information obtained from the site investigation will allow for assessment of the various options potentially applicable to the development, including *inter alia*:

- Proceed with the building as planned
- Adopt special foundation precautions – e.g. raft foundations incorporating stiffened edge beams
- Stabilise the ground by grouting of voided zones
- Relocate the building away from instability risk zone

8.0 COAL MINE RISK ASSESSMENT CONCLUSIONS

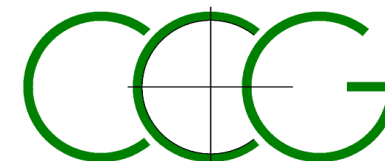
It is concluded that there is minimal evidence of a potential risk of surface instability at this site. The actual existence or absence of this risk can only be determined by intrusive ground investigation. It is therefore recommended that a further intrusive investigation be carried out as described in Section 7.0 above. The findings of the investigation should be used in the preparation of an interpretative report, further assessing the actual risks, and if appropriate, making recommendations for remedial works.

APPENDIX A: DRAWINGS



DO NOT SCALE

Notes: Study Site



CC GEOTECHNICAL LIMITED
UNIT 1 DELTIC WAY
KNOWSLEY INDUSTRIAL ESTATE
LIVERPOOL
L33 7BA
0151 545 2750

Client:
Prima Group

Project:
Coal Mine Risk Assessment for Land at Former
Prescot Police Station, Derby Road

Title:
Aerial Photograph

Scale:
NTS

Issue:
01

Drawn by:
DG

Date:
August 2021

Project No.
CCG-C-21-12517

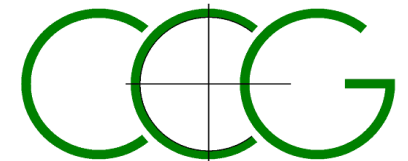
Drawing No.
01

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DO NOT SCALE

Notes: Study Site



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UNIT 1 DELTIC WAY
KNOWSLEY INDUSTRIAL ESTATE
LIVERPOOL
L33 7BA
0151 545 2750

Client:
Prima Group

Project:
Coal Mine Risk Assessment for Land at Former
Prescot Police Station, Derby Road

Title:
Aerial Photograph

Scale: NTS	Issue: 01
Drawn by: DG	Date: August 2021
Project No. CCG-C-21-12517	Drawing No. 02

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EGERTON ROAD

8 No FLAT CONVERSION

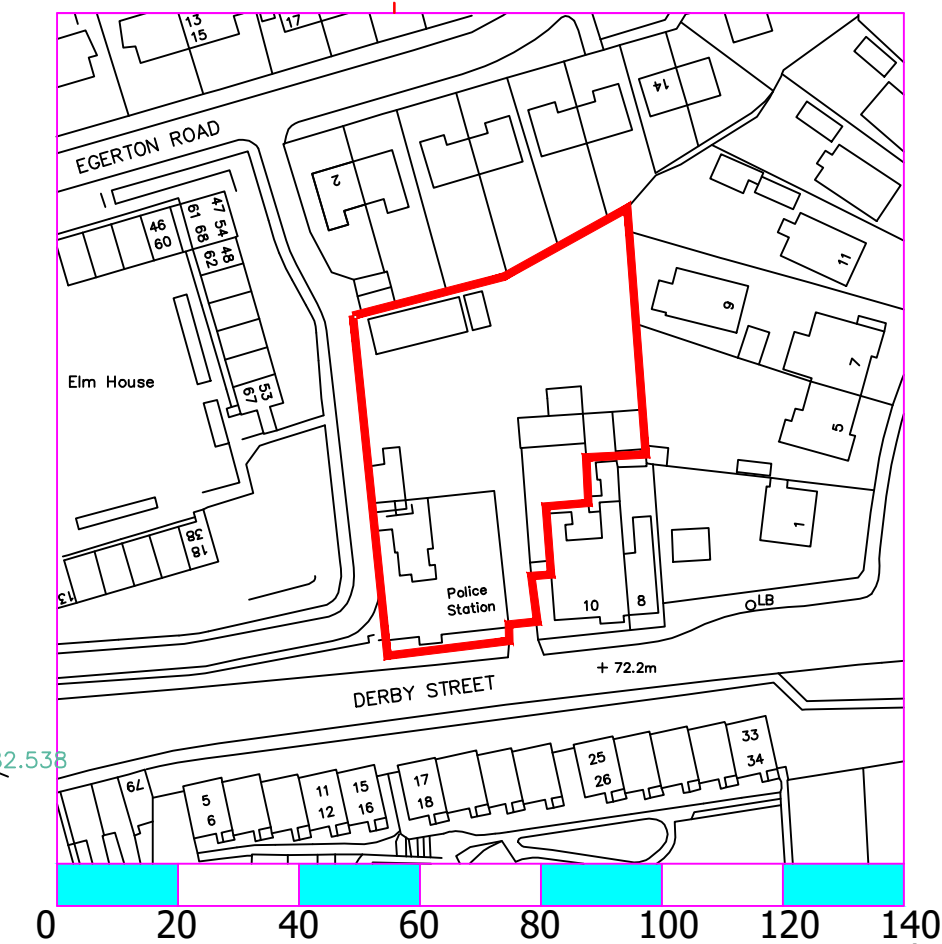
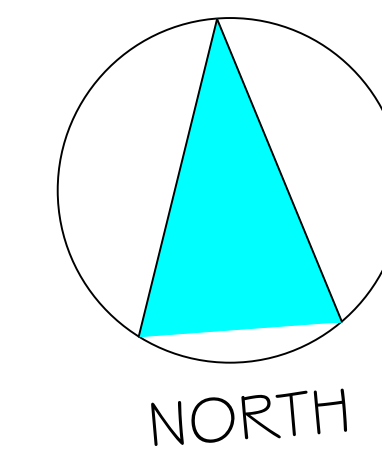
3B. TOWN HOUSES - 3 storey
100 SQM



