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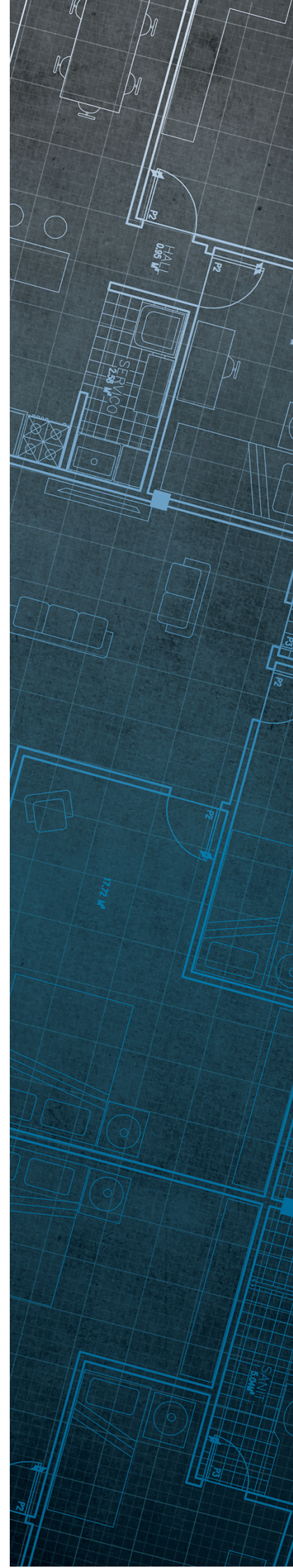
The Coal
Authority

Consultants Coal Mining Report

Skelmersdale Station
Lancashire
WN8 9UU

Date of enquiry:	30 May 2018
Date enquiry received:	30 May 2018
Issue date:	30 May 2018

Our reference:	51001863245001
Your reference:	GS-5084312



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

GROUNDSURE LIMITED

Enquiry address

Skelmersdale Station
Lancashire
WN8 9UU

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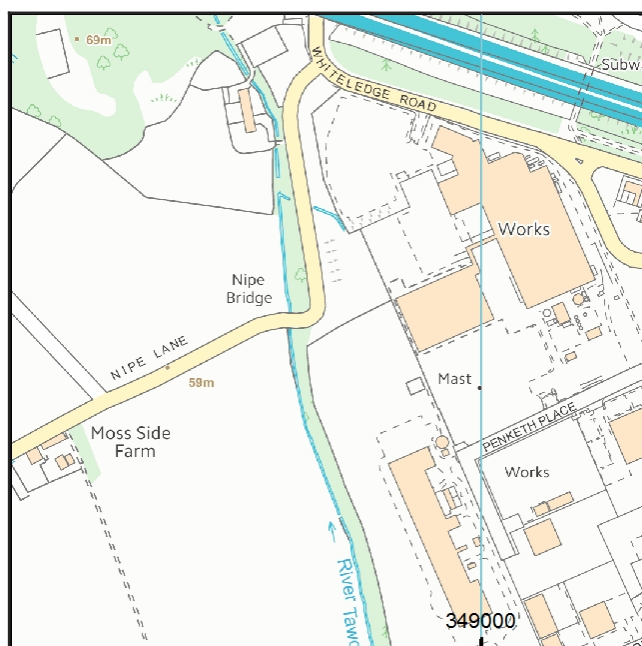
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Approximate position of property



