

MOLD INVESTMENTS LIMITED



SITE CONDITION REPORT FOR PARRYS QUARRY

REF: SCR/MIL/PQ/1.00/2020

Carried out for: **MOLD INVESTMENTS LTD**

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COMPLETE SECTIONS 1-3 AND SUBMIT WITH APPLICATION

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AT SURRENDER: ADD NEW DOC REFERENCE IN 1.0; COMPLETE SECTIONS 8-10; & SUBMIT WITH YOUR SURRENDER APPLICATION.



1.0 SITE DETAILS	
Name of the applicant	Mold Investments Ltd
Activity address	Parrys Quarry Landfill Pinfold Lane Alltami Mold, Flintshire CH7 6NY
National grid reference	SJ 27477 66279 Site Entrance

Document reference and dates for Site Condition Report at permit application and surrender	White Rock Geo-Environmental Ltd Ref: SCR/MIL/PQ/1.00/2020 Environmental Permit Application Site Condition Report
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Document references for site plans (including location and boundaries)	White Rock Geo-Environmental Ltd Environmental Permit Application Environmental Setting and Site Design (ESSD) ESSD/MIL/PQ/1.00/2020 August 2020
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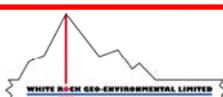
Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 Condition of the land at permit issue	
Environmental setting including: <ul style="list-style-type: none"> • geology • hydrogeology • surface waters 	<p>GEOLOGY</p> <p>The site is situated within an outcrop of Carboniferous aged Coal Measures strata (predominately comprising mudstones with sub-ordinate sandstones, siltstones and coal beds). The geological succession is complicated by local structural controls; which has created a series of fault bounded</p>



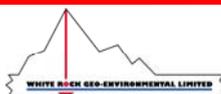
blocks in the area and caused the various types of bedrock to locally become juxtaposed against each other.

The geological sequence at the site has previously been described as very complex (TerraConsult⁷, 2015); which is considered to reflect the rapid lateral and vertical changes in lithology due to the depositional nature of the sequence and post-depositional structural controls (i.e. dipping bedding and faulting). Attempts were made by TerraConsult to laterally correlate units observed at the site; evidently this was difficult due to the limitations of the available data (including that boreholes only provide a one-dimensional (vertical) record of the geological succession) and the complicated nature of the geology as outlined above. Nevertheless, based on published geological mapping, the following simplified geological sequence for local area has been identified:

- Etruria Formation⁸ – comprising red, purple, brown, ochreous, green, grey and commonly mottled mudstone, with lenticular sandstones and conglomerates. The Etruria Formation includes the 'Buckley Blue' unit (a local and now obsolete name), which comprises a purple, black and grey mudstone, and was principally the clay that was excavated from the quarry void;
- Pennine Middle Coal Measures Formation – comprising inter-bedded grey mudstone, siltstone, pale grey sandstone and coal seams. The upper part of the Coal Measures includes a sandstone unit referred to as the 'Hollin Rock' which immediately underlies the Etruria Formation; and
- Pennie Lower Coal Measures Formation – comprising inter-bedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

HYDROLOGY

The site lies within the catchment area of the River Dee. The nearest water course to the site is Alltami Brook which is situated to the west of the site; flowing from southwest to



northeast. At its closest point it is 250m to the northwest of the site; it flows onwards and converges with Wepre Brook 700m to the north of the site. Wepre Brook flows from west to the east and is a tributary to the River Dee c. 4km to the northeast of the site. New Inn Brook, another tributary to Wepre Brook, is present 900m to the east of the site.

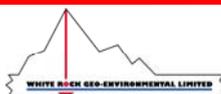
Identified flood risk zones associated with Wepre Brook and Alltami Brook are confined to their respective river channels and, as such, at their closest they are approximately 250m to the northeast of the site.

The area immediately to the south of the site includes several ponds and is part of the Deeside and Buckley Newt Sites designated SSSI and SAC. This relates to the presence of four protected amphibian species which were identified on the site mid-1990s. The owner of the site at that time (Hanson Brick Ltd) relocated these species from an area of planned mineral extraction and established a dedicated conservation area (which were subsequently designated as part of the SSSI and SAC).

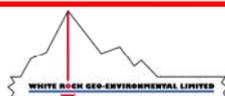
HYDROGEOLOGY

The Coal Measures and surrounding bedrock are classified as a Secondary A Aquifer. Jones *et al.* (2000) describe how these strata are expected to behave as a multi-layered aquifer system in which lower permeability mudstones act as aquicludes between sandstone aquifer horizons. Both the mudstones and sandstones (which are well cemented) possess minimal primary porosity. Groundwater flows predominately occur within joints and fractures within the sandstone strata to depths of up to 250m; transmission of groundwater will depend on how locally well connected these hydrogeological units are. Lateral recharge is considered likely to be limited as the hydraulic continuity of the aquifer is disrupted by the faulting which effectively splits the aquifer units into isolated blocks. Locally, the hydrogeology can be modified by the presence of mine shafts and inter-connecting mine workings.