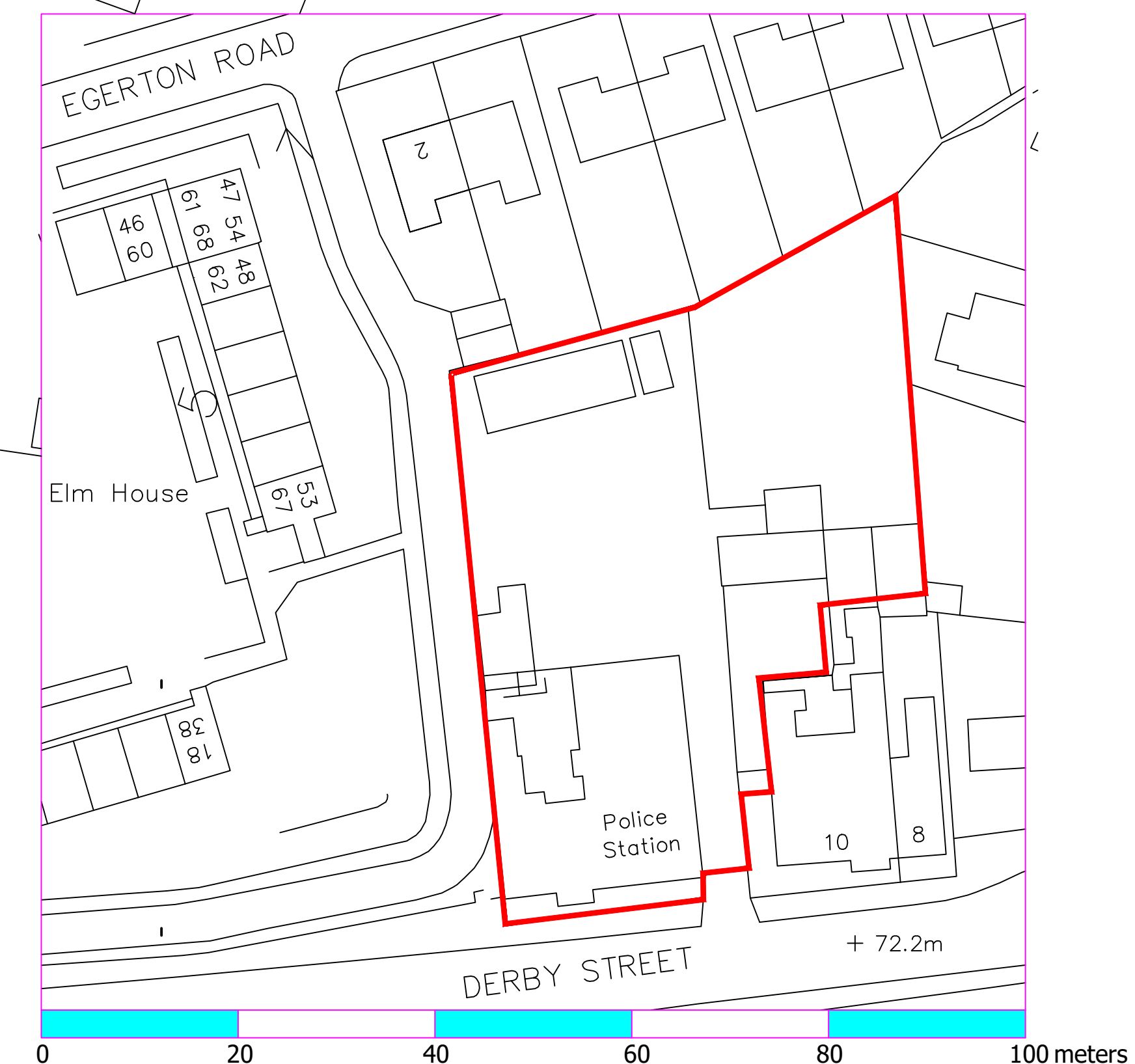
NOTE :
SITE PLAN TO BE READ IN-CONJUNCTION
WITH TOPOGRAPHICAL SURVEY AND CCG
REPORTS.

CCG TEST / TRAIL HOLE POSITIONS.

DERBY STREET

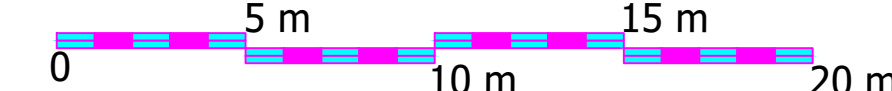


EXISTING SITE PLAN
SCALE 1:1250



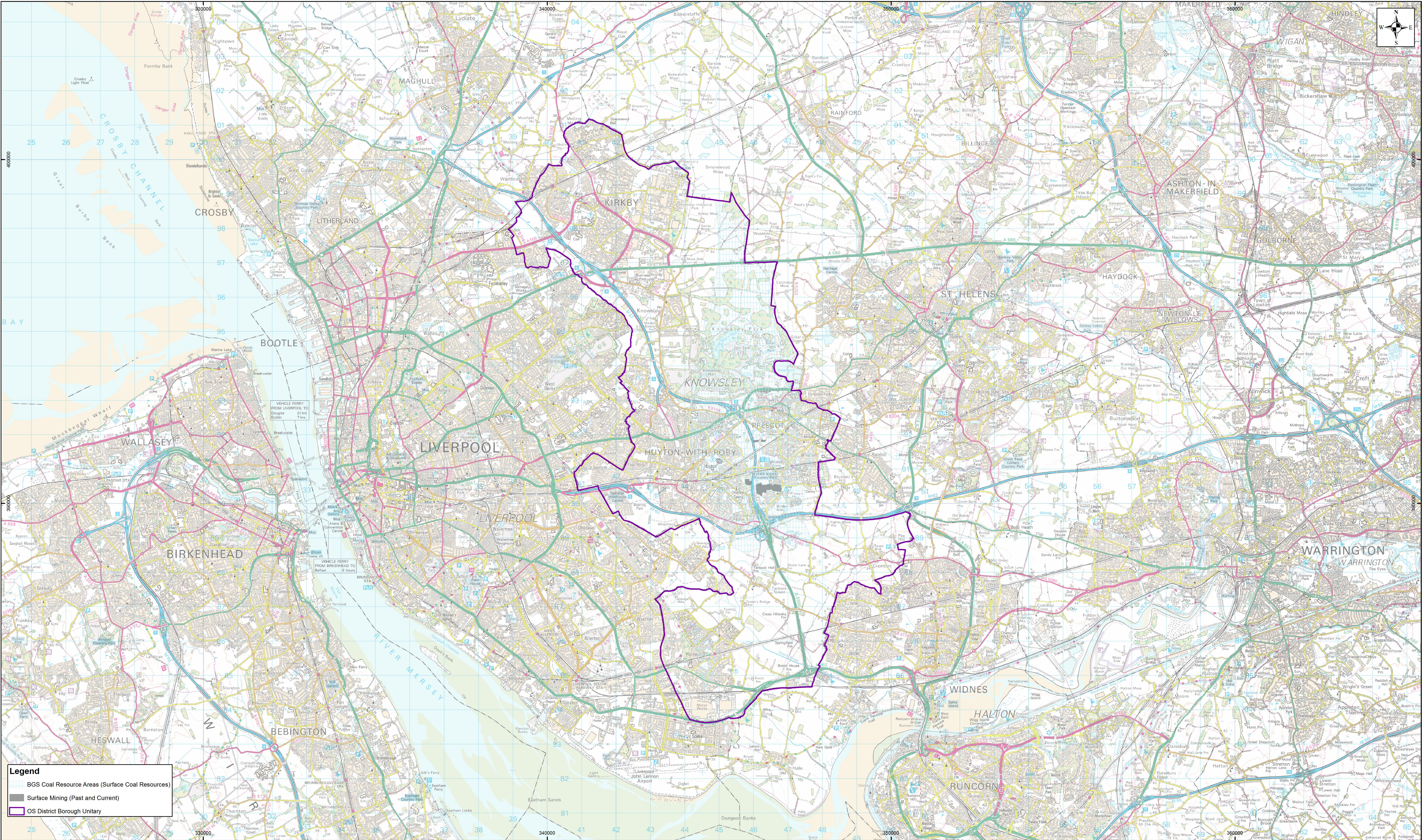
EXISTING SITE PLAN SCALE 1:500

PRIMA GROUP.		DWG TITLE EXISTING AND PROPOSED SITE PLAN.	
		JOB PRESCOT POLICE STATION, DERBY ST , PRESCOT , L34 3LG	
DRAWN	DF.	DATE	OCT'20.
SCALE	1:200@A1.	DWG No	102-01F



