

Our Ref: 18049

Your Ref:

Contact: Mathew Lake

26<sup>th</sup> March 2025

P&P Building and Roofing Contractors

For the Attention of: Mr. Duncan Long

Dear Duncan,

## **Post Demolition Geoenvironmental Supplementary Investigation**

### **1.0 Introduction**

P&P Building and Roofing Contractors are currently developing the site previously occupied by the Zanzibar Nightclub located on Stow Hill Newport. A pre demolition ground investigation was undertaken by Hydrock (report ref 40SH-HYD-XX-XX-RP-GE-0001-P01-S2) comprising a phase 1&2 investigation.

TFW Group Ltd have been commissioned by P&P Building and Roofing Contractors to undertake a post demolition investigation of the site, investigating possible sources of contamination found in the previous phase 1&2 assessments.

The main objectives of the investigation are:

- To investigate the remaining areas of site previously occupied by the former buildings, with particular attention to areas identified during the historical review (burial ground and unknown tank)
- Collect samples for laboratory chemical testing

In order to achieve the above objectives, TFW Group Ltd carried out an investigation which comprised a review of existing data on the site and a site visit to inspect the ground below the nightclub following demolition.

### **2.0 Previous Investigation**

The Hydrock investigation comprised 3No soakaway test pits, 4No windowless sampler boreholes and 1No rotary borehole. Gas and groundwater monitoring wells were installed in the windowless sampler and rotary cored boreholes. The wells were monitored for possible ground gas over a 12 week period, with a total of 6 monitoring visits. Soil samples were also taken and submitted for laboratory chemical testing.

#### **2.1 Encountered Ground Conditions**

The investigation revealed tarmac/concrete over a subbase with varied in depth between 0.25/0.45 which was laid directly onto Sandstone bedrock of the St Maughan's Formation.

Groundwater was not encountered during the investigation or following monitoring visits.

## **2.2 Summary of Soil Testing**

6No samples were taken from the subbase material and 4No samples were taken from the near surface weathered sandstone and submitted for a thorough suite of determinants. Of the samples 1No sample of subbase and weathered sandstone was found to contain slightly elevated levels of Benzo(a)pyrene. 1No sample of made ground also contained trace asbestos fibres.

## **2.3 Summary of Ground Gas Monitoring**

Ground gas monitoring classified the site as Characteristic Situation 1 with methane carbon dioxide levels all below 1% and 5~% respectively which would agree with the lack of gas source identified in the phase 1 assessment.

## **2.4 Summary of Generic Assessment**

The Generic assessment concluded that 2No pollutant linkages are preset on site relating to the PAH and asbestos contamination identified during the investigation. Mitigation measures were deemed necessary though the assessment concluded that the development comprised the buildings and hardstanding areas which would provide sufficient mitigation measures for the proposed development.

## **2.5 Recommended Further Work**

Hydrock recommended the following additional Investigation work post demolition:

- investigation of the eastern part of the site once the existing building has been demolished. This will include a deep borehole under proposed Block A as originally proposed;
- investigate areas of interest noted during the desk-based assessment (in particular the former tank location on the southern edge of the site and the burial ground)
- additional ground gas monitoring will be required in proposed borehole RH02 following the second phase of the investigation

## **3.0 Post Demolition Investigation**

Terra Firma were employed by P&P Building and Roofing Contractors to complete the post demolition ground investigation.

As part of this process Terra Firma conducted a review of the exiting phase 1&2 investigations to design a suitable post demolition investigation. Following the review it was concluded that best way to conclude the investigation was to undertake trial pitting of the previously inaccessible areas post demolition. The proposed borehole (RH02) was not deemed necessary given no sources of ground gas were identified in the phase 1 assessment and the lack of gas identified during the previous monitoring programme.

### **3.1 Site Works**

A Terra Firma Engineer attended site on the 7<sup>th</sup> March 2025 following demolition of the former nightclub. Demotion had comprised removal of the former building with exception of the building façade which was retained for the proposed development. All other walls, foundations and floor slabs had been broken out and removed from site. During this visit, enabling works had been carried out across the site which included a site strip.

During the visit, it was evident that the previously identified subbase had been removed from site during enabling works where fresh sandstone was observed across the entire site. This was also the case for the areas of the former buildings where it was evident that the foundations and floor slabs were founded directly upon the sandstone bedrock.

An attempt was made at excavating trial pits across the site. The sandstone was unable to be excavated using the available 14 tonne excavator, therefore no soil samples were collected during the visit.

In lieu of soil sampling, a visual assessment of the site and exposed surface was made.

#### **3.1.1 Former Burial Ground**

No evidence was observed of any burial ground or features. It is likely that this along with any soils that may have housed burial features were removed during earthworks when constructing the former Church/Nightclub.

#### **3.1.2 Former Unidentified Tank**

No evidence of a tank or possible oil/fuel leaks were observed in the areas of the former tank identified during the historical review. The tank was either used for water or any possible contamination was removed during the previous development of the site.

### **3.0 Conclusions**

The supplementary investigation found fresh intact rock located across the entire site. The exposed rock appeared clean with no visual or olfactory evidence of contamination present.

It is likely that the previously identified contamination was removed during site enabling works. However, given that the development proposals comprise hard standing and the proposed buildings, any remnant contamination that may have cross contaminated the weathered St Maughan's Formation will be suitably capped, breaking any pollutant linkage.

Any imported soils used for landscaping will need to be accompanied by a certificate to show they are clean and suitable for a residential end use.

The risk from ground gas is considered negligible and no further action is required in this matter.

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: TFW Group Limited

