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Tees CCPP Project

The Tees Combined Cycle Power Plant Project
Land at the Wilton International Site, Teesside

Volume 2 - Annex D4

Regulations – 6(1)(b) and 8(1)

Applicant: Sembcorp Utilities UK
Date: November 2017

Annex D4

Waste Management Plan

D1 INTRODUCTION

This Framework Site Waste Management Plan (SWMP) provides an outline waste management strategy for the construction phase of the Project, considering likely waste arising from construction based activities such as earthworks, and addresses how it will be managed through reduction, separation, control and disposal.

This SWMP does not replace the requirement for the completion of a construction stage SWMP. The SWMP presents the approach that would be adopted as a minimum throughout the construction of the Project and forms a framework for the approach of the construction stage SWMP.

D1.1 WASTE MANAGEMENT LEGISLATION AND POLICY CONTEXT

Relevant waste legislation will be complied with during construction of the Project. Waste legislation (principally originating from European Directives), includes but is not limited to:

- Control of Pollution (Amendment) Act 1989;
- Waste (England and Wales) Regulations 2011;
- Controlled Waste (England and Wales) Regulations 2012;
- Environment Act 1995;
- The Hazardous Waste (England and Wales) Regulations 2005;
- Environmental Permitting (England and wales) Regulations 2010; and
- Environmental Damage (Prevention and Remediation) (England) Regulations 2015.

(Note that this list includes base legislative references).

D1.1.1 National Planning Policy

In England, waste management strategies and principles are set out in a number of documents.

Waste Strategy 2000 (subsequently built upon by the Waste Strategy for England (Defra, 2007)) introduced new underlying principles of sustainable waste management, some key aspects of which are outlined in *Table D1.1.*

The waste management principles of the waste hierarchy are now fully incorporated in Planning Policy Statement 10: Planning for Sustainable Waste Management (1) as objectives to be delivered through Regional Spatial Strategies and waste local plans.

(1)https://www.gov.uk/government/publications/planning-for-sustainable-waste-management-planning-policy-statement-10

The National Planning Policy Framework (NPPF) 2012 (DCLG, 2012) sets out the Government's objectives in order to help achieve sustainable development. Many Planning Policy Statements have been replaced following the introduction of the (NPPF), however the framework does not include specific waste policies as these are contained in the National Planning Policy for Waste which was published in October 2014.

The arrangements described and defined within the SWMP should include [information on the proposed waste recovery and disposal system for all waste generated by the Project, and an assessment of the impact of the waste arising from the Project on the capacity of waste management facilities to deal with other waste arising in the area.]

Policy seeks to minimise the volume of waste produced and the volume of waste sent for disposal.

Policy seeks to ensure that applicants have an effective system for managing hazardous and non-hazardous waste arising from the construction.

Policy seeks to ensure that applicants demonstrate:

- any such waste will be properly managed, both on Site and off-site;
- the waste from the Project can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and
- adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.

Table D1.1 Principles of Waste Management – Definitions

Principal	Description
Waste Hierarchy	A theoretical framework used as a guide to the waste management options that should be considered when assessing Best Available Technology (BAT).
Waste as a Resource	Certain wastes can be directly used or separated/ processed for use as a replacement for raw materials, saving resources and potentially reducing energy use or other impacts associated with virgin resource extraction and transport.
Proximity Principle	Waste should generally be managed as close as possible to its place of production, to minimise environmental impact that arises through transportation.

Principal	Description
Best Practicable Environmental Option (BPEO) (Superseded by SEA/SA)	Defined by the Royal Commission on Environmental Pollution (1988) as 'the outcome of a systematic and consultative decision making procedure which emphasises the protection and conservation of the environment across land, air and water'. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits, as a whole, at acceptable cost, in both the short term and the long term. SA is designed to ensure compliance with SEA and as such includes for requirements on environmental decision making such as an opportunity for the public to express their opinion on draft plans (community involvement), take into account significant environmental effects including those on human health, material assets and climatic factors and a full assessment of alternative options and reasons why alternatives have been assessed and why others have not.

