

Technical Note

Project: Swansea University Campus

Subject: Planning Condition 21 and 22 - Material Import - Scheme for Investigation

Client:	St Modwen	Version:	V1
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I Background

This Technical Note details the strategy for managing the import of subsoil, topsoil and aggregate used in the development of the next phases of the Swansea University Campus off Fabian Way, Neath Port Talbot.

This site was originally developed by BP in the 1930s and was used to store both crude oil and refined products during the import and export operations of the main refinery in Llandarcy (approximately 2 miles to the north). Following the decommissioning carried out between 2001 and 2005, the site was acquired by St Modwen Developments Ltd in 2009. The site was remediated between 2010 and 2011 for the proposed Swansea University Bay Campus. The remedial works carried out are documented in the Hydrock Remediation Validation Report-R/HC10020/005-May 2011.

The remedial target values used during the remediation for both deep and shallow soils were derived by Atkins and set out in report 5077146-TRA-OUT-0020-July 2010. On completion of the site works there were no exceedances of the remedial target values and no protective capping layer was considered necessary to manage residual human health issues. The Atkins soil and materials quality criteria have used during the Phase 1 of the Bay Campus development to assess the quality of imported aggregates and soil for landscaping purposes. It is proposed that the Atkins chemical criteria used for the first phase of development continue to be utilised for the next phases of development.

Planning condition 21 states that:

'Any topsoil [natural or manufactured], or subsoil, to be imported shall be assessed for chemical or other potential contaminants in accordance with a scheme of investigation to be submitted to and approved in writing by the Local Planning Authority in advance of its importation. Only

material approved by the Local Planning Authority shall be imported. All measures specified in the approved scheme shall be undertaken in accordance with the relevant Code of Practice and Guidance Notes. Subject to approval of the above, verification sampling of the material received at the development site is required to verify that the imported soil is free from contamination and shall be undertaken in accordance with a scheme agreed with in writing by the LPA.'

Planning Condition 22 states that:

"Any aggregate (other than virgin quarry stone) or recycled aggregate material to be imported shall be assessed for chemical or other potential contaminants in accordance with a scheme of investigation to be submitted to and approved in writing by the Local Planning Authority in advance of its importation. Only material approved by the Local Planning Authority shall be imported. All measures specified in the approved scheme shall be undertaken in accordance with the relevant Code of Practice and Guidance Notes.

Subject to approval of the above, verification sampling of the material received at the development site is required to verify that the imported soil is free from contamination and shall be undertaken in accordance with a scheme agreed with in writing by the Local Planning Authority."

This document confirms the procedure for the assessment and ultimate approval of potential sources of subsoil and/or topsoil required on the site.

2 Scheme of Investigation

The assessment of materials for import will be in general accordance with the WLGA, CLILC publication: 'Requirements for the Chemical Testing of Imported Materials for Various End Uses and Validation of Cover Systems' – May 2013 and prepared by the Welsh Land Contamination Working Group.

2.1 Initial appraisal

The initial stage of the assessment of potential subsoil and topsoil will comprise a review of available desk study and ground investigation reports, including the results of previous laboratory analysis.

For bulk aggregate import the initial stage will comprise an assessment of the processing history and the permits and permissions under which the material was produced.

The appraisals will be carried out by a suitably qualified geo-environmental consultant and will assist in an assessment of the historical use of the source site and the nature of any likely contamination present.

2.2 Site Inspection & Sampling

Subject to the findings of the initial appraisal, potential sources of suitable material will be inspected at source by a suitably qualified consultant. An exception to site visits will be for materials from trusted and legally permitted aggregate recycling or manufacturing facilities following inspection of the accompanying certifications and testing protocols. However, where there is doubt regarding the process controls at these facilities inspections will be requested.

During the inspection, a visual assessment of the materials will be carried out in order to identify the presence and proportions of any visual or olfactory evidence of contamination or geotechnically unsuitable materials (such as plastic etc).

Where the visual inspection suggests materials to be suitable for use a minimum of one representative sample per 250m³ will be taken and sent to a suitably accredited laboratory for testing. A minimum of 4 samples for the first 1000m³ shall be obtained.

In line with agreements accepted for land associated with earlier phases of the development, following initial appraisal and testing of the first 1000m³, imported bulk materials from green field sites will be tested at a frequency of 1 test per 1000m³. Materials from a brownfield site will be subjected to a minimum testing frequency of 1 per 500m³.

For sources where the historical data is incomplete or there is uncertainty regarding the material source increased rates of testing may be imposed depending on the material condition and the professional judgement of the overseeing competent engineer.

Testing certificates provided by aggregate suppliers will only be accepted following checks to ensure the testing regime and sample dates are considered relevant to the batch of material being imported.

Samples will be scheduled for a range of chemical determinands, the choice of which shall demonstrate compliance with the necessary thresholds associated with the redevelopment of Swansea University Bay Campus and shall also demonstrate the absence of any 'key' contamination associated with the historical use of the source site.

As a minimum, the sampling will be tested for the following determinands:

- pH
- Arsenic
- Cadmium
- Chromium
- Copper
- Lead
- Copper
- Nickel
- Zinc
- Mercury (Inorganic)
- Selenium
- TPH CWG
- Speciated PAH
- Asbestos

On receipt of the laboratory results, the result of the sampling shall be assessed by a suitably qualified consultant and compared against the site specific criteria detailed above.

2.3 Reporting

Details of the sources of suitable fill material, including reference to available desk study and ground investigation data shall be reported in a Technical Note.

The Technical Note will provide a detailed description of the fill materials, including details of the total volumes of material for import and copies of the relevant laboratory certificates. The data will be compared with the permitted thresholds, demonstrating its suitability for use on the site.

In line with the requirements of planning condition 21 and 22 (or any subsequent revised condition numbering associated with a new planning permission that requires the provision of a scheme of investigation for the importation of topsoil, subsoil and aggregate), only material approved by the local planning authority shall be used on site.

Notwithstanding, it is possible that an off-site source of material is identified as suitable and then 'called off' as required with the frequency of testing matching the volumes imported. In

this case a competent engineer must re-assess the source materials at regular intervals to ensure consistency from the supplier, which may require additional source inspections and testing to demonstrate uniformity.