

Appendix 16.1 Draft Site Waste Management Strategy

Background to SWMPs

Site Waste Management Plans (SWMPs) are compulsory in England for all construction projects on one site with an estimated cost greater than £300,000. More detailed SWMPs are required for projects with a cost greater than £500,000. The Regulations aim to make the construction industry more sustainable by ensuring that those involved on a construction site are aware of the waste being produced so that it can be reduced. The SWMP involves keeping a log, which also makes tracking waste easier and aids compliance with the waste duty of care. By complying with pollution prevention guidance from the Environment Agency, notably PPG6, and implementing a SWMP, the project will maximise construction sustainability and minimise the risk of waste and environmental pollution.

Depending on the stage of the project, either the developer or the principal contractor will have overall responsibility for the SWMP. The developer is responsible for ensuring that the plan is prepared before construction work begins, however, it is generally more practical for the appointed principal contractor to prepare the plan. The principal contractor must update the plan as work progresses and ensure that any sub-contractors and workers on the site are aware of the plan and comply with it.

The SWMP encompasses preparatory work such as site clearance, and engineering and construction activities. The installation of related infrastructure and services such as cabling, telecommunications and access tracks is also included.

The SWMP sets out how resources will be managed and any waste controlled at all stages on the construction site. It covers:

- who will be responsible for resource management
- what types of waste will be generated
- how the waste will be managed (in the context of the waste hierarchy - ie will it be reduced, reused or recycled?)
- which contractors will be used to ensure the waste is correctly recycled or disposed of responsibly and legally
- how the quantity of waste generated by the project will be managed.

Purpose of SWMP

PfR recognises the particular significance of waste arisings during site preparation and construction works at the Sharpness site, and by starting the SWMP during the concept and design stage of the project, design decisions have contributed towards preventing and reducing construction waste. For example, consideration has been given to how waste materials generated during site preparation and construction can be re-used on site.

The Sharpness wind turbine development is currently at planning stage and therefore does not need a SWMP at this stage. At this planning application stage, before the appointment of contractors and detailing of site preparation and construction methods, the SWMP is very much draft. As it evolves, beyond consent and into the construction phase, the SWMP will be used to record all decisions about the project that relate to the waste produced on site. Measures taken to reduce waste will be quantified, recorded and evaluated throughout the project, and the plan will be updated as waste is disposed of, re-used, recycled, or otherwise recovered. The SWMP is a 'living' document that describes the current state of progress against the waste management forecasts contained in the plan.

This document summarises high level estimates of how much waste is estimated to be generated and how much is estimated to be reused, recycled, recovered or disposed of based on information available at this stage.

Construction Waste Quantity Estimate Assumptions

The volume of wastes estimated to arise during the construction of the development has been calculated using data from the developer such as dimensions and material types to be used. Once the volume of materials to be used was established, data from BRE's Green Guide to Specifications (summarised in documents from Construction Resources and Waste Platform, April 2010) was used to estimate wastage rates.

To complete the calculations the volume of each waste stream was converted into tonnes which was done using density figures from WRAP.

All estimates have been based on site layouts dated 20.10.11.

Table 1: Summary Table of Waste Estimates

Type of waste	Volume (m ³)	Density (tonnes/m ³)	Weight (tonnes)	Recycling rate %	Disposal rate %
Soil and stones	3,089	1.25	3,861	95	5
Concrete	807	1.27	26	95	5
Mixed C&D waste*			20	85	15
Aggregate/fill	3,294	1.09	467	95	5
Metal (reinforcement)	1,254	0.40	13	100	5
Total	4,548		4,387		

* Mixed waste will be packaging, paper (drawings), food packing, food and small off cuts

Note – figures for weight have been rounded so maybe higher/lower than expected from volume and density.

It is expected that the soil and stone waste will be reused on site for backfilling and landscaping purposes. For the remaining waste a recycling rate of 95-100% will be achieved through waste on site being segregated into separate containers for each waste type identified above and appointing a waste contractor who can demonstrate that they are able to recycle to this level for all the identified waste types.

Throughout the construction phase the amount of waste being generated will be monitored closely to ensure it does not exceed the estimates above and explanations will be sort where it does exceed the estimates by a significant amount.

Sharpness Docks Wind Energy Development: Site Waste Management Plan

Responsibility

Name of client	Partnerships for Renewables
Name of principal contractor	Unknown at this stage
Name of person who drafted plan	Sarah Wallis, Atkins
Notes, amendments	This is the first draft of the SWMP, submitted as an appendix to the ES and planning application.

Construction Project

Location (address, postcode if appropriate)	Sharpness Docks, Sharpness, Berkeley, Gloucestershire
Estimated project cost	Unknown at this stage.
Notes, amendments	

Materials Resource Efficiency

Describe here any methods adopted during the conception, design and specification phase to reduce the amount of waste arising.	
Method	Resource saving (quantify if possible)
All material to be excavated for the turbine foundations will be beneficially re-used at the construction site, or the surrounding area site (subject to any contamination or special waste licensing issues).	Carbon savings associated with minimal transport of wastes.

Waste Management

Declaration
The client and principal contractor will take all reasonable steps to ensure that: (a) all waste from the site is dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) regulations 1991; and (b) materials will be handled efficiently and waste managed appropriately.
Signatures

Waste type	Quantity (m ³ or tonnes)							
	Re-use on-site	Re-use off-site	Recycle onsite	Recycle offsite	Other form of recovery on-site	Other form of recovery off-site	Sent to landfill	Other disposal
Estimates								
Inert								
Nonhazardous								
Hazardous								
Totals (m3 or tonnes)								
Actual								
Inert								
Nonhazardous								
Hazardous								
Totals (m3 or tonnes)								
Difference between estimates and actual								

Waste Records

Date removed	Waste type	Identity of the person removing the waste	Site the waste is being taken to and whether licensed or exempt	Waste carrier and registration number*	Confirmation of delivery*

* Evidence of waste carrier registration and waste transfer or hazardous waste consignment notes for each removal of waste should be provided either as part of the plan, or filed and cross-referenced.

Post-Construction

[Within three months of the construction work being completed]

Confirmation

This plan has been monitored on a regular basis to ensure that work is progressing according to the plan and has been updated to record details of the actual waste management actions and waste transfers that have taken place.

Signature

Issue	Details
Explanation of any deviation from the planned arrangements	
Waste forecasts – exceeded	
Waste forecasts – not met	
Cost savings achieved	