D1.1.2 Policy Relating to Specific Waste Types

In regards to Construction, Demolition and Excavation (CD&E) Waste the EU Waste Directive (European Commission, 2008 (1)) has set a recovery target of 70% of construction and demolition waste by 2020.

Waste and Resources Action Programme (WRAP) have published key benchmark figures for target setting which identify the typical volumes of CD&E waste produced under baseline practice and the volume which can be expected following good practice.

Figures from 2009/2010 (WRAP, 2010) indicate that under a baseline practice scenario, which assumes that no attempt is made to secure a higher recovery rate, waste recovery is typically 50%. However, following good practice waste recovery is typically at a much higher rate of 70% to 80% which meets with the target as detailed within the EU Waste Directive.

Sembcorp will ensure that good practice CD&E waste recovery targets of 70% to 80% are achieved as a minimum in relation to waste produced at the Site for the Project

D1.2 APPROACH TO WASTE MANAGEMENT

Sembcorp is committed to delivering a Project that is sustainable in regards to matters relating to waste management, and will comply with the relevant statutory requirements (as detailed above). This requirement will be passed onto the EPC contractor.

(1) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008

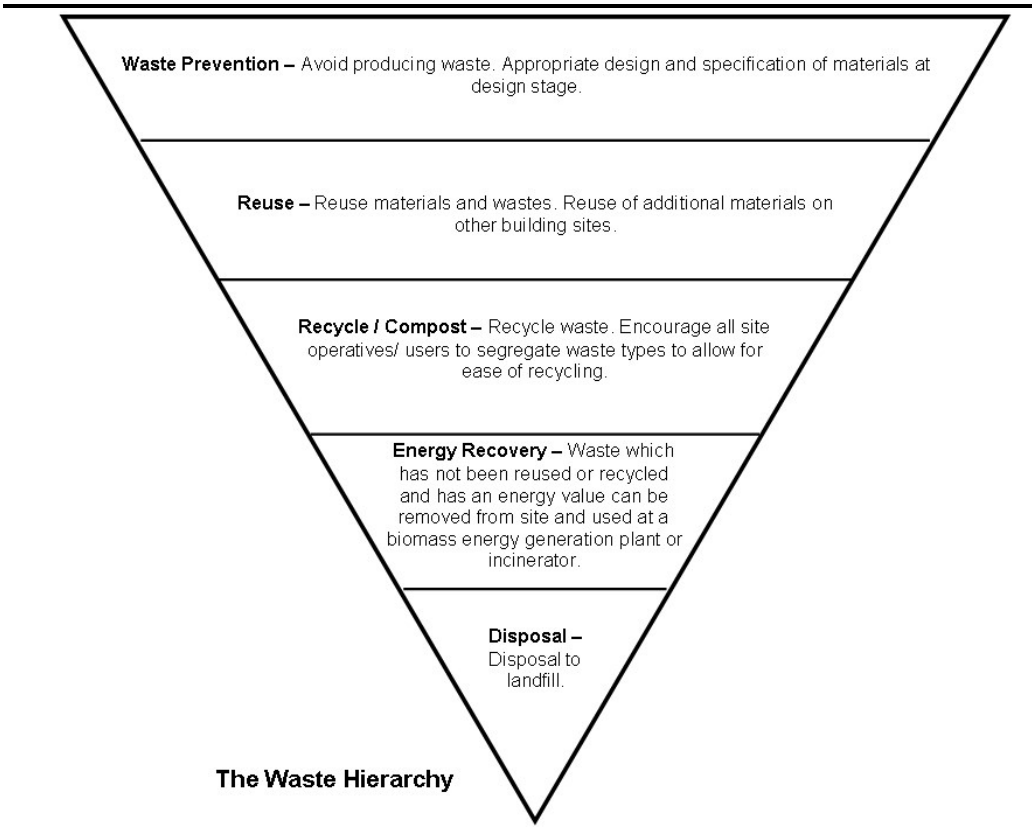
Waste elimination will start as early as possible and the contractor and their design team will work in conjunction to design and plan waste minimisation at various stages of the Development.

