

Our Ref: 17059

Your Ref:

Contact: James Rhys-Williams

8<sup>th</sup> April 2022

38 Rhiw Road  
Rhiwfawr  
Cwmllynfell  
Swansea  
SA9 2RD

For the attn. of Ross Davies

Dear Ross

## **SITE INVESTIGATION PROPOSAL : FORMER COELBREN HEALTH CENTRE**

### **1.1 General**

An intrusive site investigation designed and justified in accordance with guidance provided in BS10175:2011+A2:2017 should be undertaken to investigate the medium risks as identified in the conceptual site model illustrated in Terra Firma report 240122-17059-1 dated January 2022. It is proposed to:

- Identify the potential environmental liabilities at the site associated with historical made ground and near surface soils and modern fill materials.
- Provide a summary of the environmental conditions at the site, together with any necessary remediation works to render the site fit for its intended use.

### **1.2 Intrusive Investigation**

It is recommended that an intrusive investigation is undertaken to inspect the ground conditions and to take soil samples for laboratory chemical testing. It is perceived a combination of hand excavated trial pitting and dynamically sampled boreholes will be suitable to investigate the site.

### **1.3 Soil Sampling Strategy**

Soil sampling locations should be selected on a non-targeted basis to characterise the contamination status of the site. Given the presence of buried utilities and soakaway drainage the adoption of a regular grid sampling pattern will prove to be difficult. However, a regular closely spaced square grid should be attempted, with the intension of sampling all encountered made ground and relict topsoil strata within 1.20m of the existing ground level. A proposed exploratory hole sampling layout is presented in **Figure 1.0**.

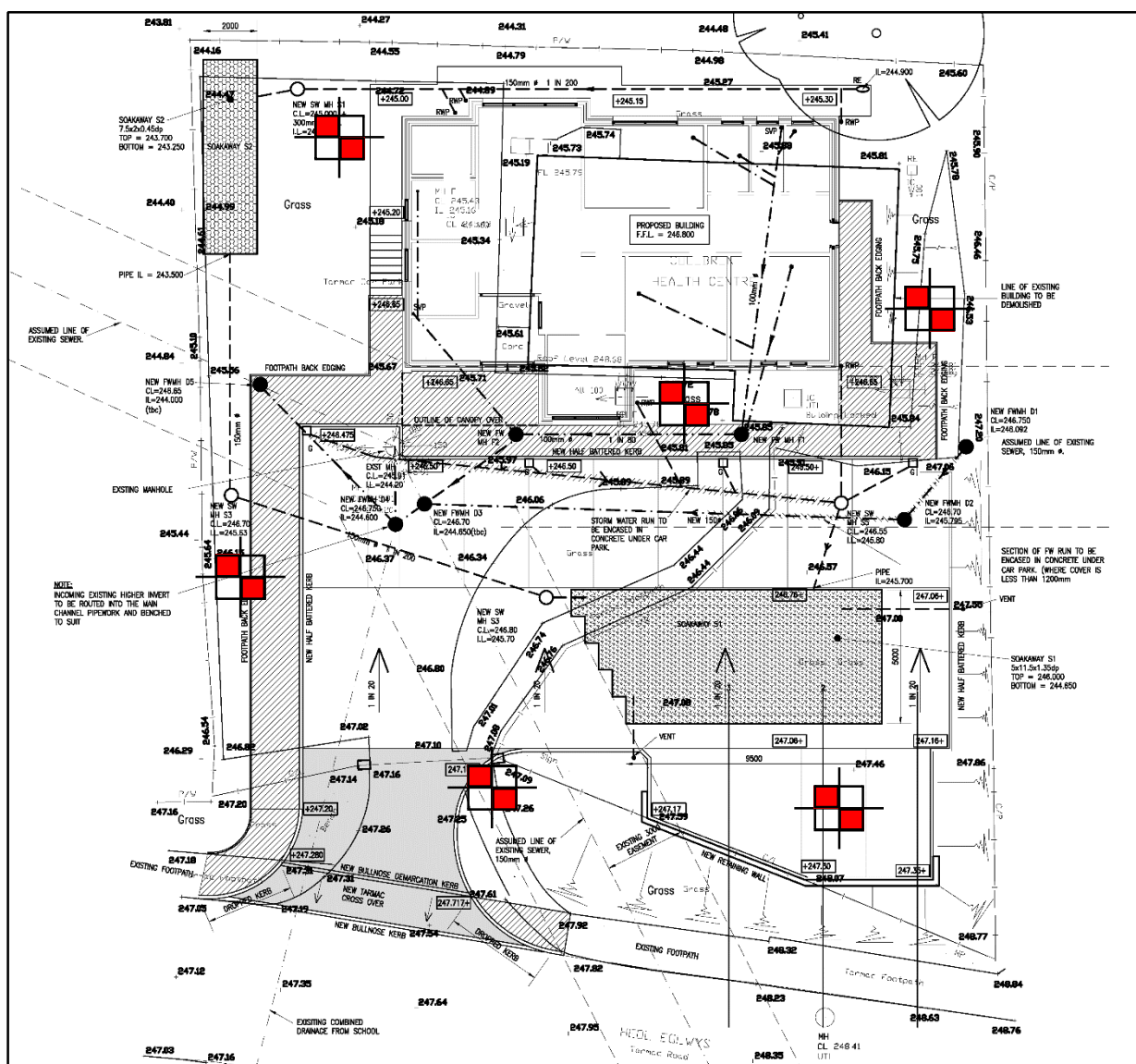


Figure 1.0 Proposed Exploratory Hole Locations

### 1.4 Recommended Soil Chemical Analysis

It is recommended that all soil samples be tested at an accredited laboratory for the determinands listed in Table 1.0.

Table 1.0 Soil Laboratory Analysis

Metals & Metalloids	In-Organics	Organics	Others
Arsenic	Cyanide	Phenols	pH (acidity)
Cadmium	Sulphate	PAH	Asbestos
Chromium III			
Chromium VI			
Copper			
Lead			
Mercury			

Nickel			
Selenium			
Zinc			

A Tier 1 assessment of the analytical results should be made with comparison to the 2015 Suitable 4 Use Levels (S4UL) provided by Land Quality Management (LQM) Limited and the Chartered Institute of Environmental Health (CIEH) or Category 4 Screening Levels (C4SL) provided by the Department for Environment, Food and Rural Affairs (DEFRA, 2014). In lieu of S4UL or C4SL generic assessment criteria, comparison should be made to published Soil Guideline Values (SGV) by the Environment Agency 2009.

It is considered that soil guideline values for a **residential setting with plant uptake** should be adopted in the first instance at the site.

## 1.5 Reporting

The final report should include findings of the site investigation and analysis of soil laboratory test results. The outcomes of which should be input into a refined conceptual site model to identify any residual pollutant linkages at the site with respect to its proposed end use as a residential dwelling.

We 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 us.

Yours sincerely

for: **Terra Firma (Wales) Ltd**

**Mr J. Rhys-Williams**  
**BSc FGS SGPV**