Houghton Retail Park

Deposit for Recovery Permit Application – Waste Recovery Plan

Additional Information

Off Site Disposal Costs Appraisal

15th February 2023

Addendum to Waste Recovery Plan (Version 3, February 2023)

This addendum provides further detail and clarification in relation to how the volumes of waste were derived regarding waste classification.

As detailed in the application, the site has historically been a colliery and subsequently an inert landfill site.

The historic landfill was operated by the City of Sunderland Council, and the original waste disposal licence is associated with the reclamation of the former colliery and deposit of inert materials. The site was only licenced to receive clean hardcore and brick and excavation wastes.

The site investigations undertaken by Shadbolt Environmental are detailed in their report 2585 Former Houghton Colliery Remediation Strategy Issue V3 Oct 2022 (provided previously) details that Made Ground was encountered in all exploratory holes undertaken across the site to a depth of up to 11m and generally comprised of dark grey, reddish, brown, CLAY with varying amounts of sand, gravel and cobbles (slag, sandstone, shale, brick, concrete, mudstone). The soils have been interpreted as typical of colliery spoil / demolition materials encountered on former colliery sites. The Made Ground was typically 3-10m in thickness. The report indicated that no topsoil was encountered on site.

The Made Ground encountered is what would be expected on a site that was previously used as a colliery then an inert landfill.

In order to construct the development platform there is a requirement to remove the vegetation surface layer, extract the historic concrete foundations and then in certain parts of the site there is the need for a general over site reduce level excavation. On average the excavation required will be 1.5 to 2 metres.

The waste produced will be:

Vegetation scrape – 6,361 m^3

Concrete foundations – 8,649 m^3

Waste - dark grey, reddish, brown, CLAY with varying amounts of sand, gravel and cobbles (slag, sandstone, shale, brick, concrete, mudstone) - 23,007 m^3

Shadbolt Environmental identified five samples taken within the area to be excavated and Waste Classification Reports have been undertaken using HazWaste Online, the reports are attached. The reports classify the waste material as non-hazardous waste.

In addition, a further 15 samples were taken at the site to carry out WAC analysis of the waste see attached results. Four of the samples were well below the inert threshold limits for all inert waste criteria parameters. All samples were inert with regard to heavy metals. Some parameters of the samples indicated the wastes more likely to be classified as non-hazardous materials rather than inert, for example a marginal exceedance for the inert waste criteria of fluoride, sulphate and mineral oil. One sample had a total PAH level higher than the other samples. Furthermore, there were some samples where Total Organic Carbons (TOCs), were ranging from 3.1 – 11.3 (% w/w). There were also two elevated results for Loss on Ignition at 11.4 and 13.6 (% w/w). There was one sample where PAH (total) was elevated at 206 (mg/kg) in comparison to the other samples. It is highly likely given the site's former use that these levels are resulting from deposits of topsoil within the deposited material.

In summary, all of the samples classified indicated non-hazardous and 9 of the 15 WAC samples passed inert WAC or exceeded only the organic content limit.

On the basis of the Waste Description obtained from the site investigations and the Waste Classifications and WAC tests undertaken the following approach to disposal was adopted:

Commercial disposal rates were obtained by Hellens Land Ltd.

Vegetation scrape - 6361m^3 at £41.11m^3

Concrete foundations - 8649m^3 at £14.11m^3

Waste - dark grey, reddish, brown, CLAY with varying amounts of sand, gravel and cobbles (slag, sandstone, shale, brick, concrete, mudstone) - Total 23,007m^3

11,503m^3 at £33.61m^3 assumed to be disposed of as inert/recovered.

5752m^3 at £63.60m^3 assumed to be disposed of as non-hazardous at low rate landfill tax.

5752m^3 at £261.32m^3 assumed to be disposed of as non-hazardous at high rate landfill tax.