The construction phase SWMP will identify, formalise and communicate waste management good site practice and responsibilities during the construction phase for the Project.

The finalised SWMP will identify the types and quantities of waste anticipated to be generated, along with the definition of suitable disposal routes. The plan will also include details as to how material reuse and recycling options would be maximised. The plan will be a live document to be updated and monitored by the contractor, in order to demonstrate compliance with the Waste Duty of Care and other relevant regulations.

The proposed SWMP would be compiled around the principles of the Waste Hierarchy, examples of which are illustrated in *Figure D1.1* below.

Figure D1.1 The Waste Hierarchy



D1.2.1 Waste Types and Actions

The general waste types which are anticipated to be generated during construction of the Project are detailed below. Actions pertaining to waste

minimisation which will be considered for implementation during the construction of the Project are also described; these will be confirmed in the construction phase SWMP. Where individual waste types have not been identified, these will be assessed at the appropriate stage.
Estimations for the volume of potential construction waste are shown below in *Table D1.2* below.

Table D1.2 Estimated types and quantities of construction waste

Waste type	Average percentage composition	Estimated tonnes
Bricks	0%	0
Tiles and ceramics	0%	10
Concrete	50%	3,000
Inert	25%	1,000
Insulation	0%	30
Metals	3%	200
Packaging	2%	150
Gypsum	0%	Less than 10
Binders	0%	Less than 10
Plastics	0%	20
Timber	2%	200
Electrical and electronic equipment	0%	0
Canteen/office/adhoc	1%	50
Liquids	0%	-
Oils	0%	-
Asphalt and tar	1%	50
Hazardous	1%	60
Other	0%	-
Mixed	15%	1,000
TOTAL	100%	5,880

D1.3 WASTE MINIMISATION ACTIONS AND MITIGATION

During the construction phase of the Project the contractor will be required to develop and implement a construction phase SWMP, incorporating the recommendations and requirements within this framework SWMP. Waste minimisation actions relating to Site generated waste that are anticipated to be implemented during the construction phase include:

- agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;

- implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;

- attention to material quantity requirements to avoid over-ordering and generation of waste materials;

- re-use of materials wherever feasible, eg minimal soil will be recovered and minimal landscaping is required as part of this Project;

- segregation of waste at source where practical; and

- re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing).

D1.3.1 Additional Actions for Dealing with Waste

In addition to the waste management measures as detailed in the 'Approach to Waste Management' section above, there are actions that would be introduced as part of the construction SWMP which would contribute to the general reduction of waste generation at the Project Site. These may include:

- appointment of an environmental co-ordinator who will hold overall responsibility for waste management. The role includes co-ordinating all waste or environmental issues on Site from waste data to identifying training needs. Sites with an environmental co-ordinator tend to perform better in managing waste;

- accurate record keeping of waste types, volumes and disposal routes and destinations;

- staff awareness training to ensure all personnel know the correct procedures on Site for waste segregation, disposal and the identity of the waste champion and actively promote recycling on Site through clear signage (during construction and for commercial and educational facilities);

- setting of targets/ Key Performance Indicators (KPIs) for waste recycling and reduction; and

- establishing a good management structure which would allow prompt decision making relating to improvements in waste management and recycling initiatives.

D1.4 INDICATIVE ROLES AND RESPONSIBILITIES

Personnel at all levels have a role in managing materials and waste correctly, however typical roles and responsibilities that may be defined as part of the construction phase SWMP (not an exhaustive list) are summarised below.

Site Manager

- Responsible for ensuring a system is implemented that identifies and manages the waste being produced.
- Implements a waste plan as a 'live' document, identifying an appropriate strategy and KPIs.
- Co-ordinates waste management on Site.

Site Waste Management Representative

- Co-ordinates the identification of materials for re-use or recycling and identify opportunities for waste reduction.
- Co-ordinates staff training.
- Ensures that all waste storage containers are accurately labelled to show all site workers where to deposit specific materials.
- Liaises with the management team to ensure the appropriate management of incoming materials, the establishing of waste management contracts, and the provision of receptacles.