PROPOSED SITE PLAN. PRESCOT POLICE STATION

Knowsley District (B) - Surface Coal Resource



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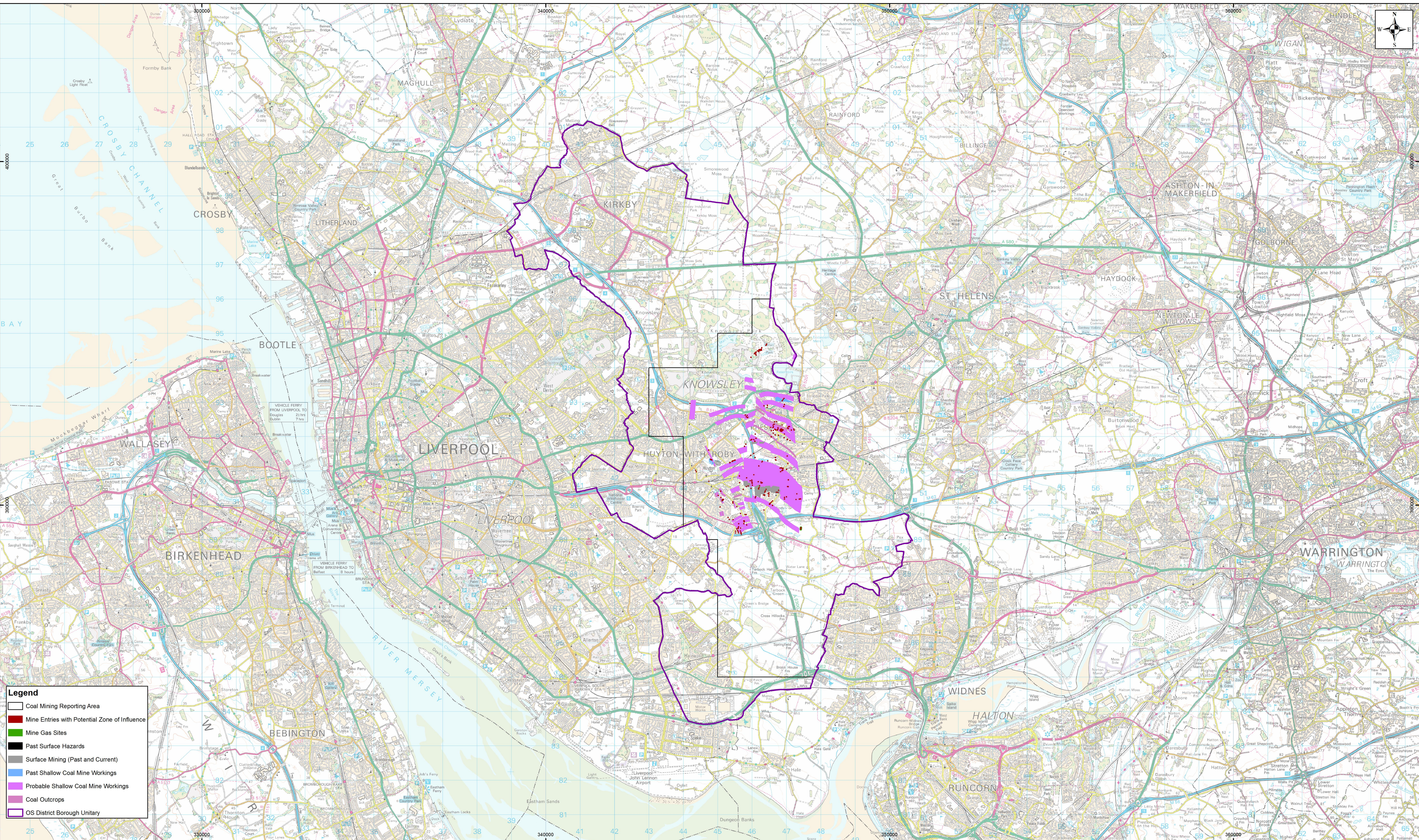
Scale 1:50000@A1