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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
unnamed	HIGHER FLORIDA	Coal	319Y	0	Beneath Property	11.3	North-West	170	1921
unnamed	WIGAN FIVE FEET	Coal	319R	21	Beneath Property	15.2	West	100	1939
unnamed	RUSHY PARK	Coal	31BH	24	Beneath Property	20.4	West	80	1936
unnamed	WIGAN TWO FEET	Coal	31C3	27	Beneath Property	13.1	West	60	1939
unnamed	DOE	Coal	319K	29	Beneath Property	11.4	West	260	1939
unnamed	WIGAN TWO FEET	Coal	319J	32	Beneath Property	14.1	West	60	1939
unnamed	HAIGH YARD	Coal	31BW	59	Beneath Property	10.0	West	220	1929
unnamed	DOE	Coal	319N	60	Beneath Property	10.3	North	280	1927
unnamed	DOE	Coal	31BN	64	South-East	12.0	West	260	1939
unnamed	KING	Coal	31BL	65	Beneath Property	17.9	West	70	1939
unnamed	HIGHER FLORIDA	Coal	3172	66	Beneath Property	3.7	North-West	170	1921
unnamed	LOWER FLORIDA	Coal	31A0	72	Beneath Property	2.9	North-West	100	1885
unnamed	KING	Coal	31BM	78	Beneath Property	17.9	West	70	1939
unnamed	HIGHER FLORIDA	Coal	3170	84	Beneath Property	4.4	South-East	170	1921
unnamed	HIGHER FLORIDA	Coal	316C	86	Beneath Property	4.2	South-East	170	1921
unnamed	HIGHER FLORIDA	Coal	3171	86	Beneath Property	2.9	North-West	170	1921
unnamed	DOE	Coal	3166	93	South-West	11.3	South-West	280	1928
unnamed	LOWER FLORIDA	Coal	3178	99	Beneath Property	2.9	North-West	90	1885
unnamed	DOE	Coal	319M	109	Beneath Property	7.1	North-West	280	1927
unnamed	WIGAN FIVE FEET	Coal	31C6	110	Beneath Property	18.4	West	100	1939
unnamed	ARLEY	Coal	31BS	117	Beneath Property	16.1	West	120	1936
unnamed	LOWER FLORIDA	Coal	3169	119	Beneath Property	7.1	South-East	90	1885

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	318Y	128	Beneath Property	10.5	West	120	1936
unnamed	LOWER FLORIDA	Coal	317A	133	East	2.9	North-West	90	1885
unnamed	LOWER FLORIDA	Coal	3177	137	Beneath Property	4.8	North-West	90	1886
unnamed	DOE	Coal	316X	138	Beneath Property	4.7	North-West	280	1927
unnamed	HAIGH YARD	Coal	319E	140	Beneath Property	14.9	North-West	220	1929
unnamed	WIGAN FIVE FEET	Coal	319S	145	Beneath Property	14.0	North	130	1921
unnamed	LOWER FLORIDA	Coal	3176	145	Beneath Property	7.1	South-East	90	1885
unnamed	LOWER FLORIDA	Coal	3168	146	Beneath Property	7.1	South-East	90	1885
unnamed	WIGAN FIVE FEET	Coal	31GW	152	Beneath Property	3.9	North	130	1921
unnamed	FLAGGY DELF	Coal	319C	153	South-West	18.5	West	50	1900
unnamed	FLAGGY DELF	Coal	31C2	159	South-West	18.5	West	50	1900
unnamed	RUSHY PARK	Coal	3195	171	Beneath Property	10.0	North-West	80	1936
unnamed	HAIGH YARD	Coal	319G	178	Beneath Property	11.3	West	180	1925
unnamed	WIGAN FIVE FEET	Coal	316V	180	Beneath Property	3.9	North	130	1921
unnamed	HAIGH YARD	Coal	31BV	182	North-East	20.0	North-West	200	1932
unnamed	DOE	Coal	3164	184	Beneath Property	6.3	South-East	290	1899
unnamed	RUSHY PARK	Coal	31BE	184	East	18.4	North-West	90	1912
unnamed	RUSHY PARK	Coal	31BF	184	East	18.4	North-West	90	1912
unnamed	HAIGH YARD	Coal	319I	189	North-East	20.0	North-West	220	1932
unnamed	DOE	Coal	316W	196	Beneath Property	6.3	South-East	290	1899
unnamed	ARLEY	Coal	31BQ	209	East	16.0	North-West	110	1912
unnamed	RUSHY PARK	Coal	31BG	222	North-East	18.4	North-West	90	1912
unnamed	KING	Coal	3161	243	Beneath Property	8.0	South-West	170	1921
unnamed	UPPER MOUNTAIN	Coal	31BO	247	Beneath Property	6.8	North-West	70	1920
unnamed	FLAGGY DELF	Coal	319D	249	Beneath Property	7.1	North-East	50	1920
unnamed	HAIGH YARD	Coal	316P	249	South	7.1	West	180	1925

