

Principal Contractor



Site Background & History

The site has historically remained undeveloped – this is most likely as a consequence of the site being prone to flooding from the adjacent River Usk. The site is split (north / south) by a drainage reën discharging into the River Usk.

In 2008, remediation works were undertaken on the area north of the reën (this area is now the subject of the Phase III works including the recent new school development) – these remediation works were to address PCB contamination associated with the historical tipping of drums containing PCB waste on the site. During the remediation works, it was reported that 778 drums of PCB type material were removed, as well as 2,000 tonnes of impacted soils. This part of the site was subsequently capped with 600 mm clean capping material.

The site as a whole was previously owned by Riversee Ltd who held an Environmental Permit (MB3390HF) primarily for land raising purposes (to alleviate the flood risk potential).

The site is currently owned by the Pobl Group and is being developed by Engie for residential purposes. The circa £24m housing development is being undertaken on behalf of the Pobl Group, Newport City Council and the Welsh Government.

The site and the respective phase areas are shown in Figure 1 below

Figure 1 – Herbert Road Site



Site Contamination

Recent site investigations undertaken on the site did not indicate any significant contamination issues.

Recent enabling works by Engie had generated a number of waste soil stockpiles. The stockpiled materials had been tested and assessed by Terra Firma in accordance with WM3 – the soils comprised of a mixture of both hazardous and non-hazardous soils.

The risk to controlled waters from the previously imported fill material and consequently the stockpiled soils, had been assessed and agreed by Natural Resources Wales [NRW] to be low. As such, the potential reuse of any existing material was not considered to constitute an unacceptable risk to controlled waters.

Engie engaged Envirotreat to review the historical site investigation information / stockpile assessments with the aim of preparing a range of cost-effective solutions for the effective management of soils surplus soils.

A suitable remediation strategy was developed for the site.

Remediation Strategy

Enviro-treat reviewed several remediation options for the stockpiled soils (estimated to be circa 4,000 tonnes in total), including offsite disposal and potential reuse of some or all of the surplus stockpiled soils. The prime objective being to reuse soils back onsite where practical to do so.

Following in-depth discussions with Engie and a comprehensive review of the development plan, it was determined that there was a significant requirement for fill materials at a number of locations on the site to achieve required formation levels. The review indicated a requirement in excess of 4,000 tonnes across all of the development phases.

Enviro-treat considered all the possible options and legal requirements for retaining the materials on-site – these options included possible exemptions, utilising the CL:AIRE Definition of Waste: Code of Practice [DoW:CoP] and treatment under an Environmental Permit (Mobile Treatment Licence). Exemptions alone would not facilitate the reuse of all the stockpiled soils, DoW:CoP was not viable as the soils were already excavated and considered to be a waste. Therefore, the only suitable option was to treat / process the stockpiled soils under the auspices of the Enviro-treat's Mobile Treatment Licence (MTL) to fully recover the soils and enable reuse on-site (in accordance with the identified requirements for fill material).

In addition, Enviro-treat reassessed the Garden and Public Open Space [POS] soil acceptance criteria to better reflect the site wide conditions. Enviro-treat liaised closely with Newport Council to gain regulatory approval for the revised criteria.

Regulatory Approval

In accordance with the requirements of the Enviro-treat Mobile Treatment Licence (EPRIEP3499SN), Enviro-treat submitted an application to NRW to formally deploy the Mobile Treatment Licence for the Herbert Road site.

In addition to the required information, Enviro-treat also produced a Remediation Method Statement outlining the proposed remediation works to be undertaken at the Herbert Road site.

Site Operations

Enviro-treat mobilised to site in March 2021 and completed the works in approximately two weeks. Stockpiled soils were assessed on-site by the Project Manager who determined the required treatment / processing to produce a suitable material for appropriate reuse.

One of the stockpiles is shown in Figure 2 below.

Figure 2 – Stockpile SP1



A range of treatment / processing techniques were utilised on the site as summarised below:

- stabilisation of soils containing elevated concentrations of hydrocarbon pollutants (to reduce the leachability / mobility).
- screening using a rotary screening bucket to produce a fine material suitable for use in POS areas and aggregate suitable for use as sub-base.

- screening using a riddle bucket to produce a material suitable for general fill.
- Addition of CenDri (low carbon mineral drying agent) to improve geotechnical properties.

The processing of materials is shown in Figure 3 below. The use of the rotary screening bucket is shown in Figure 4 below.

Figure 3 – Processing of Materials



Figure 4 – Processing Materials with a Rotary Screening Bucket



Environmental Monitoring

In accordance with the approved Deployment and Remediation Method Statement Envirotreat undertook environmental monitoring to confirm compliance with site wide threshold values.

Dust, noise, odour and VOC monitoring were carried out at critical and sensitive environmental monitoring points throughout the works - no exceedances were recorded.

Validation

Samples of treated material were assessed on-site and samples were submitted for laboratory assessment at i2 Analytical.

The testing and analysis confirmed that the treated materials were fully compliant with the designated reuse criteria and were therefore suitable for appropriate reuse on-site (as a replacement for imported clean materials).

The fully treated and validated stockpile SP1 is shown in Figure 5 below. A portion (250m³) of the screened was assessed and shown to be suitable for use in POS areas is shown in Figure 6 below.

Figure 5 – Fully Treated and Validated Stockpile SP1



Figure 6 – Screened / Validated Soils Suitable for use in Public Open Space Areas



Additional Works

To cover the proposed works required under Phase III of the development, it was agreed that the CL:aire DOW:CoP could be used to enable soils to be reused onsite. At this stage the soils have not been excavated and therefore not considered a waste.

Taking into consideration the required cut and fill requirements, contamination status of the likely excavated soils (based on assessment of historical site investigation and remediation reports) and intended end usage, Envirotreat

has produced a Material Management Plan (MMP) for the works envisaged in Phase III of the development.

The MMP together with supporting documentation were assessed by an independent Qualified Person – this enabled the works to be undertaken under CL:AIRE DoW:CoP and prevent excavated soils being considered a waste allowing the legal reuse as part of any soil requirements on the development site itself.