Published on: 07/06/2014



The Coal Authority

Knowsley District (B) - Specific Risk



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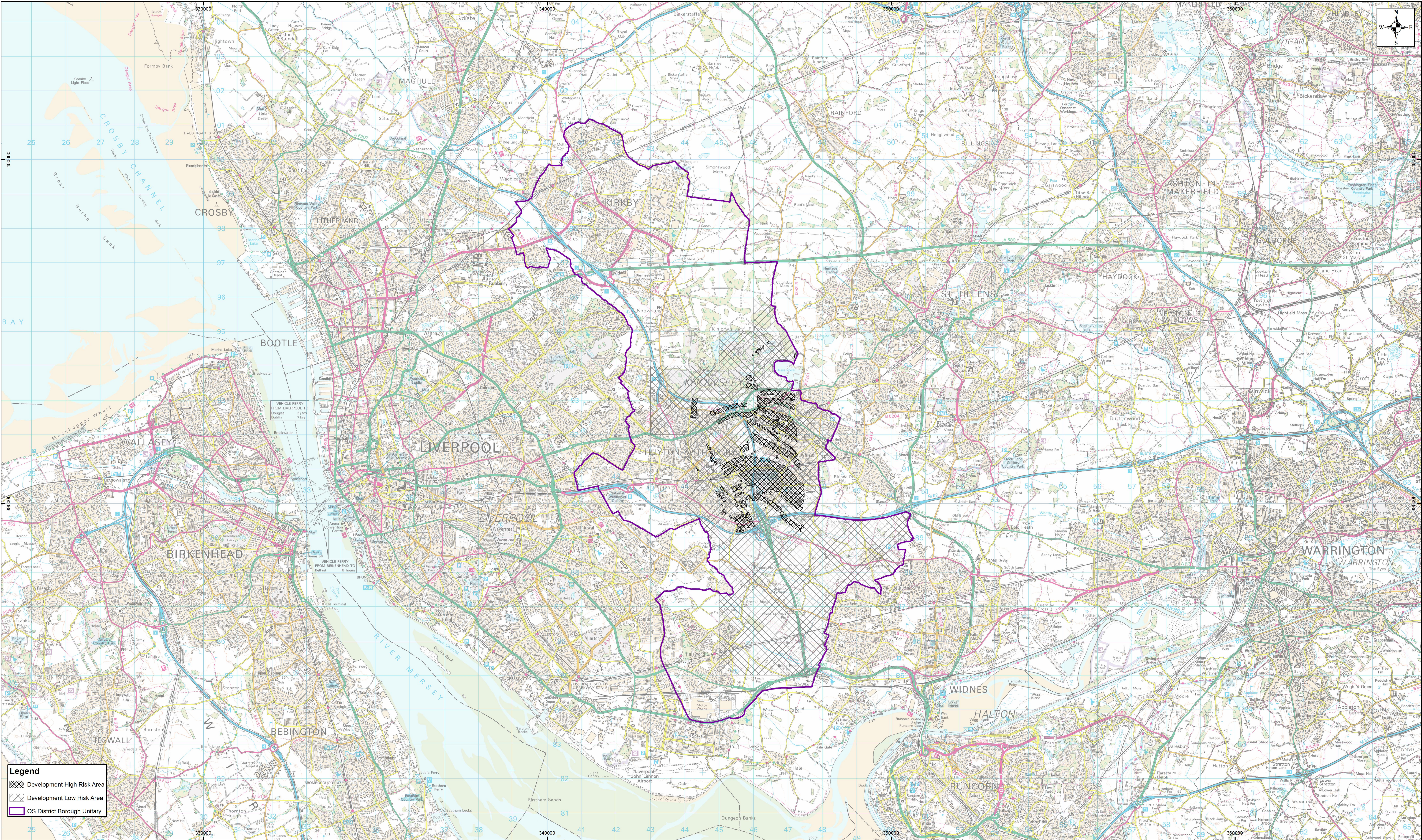
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Published on: 12/06/2014



The Coal
Authority

Knowsley District (B) -Development Risk



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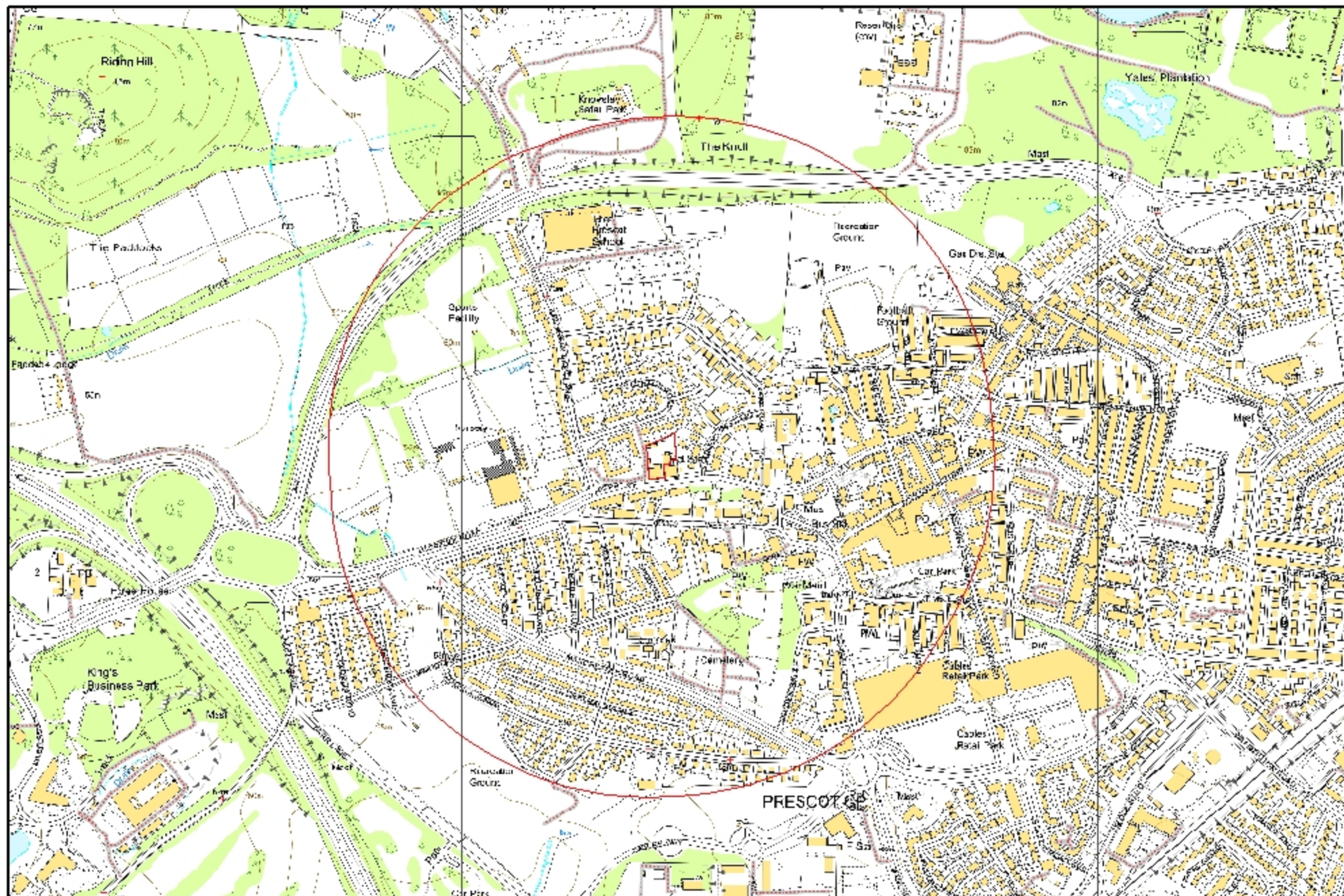
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Scale 1:50000@A1