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	UPPER MOUNTAIN	Coal	3191	255	Beneath Property	7.1	West	70	1915
unnamed	RUSHY PARK	Coal	3193	255	North-East	18.4	North-West	90	1900
unnamed	HAIGH YARD	Coal	315R	275	Beneath Property	6.3	South-East	175	1899
unnamed	HAIGH YARD	Coal	316S	277	Beneath Property	6.3	South-East	175	1899
unnamed	HALF YARD	Coal	3199	281	West	8.1	West	50	1927
unnamed	RUSHY PARK	Coal	3196	290	Beneath Property	7.2	South-West	70	1921
unnamed	RUSHY PARK	Coal	316N	294	Beneath Property	7.0	West	70	1921
unnamed	HALF YARD	Coal	316O	307	South	6.7	West	50	1927
unnamed	ARLEY	Coal	3190	311	East	10.5	West	100	1936
unnamed	KING	Coal	316U	316	Beneath Property	0.0	East	170	1921
unnamed	HAIGH YARD	Coal	319F	320	Beneath Property	18.4	North	180	1925
unnamed	ARLEY	Coal	316K	329	Beneath Property	7.1	West	100	1927
unnamed	HAIGH YARD	Coal	315T	329	Beneath Property	8.1	North-West	180	1925
unnamed	HALF YARD	Coal	315Z	335	South	8.1	West	50	1927
unnamed	RUSHY PARK	Coal	3197	335	West	10.7	North-West	80	1936
unnamed	RUSHY PARK	Coal	315J	340	Beneath Property	7.3	South-West	70	1921
unnamed	ARLEY	Coal	318Z	355	Beneath Property	7.0	West	100	1927
unnamed	KING	Coal	316T	369	Beneath Property	0.0	East	160	1895
unnamed	HAIGH YARD	Coal	316R	416	Beneath Property	8.1	West	180	1925
unnamed	ARLEY	Coal	315C	419	Beneath Property	7.1	West	100	1927
unnamed	HAIGH YARD	Coal	316Q	486	Beneath Property	8.0	South-West	180	1925
unnamed	ARLEY	Coal	316L	505	Beneath Property	7.1	North-West	120	1894
unnamed	ARLEY	Coal	315D	561	North	7.1	South-East	120	1894
unnamed	ARLEY	Coal	316M	573	North	7.1	South-East	120	1894

