



Chartered Consulting Engineers

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Mr M Townsend
Michael Townsend Planning
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10 Rishworth Street
Wakefield
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BY E-MAIL

Our Ref: ENG/01/TRmjs

9th October 2017

-- Dear Michael

Mr & Mrs P England
Coal Mining Stability Rotary Drilling Works
Blackergreen Lane, Silkstone, Barnsley - Single New Dwelling

In accordance with your request, we visited the above site on Friday 30th June 2017, to undertake rotary drilling as recommended in our Coal Mining Stability Risk Assessment dated July 2016. This was to determine the presence of any coal seams which would be within influencing distance of the surface.

Four boreholes were drilled on the site by Ground Support Services Ltd, using rotary open hole with water flush techniques. The holes were numbered BH1 to BH4, and drilled to depths of between 12m and 18m, at the locations shown on the attached plan.

All four boreholes encountered clay at between 2.2m and 3.6m depth, underlain by mudstone. Within the mudstone, a coal seam with a maximum thickness of 1.3m was encountered, at between 9.4m and 11.3m depth with no evidence of workings observed. This seam is interpreted to be the Whinmoore Coal, which is known to outcrop to the southwest. In BH2 and BH3, a 0.3m - 0.4m thick seam was also encountered at 6.8m and 6.3m depth, respectively with no evidence of workings observed (Black Band Coal). Position BH1 was extended through the coal and mudstone, before reaching sandstone at a depth of 15.8m and proven to 18m.

The rock cover is calculated as approximately 7m above the Whinmoor Coal seam. Although the seam is within influencing distance of the surface, i.e. within ten times the seam maximum extractable thickness of coal, neither workings nor loss of flush were encountered during the drilling. The rock cover above the Black Band Coal (BBC) seam is calculated at between 3.5m and 4.1m. Therefore, the BBC seam is also within influencing distance from the surface. However, there was no evidence of working or loss of flush during drilling through the upper seam either.



Conclusion

Both the Whinmoor Coal and the Black Band Coal seam were found to be within a potentially influential distance from the surface with regard to ground stability. Nevertheless, neither seam was found to have been worked. We would therefore conclude that this site is stable with regard to coal mining.

We trust the above details are acceptable. However, if you have any comments or queries, please do not hesitate to contact us at your convenience.

Yours sincerely
for ARP GEOTECHNICAL LTD

Tom N Roebuck-Rouse

Encs



GROUND SUPPORT SERVICES (UK) LTD

GEO TECHNICAL AND GROUND SUPPORT FOUNDATION SPECIALISTS

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Site Investigation Drillers log			Site: <u>Blackergreen lane</u>			Sheet: <u>1 / 1</u>				
Rig: <u>Casagrande C6</u>			Crew: <u>J. Stuart, G. Pukington</u>			Date: <u>30/6/17</u>				
Hours on site:			Travelling Time:							
Equipment used:										
BH	Depth	Strata Description	BH	Depth	Strata Description					
1.	0.00 - 3.60	clay	4.	0.00 - 3.20	clay					
	3.60 - 10.60	Grey mudstone		3.20 - 10.30	Grey mudstone					
	10.60 - 11.70	Coal		10.30 - 11.50	Coal					
	11.70 - 15.80	Grey mudstone		11.50 - 13.00	Grey mudstone					
	15.80 - 18.00	Sand stone								
2.	0.00 - 3.30	clay								
	3.30 - 6.80	Grey mudstone								
	6.80 - 7.10	Coal								
	7.10 - 11.30	Grey mudstone								
	11.30 - 12.60	Coal								
	12.60 - 15.00	Grey mudstone								
3.	0.00 - 2.20	clay								
	2.20 - 6.30	Grey mudstone								
	6.30 - 6.70	Coal								
	6.70 - 9.40	Grey mudstone								
	9.40 - 10.70	Coal								
	10.70 - 12.00	Grey mudstone								
Casing / Water level details										
BH	Casing Die	Casing Depth	Strike	Water Rise	Sealed	Totals	BH's	Drill	Case	Core
						Today	4	58		
						Previous	—	—		
						To date	4	58		

Signed J. Stuart Driller

Project Id: ENG/01
Project Title: Blacker Green Lane
Location: Silkstone, Barnsley
Client: Mr P England

Title: Site Investigation Plan
Scale: 1:500
Engineer: TNRR
Contractor:



Legend Key

-  Locations By Type - RO
-  Project Bounds - Project Bounds