Published on: 06/08/2014



The Coal
Authority

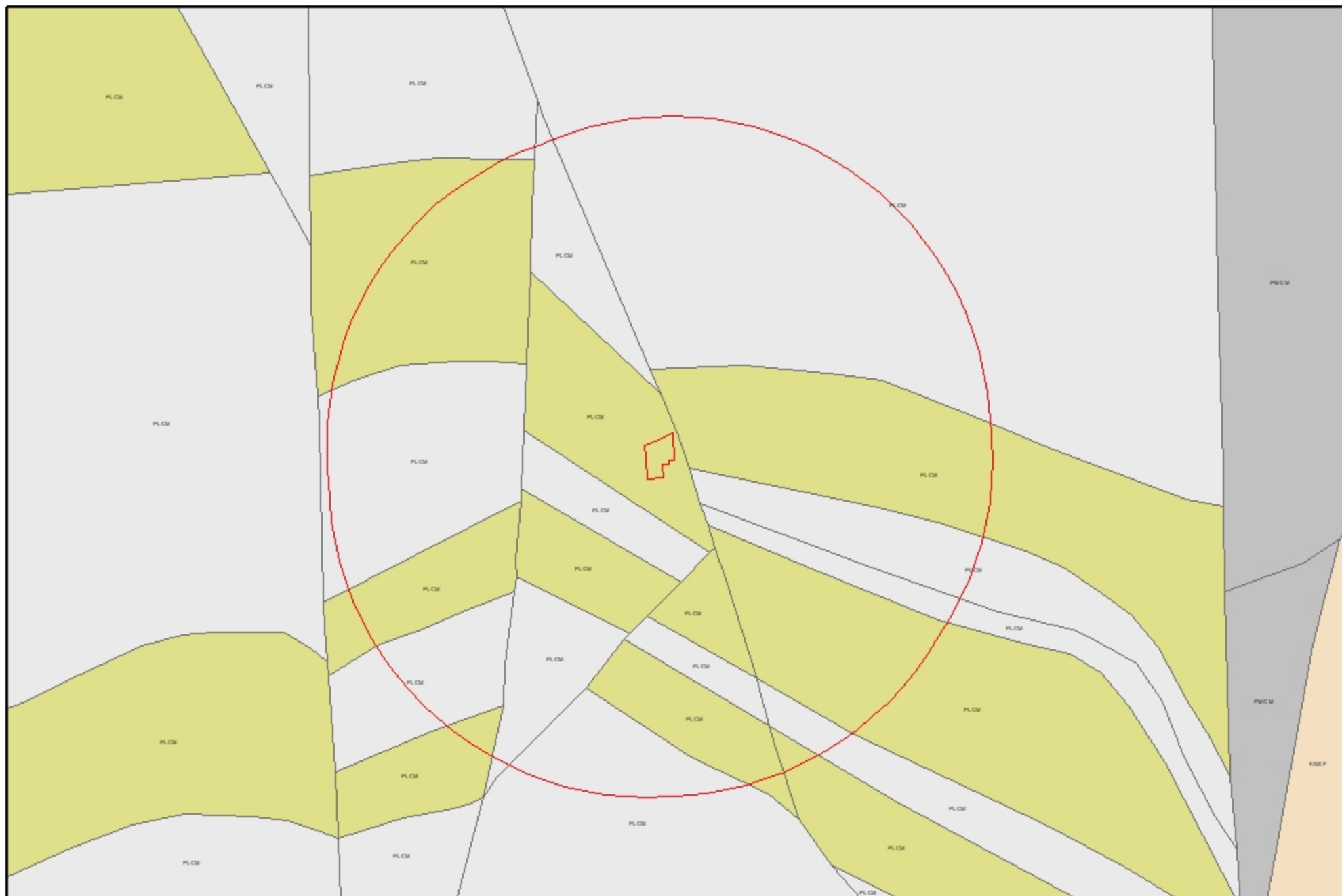


Former Prescott Police Station

0 0.075 0.15 0.3 0.45 0.6
Kilometers

CCG-C-21-12517
Site Location Plan complete with 500m Buffer



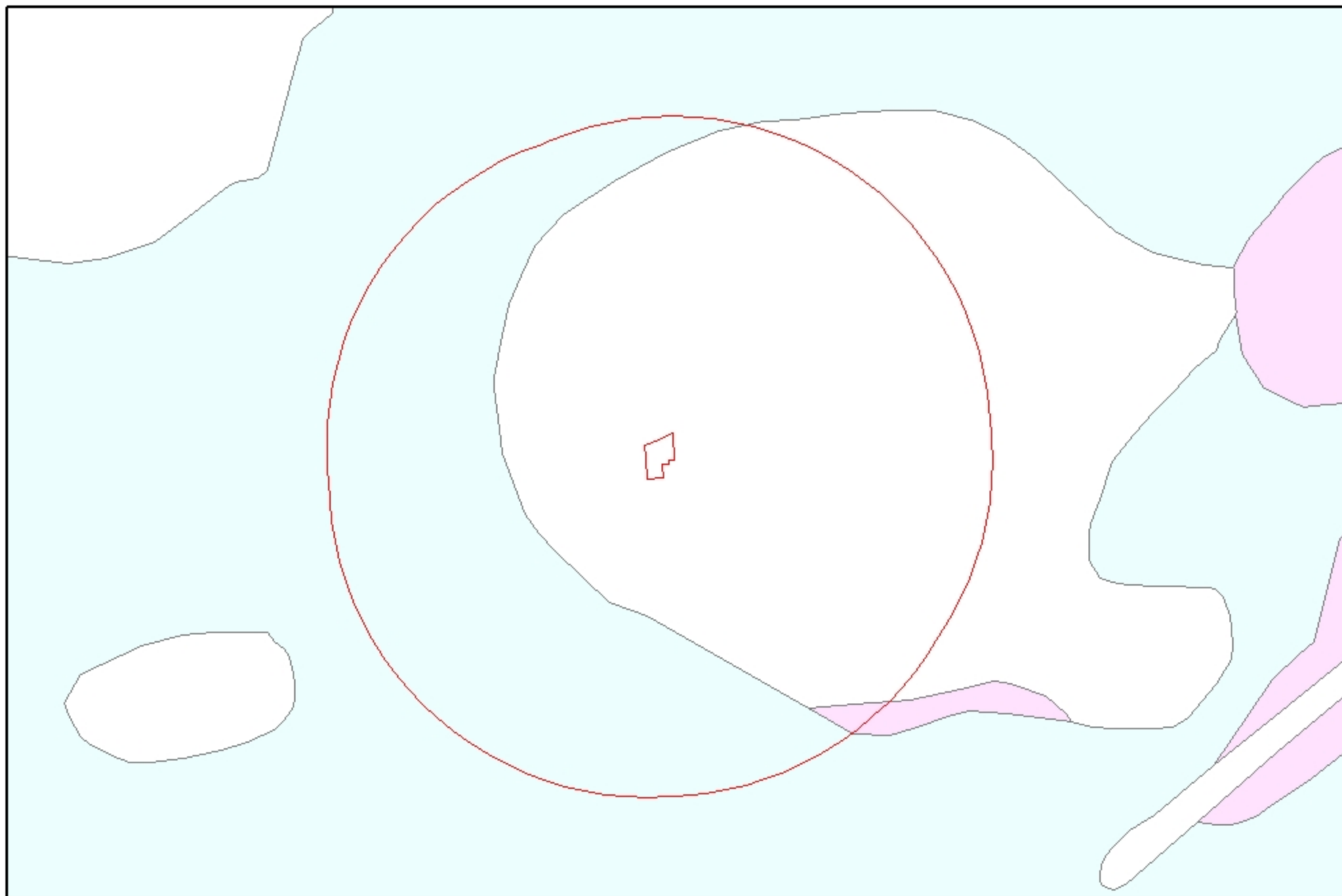


Former Prescott Police Station

0 0.075 0.15 0.3 0.45 0.6 Kilometers

CCG-C-21-12517
BGS Sheet 097 (2007) Solid Geology complete with 500m Buffer



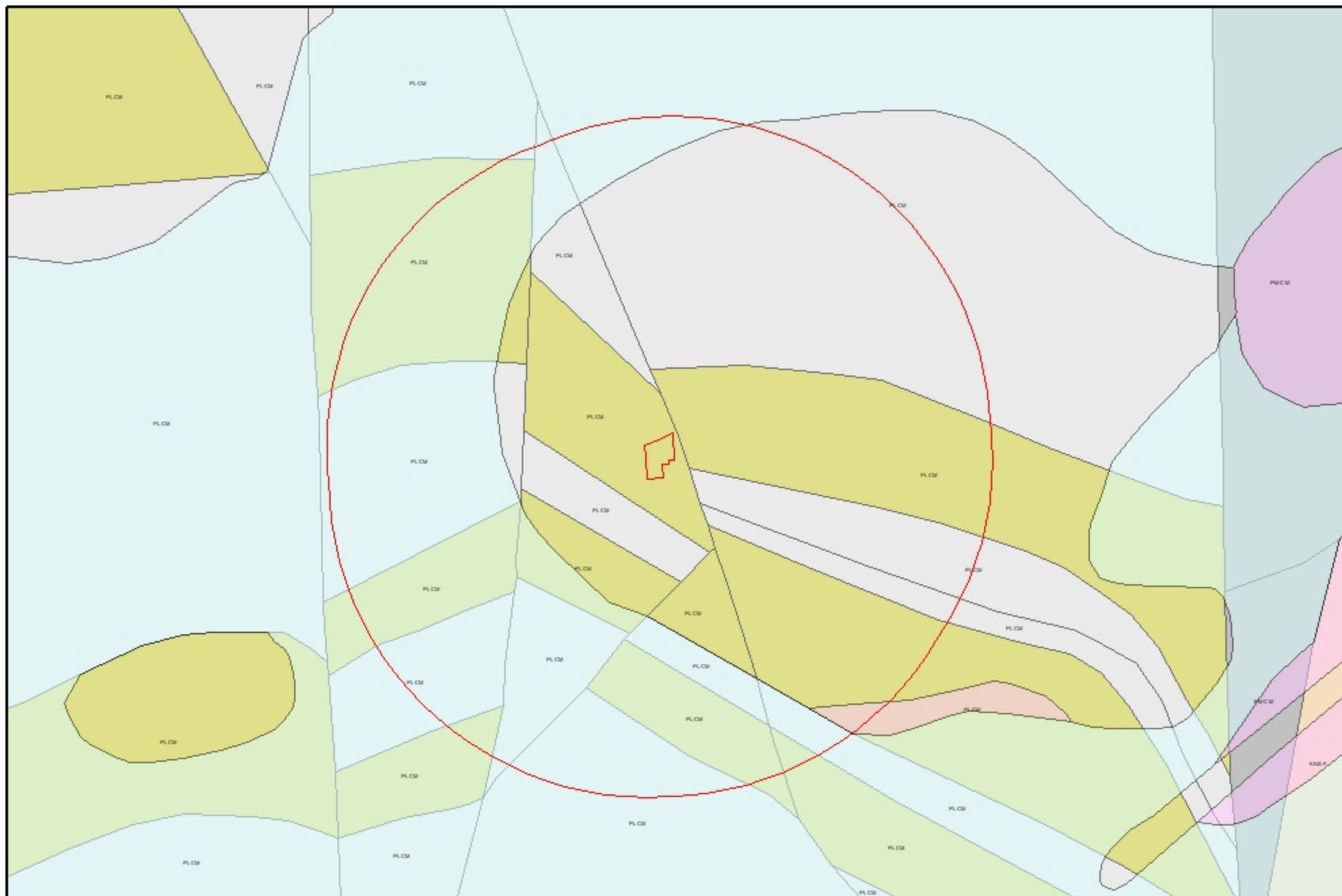


Former Prescott Police Station

0 0.075 0.15 0.3 0.45 0.6 Kilometers

CCG-C-21-12517
BGS Sheet 097 (2007) Drift Geology complete with 500m Buffer



