

PSS Appendix 5

Waste Audit



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<p>Step 1: Description of site</p>	<p>Please see the development description (Section 3 of the planning support statement).</p>
<p>Step 2: Type and Volume of waste to be generated through the development process</p>	<p>A number of wastes will be generated during the construction phase of the plant. The production of these wastes will be minimised by following the site specific waste management plan (SWMP), which includes waste minimisation through good design. Some materials will require excavating to both level the site and also to provide footings for the facility. This will be minimised where possible, and some removed material will be utilised to level other parts of the site. It is, however, anticipated that a cut/fill balance may not be achieved and a net export of excavated soil will be required in the order of 52,000m³.</p> <p>During the operational phase of the proposed EfW facility, both Bottom Ash and Flue Gas Treatment (FGT), residues will be produced. Bottom Ash represents material that remains un-burnt after the incineration process and FGT residue constitutes fine ash particles and the dry residues from the gas scrubbing process (See Chapter 4 of the ES for further details). The proposed facility will produce approximately 75,000 tonnes of bottom ash and 12,000 tonnes of FGT residue per year</p>
<p>Step 3: Steps to be taken to reduce, re-use, and recycle any wastes produced</p>	<p>Wastes generated during both the site preparation and construction phases will be recovered or recycled where possible in line with the SWMP. Excavated materials will be used on site as engineering fill and in landscaping where practicable. However, to avoid increasing the height profile of the building, the opportunities for use of excavated materials as engineering fill are limited. This material will be transferred off site for sorting and reuse as engineering fill and aggregate.</p> <p>Green wastes from site clearance will be removed from site for shredding and composting at a suitably authorised facility. Soils and subsoils will be screened and where possible reused on site for screening or levelling purposes. Excess arisings will be removed from site for either immediate use on other nearby developments, or stored at a suitably permitted facility prior to off-site reuse. Landfill for these materials will be avoided where possible. Any soils or subsoils that are excavated due to contamination related issues will be removed from site for landfilling at a suitably authorised facility.</p> <p>Any hardcore or rubble that requires removal will be crushed and graded for use as aggregate on site where possible, and on nearby developments where not. Materials such as waste wood that may arise will be segregated on site and sent to a biomass fuelled power facility, where direct reuse or recovery is not possible.</p> <p>The facility will recover metals from the bottom ash through the use of electromagnets and eddy current separators. It is estimated that the facility will recover approximately 6000 tonnes of ferrous materials and 600 tonnes of non ferrous materials per year. The preferred bidder who is chosen to operate the facility will investigate the off-site reuse or recovery of the remaining bottom ash as an aggregate material for uses including concrete blocks and road building. There is a proven, current UK market</p>

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	<p>for this material that will normally recover around 90% of the arisings. The remaining ash will then be landfilled (as non-hazardous waste).</p> <p>The exact route for the FGT residue will, again, be a decision for the preferred bidder, but it is normally diverted to waste chemical treatment plants for the neutralisation of waste acids. A number of companies are developing facilities for its recovery as gypsum for use in the cement and construction industries that may be an alternative recovery route. In either case its disposal to landfill will be avoided where possible</p>
<p>Step 4: Steps to be taken to minimise the use of raw materials</p>	<p>Where possible all aggregates utilised at the site, will be recycled materials, meeting the required engineering standards. Some of these may be from materials excavated on site, others will be brought to the site from other developments.</p> <p>Materials imported to the site for landscaping purposes, will be sourced where possible from recovered or recycled materials, including PAS100 standard compost and screened soils. In line with the SWMP, all other raw materials will be delivered to site on a 'just in time' basis to minimise the possibility of losses due to spoilage, double handling or storage.</p> <p>Prior to delivery at the proposed EfW facility, waste will undergo the removal of dry recyclable materials through kerbside sorting and recycling collection schemes (the precise nature of which depending on which Local Authority has collected the waste). This will reduce the volume of waste to be processed as well as reducing the non-combustible elements such as metals and glass, thus reducing the percentage of waste that becomes bottom ash.</p>
<p>Step 5: Steps undertaken to minimise the pollution potential of unavoidable waste including environmentally acceptable disposal</p>	<p>All wastes and materials on site will be managed in accordance with the SWMP. These measures include the safe storage and segregation of wastes and auditable trail for those materials removed from site. Waste generated within the preparation and construction phase will, where possible, be stored on hardstanding to minimise the possibility of spillages causing soil contamination. Where possible materials removed from the site as waste will be diverted to suitably permitted recycling or recovery facilities.</p> <p>All handling and storage of bottom ash and FGT residue will take place within the main building envelope to prevent accidental release causing pollution to the local environment.</p>
<p>Step 6: Steps to be taken to dispose of any unavoidable waste in an environmentally acceptable manner</p>	<p>Material that is not suitable for processing at the plant, such as metal items, will where possible be diverted to off-site recycling facilities. Materials that are unsuitable for off-site recycling, will be directed to landfill, however this is anticipated to occur only in exceptional circumstances.</p>
<p>Step 7: Steps to be taken to ensure maximum waste recovery (e.g. recycling) once development is occupied.</p>	<p>See Section 4 of the ES.</p>

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Step 8: Proposed methods of transporting any waste created during the development and subsequent use of the site.	<p>Excavated waste removed from site during construction will be transported by covered tipper lorries.</p> <p>Bottom Ash will be removed from the site by covered bulk transport vehicles that are loaded by front loading shovel within the building envelope.</p> <p>FGT residue will be removed by powder tankers that load and unload by means of a sealed system with the FGT residue discharged from the silo to the tanker by a flexible connection. Dust filters will be used to prevent accidental discharge.</p>
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