The superficial deposits (alluvium and glacio-fluvial) locally present along Alltami Brook and Wepre Brook are classified as



	<p>Secondary A Aquifer. The Glacial Till is classified as unproductive strata.</p> <p>In general, the groundwater flow direction within the Coal Measures is expected to follow the overall topography towards the north; however local variations in flow directions (and hence piezometric head differences between separate or poorly connected hydrogeological units present within the Coal Measures) are also likely to be apparent.</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures 	<p>Historical maps indicate that the southern part of the site was being quarried prior to 1874 and is identified as a brick works with a clay pit, kilns and a railway track shown on the 1874 map. There is also a colliery (later identified as Elm Collieries) present in the south western corner which is now approximately the location of the current site entrance.</p> <p>Between 1874 and 1912 historic maps show the development and expansion of the brickworks and colliery with a new brickworks identified as Castle Brickworks being developed in the northern half of the site. The quarry development identified above is in the western half of the current site as is visible in historic aerial photographs (Google Earth) from 1945 with the eastern half remaining as agricultural fields.</p> <p>Historic Maps for the wider area, from 1900 onwards, show a number of brickworks having been developed to the south of the site with a small pit or pond shown immediately to the west of Pinfold Lane near the Castle Brickworks.</p> <p>The original brickworks to the south are identified as disused on the 1964 map and the colliery is no longer shown but disused shafts are identified. By 1970 the former Colliery is identified as a works with industrial buildings having been erected. The Castle Brickworks to the north appears to still be in use in 1964 but over the years the scale of the buildings diminish and eventually it is shown as a workshop which is approximately half the size of the original buildings. The railway is</p>



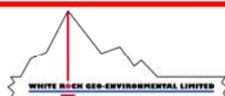
	<p>still present on the 1963 map but is shown as dismantled on the 1970 map.</p> <p>The former brick pits remain shown as disused throughout this period and the brickworks buildings to the south remain until the 1982 map when they are shown as having been removed.</p> <p>See Landmark-Envirocheck Site Sensitivity Map and Report attached at Appendix A</p>
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	See attached reports
Baseline soil and groundwater reference data	
Supporting information	<ul style="list-style-type: none"> • Source information identifying environmental setting and pollution incidents, see ESSD • Historical Ordnance Survey plans • Site reconnaissance see ESSD • Historical investigation / assessment / remediation / verification reports, see ESSD • Baseline soil and groundwater reference data- see ESSD

3.0 Permitted activities	
Permitted activities	Inert Landfill
Non-permitted activities undertaken	Quarrying Clay;
Document references for: <ul style="list-style-type: none"> • plan showing activity layout; and • environmental risk assessment. 	ESSD Drawings ESSD1, ESSD2, ESSD 4 ESSD HRA LFGRA

Note:

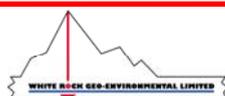
In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (*Environmental Risk Assessment - EPR H1*) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.



These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application.



4.0 Changes to the activity	
Have there been any changes to the activity boundary?	No
Have there been any changes to the permitted activities?	No
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	No
Checklist supporting information	<ul style="list-style-type: none"> Plan showing any changes to the boundary (where relevant) ESSD 2 Description of the changes to the permitted activities (where relevant) N/A List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant) N/A

5.0 Measures taken to protect land	
Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist supporting information	All phases to have constructed geological barrier built under part time CQA in accordance with CQA Plan

6.0 Pollution incidents that may have had an impact on land, and their remediation	
Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.	
Checklist supporting information	There are no records of pollution incidents that may have impacted on land as presented in the appendices Records of their investigation are included in report

7.0 Soil gas and water quality monitoring (where undertaken)

Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

Checklist of supporting information	Description of groundwater monitoring is presented at Appendix ESSD 9 and baseline gas monitoring is presented at Appendix ESSD 10
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8.0 Decommissioning and removal of pollution risk		
Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.		
Checklist supporting information	of	Site closure plan is presented in the ESSD and covered under the Financial Provision for the landfill site for three years post closure monitoring for inert landfills

9.0 Reference data and remediation (where relevant)		
Currently Not Applicable		
Checklist supporting information	of	Land and/or groundwater data collected at application (see attached report)

10.0 Statement of site condition		
Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:		
<ul style="list-style-type: none"> N/A at this stage 		

APPENDIX A:

SITE SENSITIVITY REPORT