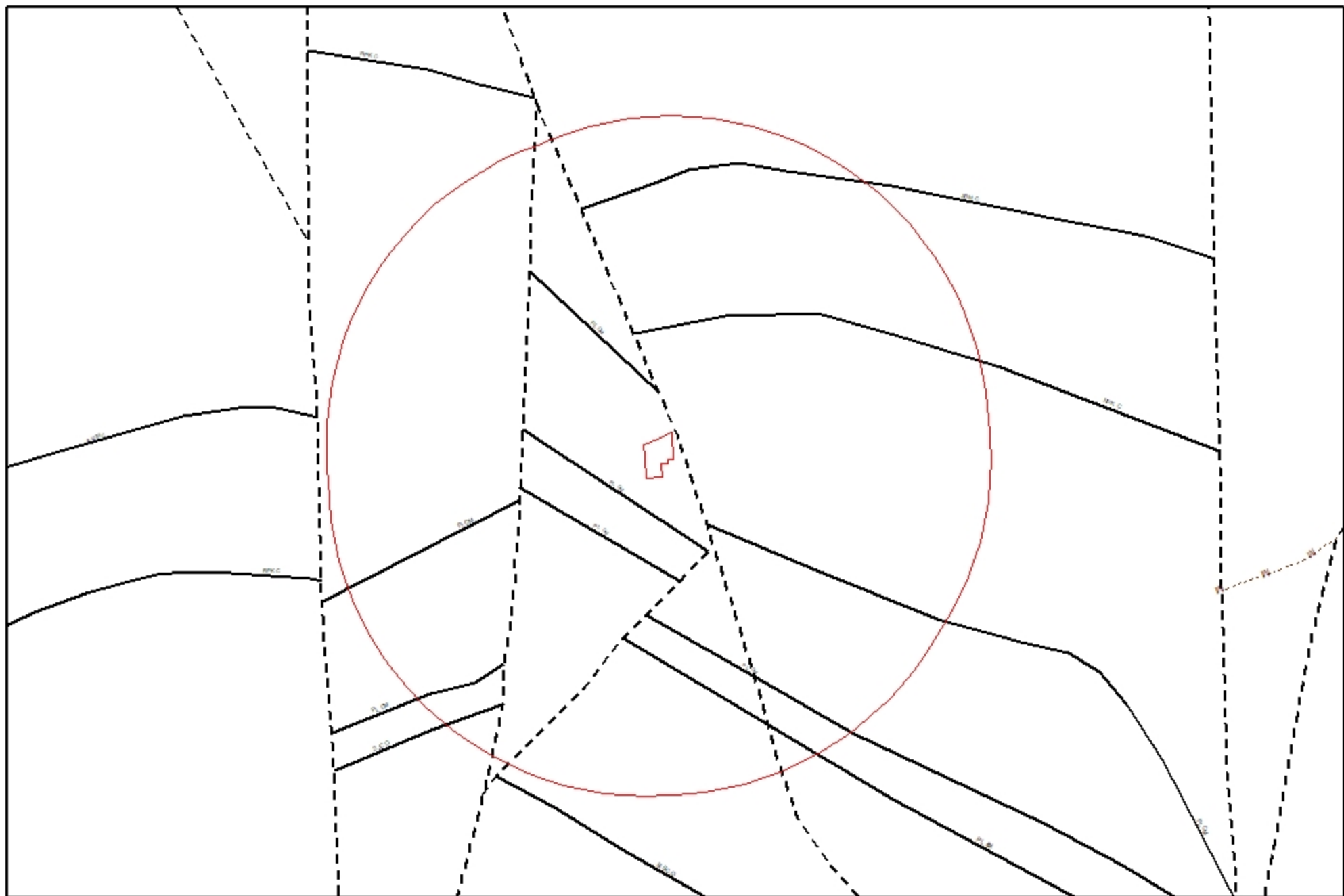


Former Prescott Police Station

0 0.075 0.15 0.3 0.45 0.6 Kilometers

CCG-C-21-12517
BGS Sheet 097 (2007) Solid & Drift Geology complete with 500m Buffer



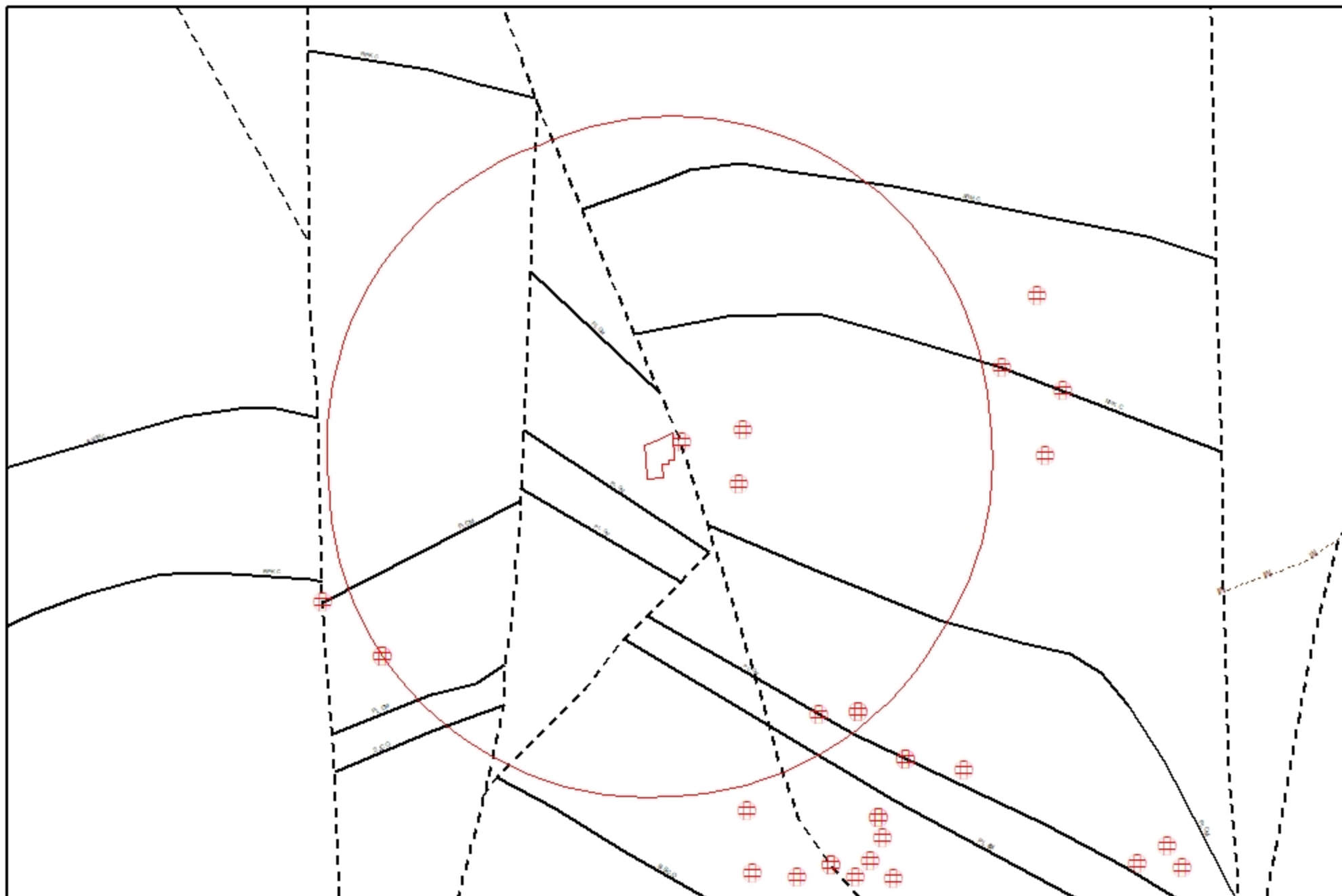


Former Prescott Police Station

0 0.075 0.15 0.3 0.45 0.6 Kilometers

CCG-C-21-12517
BGS Sheet 097 (2007) Geological Lines of Weakness
complete with 500m Buffer





APPENDIX B: COAL MINING REPORT



The Coal
Authority

Consultants Coal Mining Report

Prescot Police Station
Prescot Police Station
Derby Street
Prescot
Knowsley
L34 3LG

Date of enquiry:	8 September 2021