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	348403-001	348883 403958		Coal	
Shaft	348403-003	348782 403714		Coal	
Shaft	348403-004	348662 403456	Our records indicate that a search was made for this shaft in 2001 by International Mining Consultants Ltd but no evidence of a shaft was found	Coal	
Shaft	348403-005	348753 403463	This shaft was located by International Mining Cons [^] ts in 2001 and was found to have been infilled with colliery waste. The shaft fill was then drilled and grouted with 21.8 tonnes of grout to the base of the shaft. A reinforced concrete cap 6.6m x 6.6m x 0.75m was then constructed.	Coal	
Shaft	348403-006	348764 403464	This shaft was located in 2001 by International Mining Consultants Ltd. The shaft was found to have been infilled with colliery waste. The shaft fill was then grouted for its full depth with 19 tonnes of grout. The shaft and surrounding area was then excavated to a depth of 5.1m BGL and a 6.6m x 6.6m reinforced concrete cap was constructed and the area backfilled.	Coal	
Shaft	348403-007	348807 403446		Coal	
Shaft	348403-008	348845 403417		Coal	
Shaft	348403-009	348829 403387		Coal	
Shaft	348405-002	348727 405994	This shaft has been sealed at the surface by means of a 1.85 metres thick conical concrete plug founded on stiff boulder clay. These works were carried out by J W Bradley and Co in 1971	Coal	Skelmersdale Development Corporation 24/04/1968
Shaft	348406-011	348640 406097	This shaft has been sealed by means of a conical concrete plug 1.85 metres thick. The plug is 3.87 metres diameter at the bottom and 5.16 metres at the top and founded on rockhead. These works were carried out by J Murphy in 1971	Coal	Skelmersdale Development Corporation 24/04/1968
Shaft	349403-002	349575 403261		Coal	
Shaft	349403-003	349448 403232		Coal	
Shaft	349403-004	349348 403197		Coal	
Shaft	349403-005	349090 403205		Coal	

Abandoned mine plan catalogue numbers

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

13878	10741	NW787
13887	9802	NW788
NW296	NW404	12484

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

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
BULLDOG	Coal	Yes	10.1	N/A	51
BULLDOG	Coal	Yes	Within	N/A	51
BULLDOG	Coal	Yes	Within	N/A	54
BULLDOG	Coal	Yes	Within	N/A	231
DOE	Coal	Yes	Within	N/A	164
DOE	Coal	Yes	Within	N/A	348
FAIR BOTTOM	Coal	Yes	Within	N/A	83
KING	Coal	Yes	Within	N/A	13
LONDON DELPH (BIN)	Coal	Yes	Within	N/A	51
LONDON DELPH (BIN)	Coal	Yes	Within	N/A	51
LONDON DELPH (BIN)	Coal	Yes	Within	N/A	54
LOWER FLORIDA	Coal	Yes	Within	N/A	347
LOWER FLORIDA	Coal	Yes	Within	N/A	348
PEACOCK	Coal	Yes	Within	N/A	10
PLODDER	Coal	Yes	Within	N/A	41
UNNAMED 1	Coal	Yes	Within	N/A	45
WIGAN FIVE FEET	Coal	Yes	Within	N/A	353
WIGAN FIVE FEET	Coal	Yes	0.4	North-East	354
WIGAN TWO FEET	Coal	Yes	Within	N/A	5
WIGAN TWO FEET	Coal	Yes	29.6	South-East	66

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Faults under or close to the property 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

Distance to site investigation (m)	Direction
Within	N/A
3.9	South-West

See Section 4 for further information.

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 31st October 1994.

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

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

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 in an area where a notice to withdraw support was given in 1948.

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.

Site investigations

The site is within an area of previous interest. It is close to where the Coal Authority has received information relating to past site investigations.

The site requires further investigation and may influence how you approach your risk assessment.

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.

Stage 2 Mining Report (Pre-Construction Information - Mining)

created in accordance with NR/L2/OHS/0047/F0002 Section 4.3 Site Specific Hazards - Old Mine Workings

Executive Summary

(Refer to report LM-MISC-2448)

Coal Authority Data Plan:

The site is on coal bearing strata.

Plan summarises Coal Authority Data.

Numerous coal seams outcrop beneath the site.

Probable shallow workings exist beneath the site.

Next Steps

The project manager should appoint a suitably competent consultant to undertake a review of this report and where appropriate take action(s) to mitigate the identified mining risks to the design and construction of the proposed works.

Project Name Skelmersdale Rail Link

Project Code 139606

Report reference LM-MISC-2448

ELR WKL2

Mileage From 25.088

Mileage To 27

Date 06/08/2018

Plan Scale 1:25,000

Author Joe Milton

Position Senior Mining Engineer

