

SIMPSON MINING AND GEOTECHNICAL LTD

CONSULTING MINING & GEOTECHNICAL ENGINEERS

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REPORT ON BORES SUNK AT **BROWNIESIDE, PLAINS**

Client : Aspire Joinery
26 Carnbroe Road
Coatbridge
ML5 4SG

Report No.: 5037M/IS

Engineer : W. Simpson

Issued : 18 July 2018

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3. INTRODUCTION.

This report discusses the results of the bores sunk by Phoenix Drilling Ltd on the 21st May 2018. The bores were set out and supervised by Simpson Mining and Geotechnical Ltd.

The report draws conclusions on the mining stability of the site, and gives recommendations on the most suitable foundation to be adopted from a mining view point.

4. BORES.

Three bores were sunk by a rotary drilling rig on 21st May 2018, the rig being supervised by the writer. The bores were correlated by the writer.

5. PREVIOUS WORK.

This report should be read together with our Coal Mining Risk Assessment Report, Report No 5037/IS dated 7th May 2018.

6. RESULTS OF BORES.

The bores revealed the site to be underlain by fill materials consisting of black blaes (colliery spoil), which varied in thickness from 1.10 metres at bore hole number 1, to 2.20 metres at bore number 2. The black blaes was underlain by boulder clay which extended down to depths varying from 6.8 metres at bore number 3, to 8.40 metres at bore number 2. These superficial deposits rested in turn on rock strata of the Lower Coal Measures.

The writer has correlated the coal encountered at a depth of 16.20 metres in bore number 1 as being the Virtuewell. The horizon described by the driller as black OIL SHALE at depths of 13.10 and 14.20 metres at bores numbers 2 and 3 has also been correlated as the Virtuewell Coal. The bores confirm our original assessment that the Virtuewell was probably too thin to have been worked beneath the site, and would have been affected by the near presence of the quartz-dolerite sill. The bores confirm that the site is stable with regards to the Virtuewell Coal.

Trial pit number 1 excavated for foundation purposes exposed the old shaft which has already been treated and capped by the Coal Authority. It is recommended that as a precaution the position of the proposed workshop be moved 5 metres to the east.

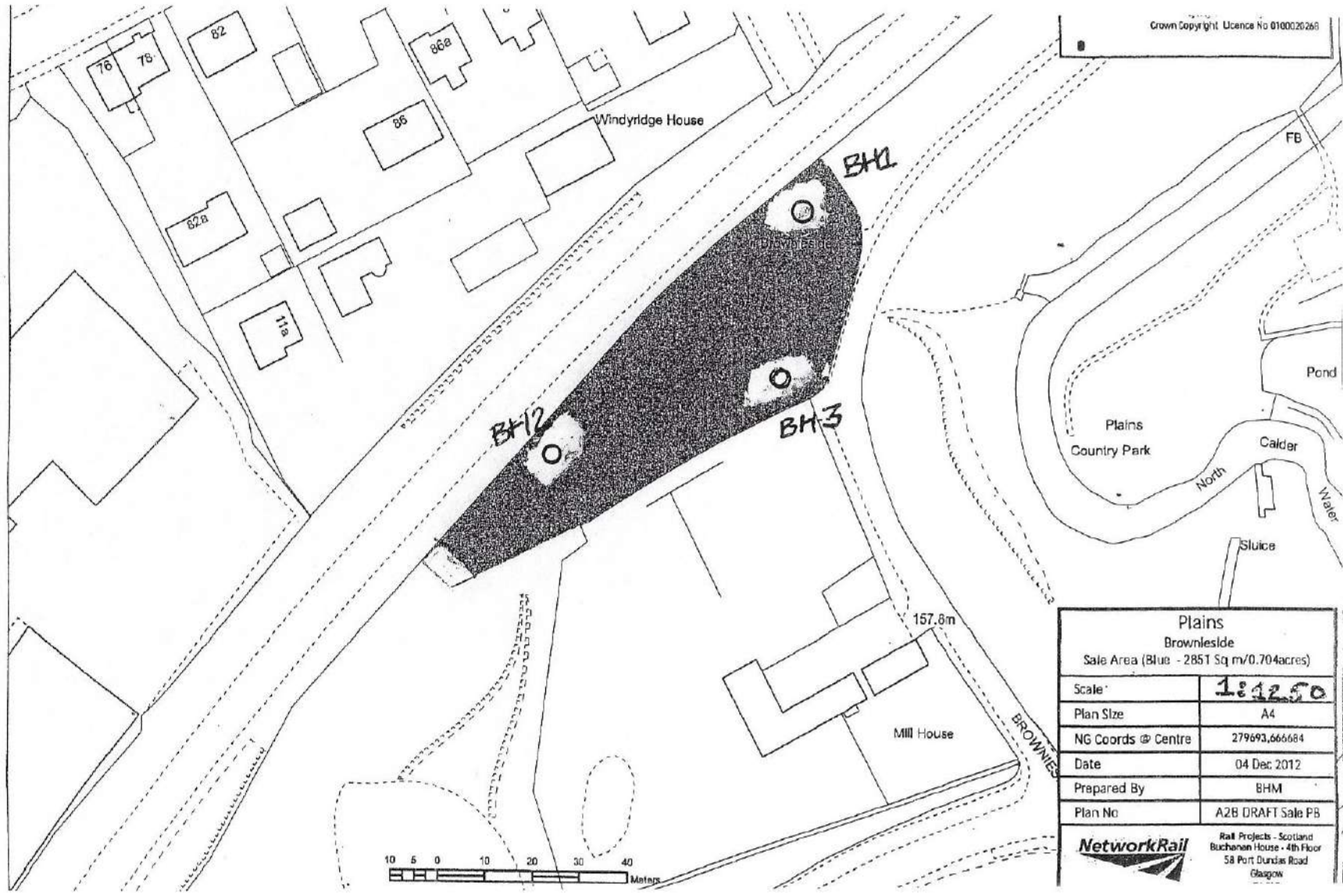
W SIMPSON B.Sc.(Mining), M.Sc., C. Eng., MICE, MIHT, F.G.S.