Date enquiry received:	8 September 2021
Issue date:	8 September 2021

Our reference:	51002654128001
Your reference:	



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

Christopher Bolan

Enquiry address

Prescot Police Station
Prescot Police Station
Derby Street
Prescot
Knowsley
L34 3LG

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

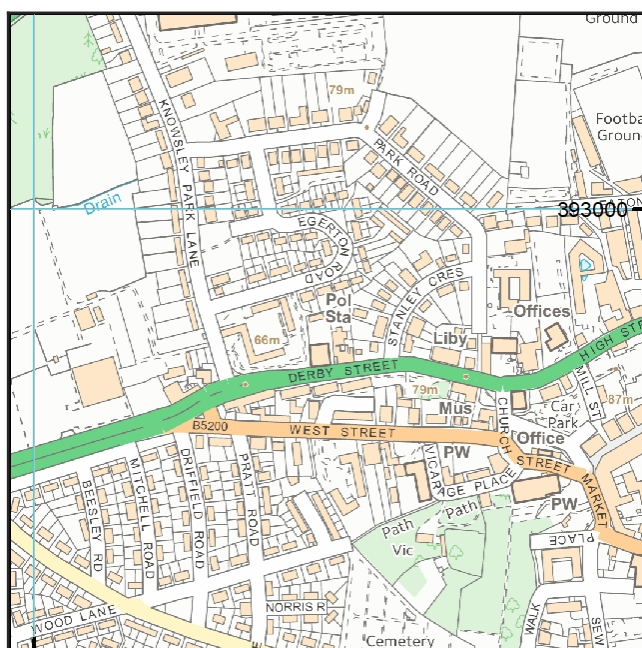
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



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
unnamed	ARLEY	Coal	3ZVJ	66	Beneath Property	11.0	South	70	1850

Probable unrecorded shallow workings

Yes.

