

Our Ref: GCL/14278/Let2

Your Ref:

Contact: Gwyn Lake

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25th February 2020

Infinite Renewables Limited
 Number 1
 Waterton Park
 Bridgend
 CF31 3PH

For the attn. of Gillian Jones

Dear Gillian,

COAL MINING RISKS ASSESSMENT – PROPOSED SOLAR FARM, MALHOUSE FARM

1.0 Introduction

The Royal Mint are proposing the construction of a new solar farm at Malhouse Farm, Llantrisant. The area is located adjacent to the existing wind turbine which has recently been constructed.

The planning application for the development has highlighted that part of the development area lies within a Coal Authority development high risk area. This risk designation refers to a small coal outcrop which is suggested to outcrop across part of the development area.

2.0 Previous Investigation

Terra Firma Wales Previously carried out a site investigation for the wind turbine (report No 14728) in August 2017. The investigation consisted of a number of machine excavation trial pits and a rotary cored borehole. A copy of the borehole log is attached to the rear of this letter. The ground conditions encountered are summarised in **Table 2.1**.

Table 2.1 General Summary of Ground Conditions		
Depth (m)	Thickness (m)	Stratum
GL - 19.0	-	Medium dense brown grey clayey sandy GRAVEL
19.0 - >30	-	SANDSTONE

3.0 Geology

The 1:50000-scale geological map of the area (Sheet 248 solid and drift editions) shows the site to be underlain by the rocks of the Hughes Member, Carboniferous in age. These rocks comprise green-grey, lithic arenites ("Pennant sandstones") with conglomerate lenses at bases of units; thin mudstone/siltstone and seatearth interbeds and mainly thin coals.

The Daren Ddu coal seam is shown outcropping to the north of the site. The seam dips towards the north and will therefore not underlie the site.

The seam mentioned that outcrops across the site is not shown on the geological map. The seam is also absent on the county series maps.

A fault is shown running horizontally across the northern part of the site area.

Till deposits are shown to overly the solid geology.

4.0 Assessment of the risk from past shallow mining

The Coal Authority viewer suggests that a small outcrop is located beneath parts of the development area. However, there is no record of the seam in the local geological maps and no mention of the possible unnamed seam in the geological memoirs for the area. Tera Firma have held discussions with the Coal Authority, and they were unsure as to what the outcrop referred to as they held no record of the seam. Given the lack of information on the seam it is considered that it is likely that the seam is of inferior size/quality and therefore highly unlikely that the seam would have been worked historically.

It should also be noted that there is a substantial thickness of superficial cover below the site which would make working the seam uneconomical. The absence of any coal mining features shown on historical maps and lack of information on the seam confirms this statement.

It is therefore concluded that there is insignificant risk to the proposed development caused by unrecorded shallow coal mining.

I trust that the above is to your satisfaction, however, if you have any queries or require any further information please do not hesitate to contact me. In the meantime I await your further instructions.

Yours sincerely

for: Terra Firma (Wales) Ltd



Mr Mathew T C Lake



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Borehole No.

BH1

Sheet 1 of 3

Project Name: Malthouse	Project No. 14278	Co-ords:	Hole Type RC
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Location: Llantrisant	Level:	Scale 1:50
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Client: Infinite Renewables Limited	Dates: 09/08/2017	Logged By ML
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Water Strikes	Depth (m)	Type /Fl	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
										Brown sandy GRAVEL (drillers description)	
											1
											2
											3
											4
											5
											6
											7
											8
											9
											10

Remarks:



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Sheet 2 of 3

Project Name: Malthouse	Project No. 14278	Co-ords:	Hole Type RC
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Location: Llantrisant	Level:	Scale 1:50
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Client: Infinite Renewables Limited	Dates: 09/08/2017	Logged By ML
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Water Strikes	Depth (m)	Type /Fl	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
										Brown sandy GRAVEL (drillers description)	11
											12
											13
											14
											15
											16
											17
											18
	19.00 - 19.40		25	0	0	19.00					19
	19.40 - 19.50	C				19.40				Medium strong thinly bedded dark grey fine grained silty SANDSTONE slightly weathered with some iron stained discontinuities. Non intact.	
	19.40 - 20.40		100	75	50					Medium strong thinly bedded dark grey fine grained silty SANDSTONE slightly weathered	20

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Sheet 3 of 3

Project Name: Malthouse	Project No. 14278	Co-ords:	Hole Type RC
Location: Llantrisant		Level:	Scale 1:50
Client: Infinite Renewables Limited		Dates: 09/08/2017	Logged By ML

Water Strikes	Depth (m)	Type /Fl	Coring			Depth (m)	Level (m)	Well	Legend	Stratum Description	
			TCR	SCR	RQD						
	20.40 - 20.50	C	100	20	0	20.40				with some iron stained discontinuities. 30degree planar rough bedding planes closely spaced at ~0.1m.	
	20.50 - 20.90		100	50	30	20.50				Medium strong thinly bedded dark grey fine grained silty SANDSTONE slightly weathered. 30degree planar rough bedding planes very closely to closely spaced at ~0.05m. Highly fractured.	21
	20.90 - 21.10	C	100	0	0	20.90				Medium strong thinly bedded dark grey sandy SILTSTONE slightly weathered. 70degree undulating smooth joint.	
	21.10 - 21.70		100	60	40	21.10				Medium strong thinly bedded dark grey fine grained silty SANDSTONE slightly weathered with some iron stained discontinuities. Non intact.	22
	21.70 - 22.00	C	100	40	20	21.70				Medium strong thinly bedded laminated dark grey silty SANDSTONE slightly weathered with some iron stained discontinuities. 30degree planar rough bedding planes very closely to closely spaced between 0.05m and 0.15m.	23
	22.00 - 23.50		40	10	10	22.00				Medium strong thinly bedded dark grey fine grained silty SANDSTONE slightly weathered. Highly fractured.	24
	23.60 - 23.70	C				23.50				Very weak thinly bedded dark grey silty MUDSTONE. Moderately weathered, highly fractured. Poor recovery.	
	23.50 - 25.00		100	10	10	23.50				Very weak thinly laminated dark grey silty MUDSTONE. Moderately weathered, highly fractured.	25
						25.00				End of Borehole at 25.000m	26
											27
											28
											29
											30

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