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APPENDIX

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Plains Brownieside	
Sale Area (Blue - 2851 Sq m/0.704acres)	
Scale	1:4250
Plan Size	A4
NG Coords @ Centre	279693.666684
Date	04 Dec 2012
Prepared By	BHM
Plan No	A2B DRAFT Sale PB
NetworkRail	
<small>Rail Projects - Scotland Buchan House - 4th Floor 58 Port Dundas Road Glasgow</small>	

APPENDIX 1

BORE LOGS

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Phoenix Drilling Limited

2 Nairn Road, Deans Industrial Estate, Livingston, EH54 8AY T: 01506 411448 F: 01506 414477 E: info@phoenixdrilling.co.uk www.phoenixdrilling.co.uk

From	To	Strata Description	Rec	Flush%
		Extension of Cable Percussion? YES/NO		100%
62	11	MADE GROUND GRAZE ASH	✓	
11	51	SOFT BROWN ROULDER CLAY	✓	
51	74	GREEN SILTY ROULDER CLAY WITH GRAVELS	✓	
74	90	DECOMPOSED MUDSTONE	✓	
90	1185	WEATHERED MUDSTONE	✓	
1185	1235	WEATHERED SANDSTONE	✓	
1235	1275	WEATHERED COAL	✓	
1275	162	MUDSTONE	✓	
162	166	COAL (VIRTDWELL)	✓	
166	180	MUDSTONE	✓	

Backfill	Tuby of Standup	Installation
Type/Depth	Type/Depth	Type/Depth
62-180		

Core Runs			
From	To	Recovery	Casing
/			

Samples/Core Left:	Yard	Site
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Bits Used			
Size	158	120	
No.			
Remarks			

Circulation Fluid			
Type	From	To	Return %
AIR	62	180	100%

Orientation (Vertical unless stated)	
Angle from Horizontal	Direction
↘	N ↑

Rotary Drilling Complete? Yes No Plugged at: 90

Other tests/samples			
/			

Ground Water				Depth Struck	74	120
Water Levels				After	mins	
Morning	Time:	Evening	On Pulling Casing	After 20 mins		
Level	Level	Level	Level	Sealed off		
Casing	Casing	Casing		Water sample?		

Time Spent			Standing Times	
Total Hours this Sheet:	Coring	Open Hole	(i)	(Details in
Moving from BH	to BH 1	Time (hrs): 1/4	(ii)	Remarks)

Remarks (including standing time details and visits to site by non Phoenix Drilling Staff)

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Inspection Pit	Depth	Width	Length	Time
	1.2	0.3	0.2	1/4 hr

Rig Type: FEASTE XL	No: RL001
Driller (1): J. HARRIS	
Drillers (2 & 3): G. ALLAN	

Day: MONDAY	Date: 21/05/18	Sheet: 1
Site: STATION ROAD PLAINS		
Job No: 2789	Borehole: 1	

Project No: 5037

SIMPSON WINING & GEO TECHNIQUES LTD

PIT No 1

Project: Vacant Site Brownsie Road

Location: Plains, Aithea

Client: Mr & Mrs G Fraser

SUBSURFACE PROFILE			SAMPLE				Lab Data			Shear Strength		Well Data	Remarks	
Elevation	Description	Symbol	Depth (m)	Type	SPT N-Value	Recovery	0 Angle	NMC (%)	LL (%)	Bulk Density	Hand Vane (kN/m ²)			Apparent Cohesion
0.60	Black BLAES, FILL	[Cross-hatched symbol]	0.60	D										Sides of Pit Stable No Groundwater encountered
	Concrete slab, shaft cap 0.55 metres thick, 6 metres long													
	Bottom of Trial Pit													

V: Hand vane test
D: Disturbed Sample

Logged By: I. Simpson

Excavation Method: Tracked Excavator

Excavation Date: 18th May 2018

Sheet: 1 of 1

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APPENDIX 2

POSITION OF OLD CAPPED SHAFT

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