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	346392-008	346350 392892		Coal	

Abandoned mine plan catalogue numbers

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

NW831	NW853	NW821
16820		

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
PLODDER	Coal	Yes	33.3	North-East	132

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded 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.

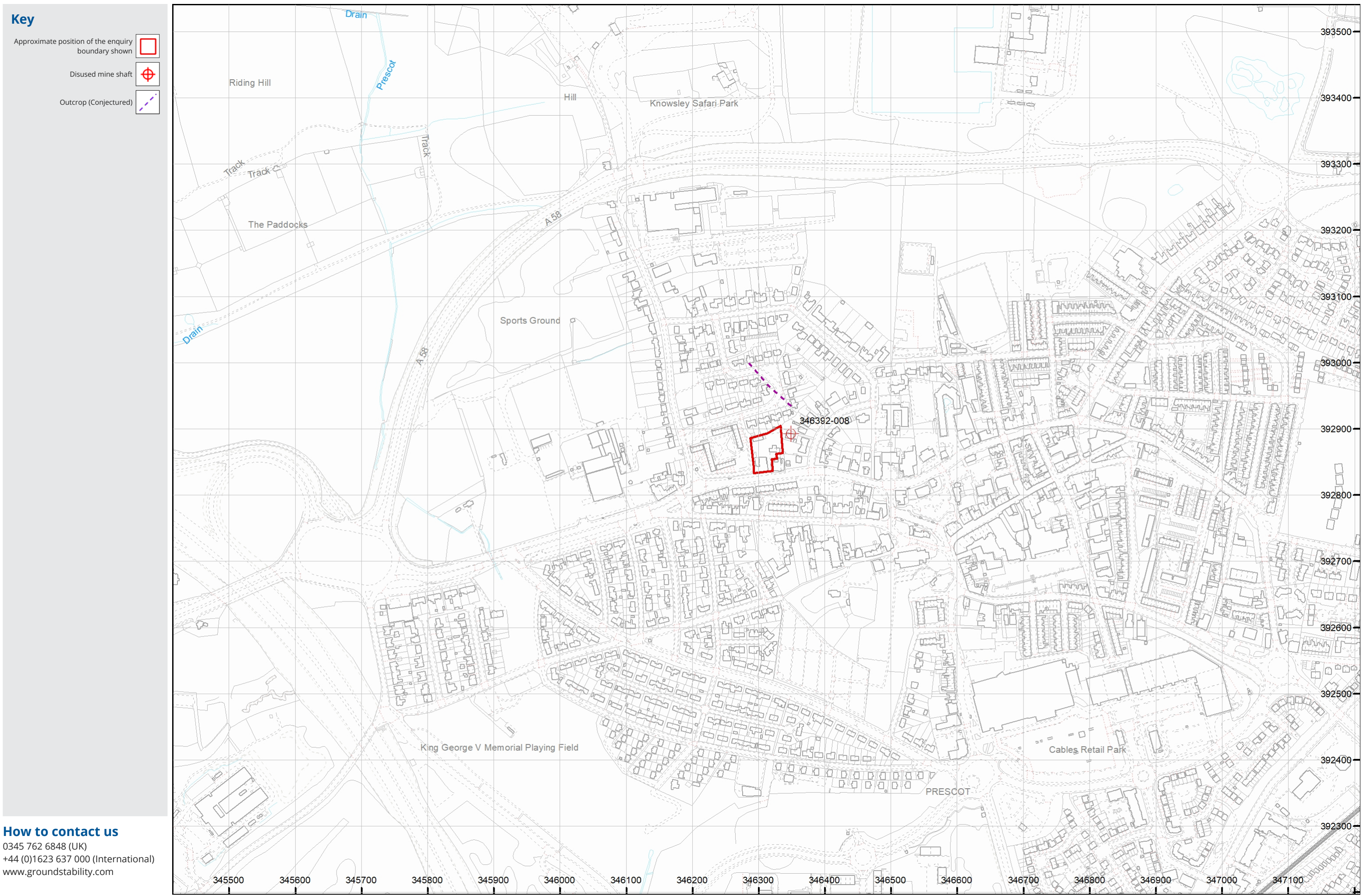
Withdrawal of support notices

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.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.



APPENDIX C: NOTES ON LIMITATIONS

Standard Terms and Conditions of Engagement

Notes on Limitations For Geoenvironmental and Geotechnical Consultancy Services

General

CC GEOTECHNICAL LTD has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from CC GEOTECHNICAL LTD and a charge may be levied against such approval.

CC GEOTECHNICAL LTD accepts no responsibility or liability for:

the consequences of this document being used for any purpose or project other than for which it was commissioned and/or

the consequences of use of this document by any party with whom an agreement has not been executed.

Phase I Environmental Audits / Desk Studies

The work undertaken to provide the basis of a Phase 1 Desk Study report comprises a study of available documented information from a variety of sources (including the client), together with (where appropriate) a walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in a Desk Study report have been dictated by finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in the report, CC GEOTECHNICAL LTD reserves the right to review such information and to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Environmental Audits

The investigation of the site has been carried out with the intention of providing sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated to potential human targets, building materials, the environment (including adjacent land), and surface and groundwater.

The amount of exploratory work and chemical testing undertaken may have been restricted by the timescale available, and the locations of the exploratory holes may have been restricted to areas unoccupied by the building(s) on the site, and further restricted by the existence of buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues may need to be resolved.

For those reasons, if costs have been included in relation to site remediation these must be considered as tentative only and must, in any event, be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of site conditions. The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

Geoenvironmental Ground Investigations

The investigation of the site has been carried out to provide sufficient information within the agreed scope of the investigation, under the general headings of type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions, to provide a reasonable assessment of the environmental risks together with engineering and development implications.

If costs have been included in relation to the site remediation, these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of the site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be ground conditions present on the site which have not been disclosed by this investigation, and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that groundwater levels will vary owing to seasonal, tidal, weather, or other effects.

The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.