All Site Personnel

- Ensuring no over-ordering of materials to reduce the amount of waste produced.
- Correct handling and storage of materials to prevent damage and wastage.
- Co-ordinate with the site team the reuse or recycling of materials for alternative usage where possible.
- Correct handling of waste materials by containment, separation and storage.
- Labelling of waste storage containers to show where to deposit specific materials.
- Ensure containers are stored safely and securely.
- Disposal of waste to appropriately licensed site with correct documentation completed.

The SWMP will define and assign the responsibilities of personnel at the Site.

D1.5 AUDIT MONITORING AND REVIEW

To be most effective it is important that the SWMP is a live document, which is continually reviewed and updated. Waste will be monitored routinely. Monitoring of waste and waste management plans ensures that waste

minimisation obligations, as detailed within the SWMP are being met and helps to identify opportunities for improvements and potential cost reductions.

The following is not an exhaustive list and represents typical activities undertaken at each stage.

Waste Monitoring

- Update the SWMP at regular intervals throughout the construction phase to illustrate changes in the Project such as waste types, volumes, sub-contractors and changes in personnel and to drive continual improvement in promoting management of wastes as high up the waste hierarchy as possible.

- Ensure all legislation and regulations are being complied with and that the waste management strategy is being implemented appropriately, monitored through regular site inspections.

- Completion of logs detailing the volume of material brought onto Site and the volume of waste generated including the type and the route of disposal/ recovery.

- Collation of data into a report detailing all waste movements for submission to the site manager to be utilised during the annual waste audit and waste review.

Waste Audit

- Collate / review baseline information. This will include, for example reviews of:
  - operations/ staffing levels, composition, waste monitoring reports and quantity of waste generated;
  - current waste management procedures;
  - existing activities including, for example, key roles and responsibilities; and
  - an estimation of waste volumes including a comparison from previous and projected years (where appropriate).
- The results of the waste audit will be used to inform the waste review.

Waste Review

- A waste review should be undertaken following the completion of a waste audit and the completion of regular waste monitoring. The review will provide an opportunity to consider the suitability of the management strategies that are in place in relation to relevant regulations and best practice procedures, and identify areas for improvement, lessons to be learnt and potential improved cost savings and sustainability.

- The review will consider monthly, quarterly and annual reports, compare waste related data that has been collected and include guidance and proposals to drive continual improvement.

The monitoring procedures detailed above will be undertaken as a minimum and defined within the SWMP.

D1.6 CONCLUSION AND SUMMARY

This framework SWMP presents the approach that would be implemented during the construction phase of the Project.

This plan illustrates and seeks to guide the contractor and the Applicant to:

- recognise that the SWMP will underpin the approach to waste management for the Project;
- define indicative roles and responsibilities within the organisations to ensure those responsible for waste management are aware of the remit;
- demonstrate that key waste legislation would be complied with and local and regional drivers would be fulfilled including reviewing procedures should waste legislation and guidance be amended or updated in future;
- demonstrate that the construction phase would minimise waste in accordance with best practice via the implementation of a construction phase SWMP;
- develop a proactive and coordinated approach to sustainable waste management, reuse and recycling that will be encouraged and implemented at the Site through a number of recycling initiatives to divert as much recyclable waste as possible from landfill; and
- record and audit waste movement through, in and out of the Project as appropriate.

Where individual waste types have not been identified within this framework SWMP, these will be assessed at the appropriate stage.

In *Table D1.3* below is a summary of the potential wastes which are likely to be generated from the Project and proposed management processes to reduce negative impacts.

Table D1.3 Waste Estimations

Waste Type	Main Management Process
Soil arisings	Reuse on Site where appropriate.
Concrete, masonry and aggregates	Crush and reuse investigate potential for off-site use
Metals	Recycle via appropriate waste carrier
Paper and cardboard	Segregate and recycle via appropriate waste carrier
Sanitary waste	Remove by specialist waste contractor
Plastics and glass	Recycle via appropriate waste carrier