

## **Tab 7**

# **Waste Management Plan**

# Waste Management Plan

## 1 Introduction

This Waste Management Plan (WMP) will provide the basis for the preparation of a final WMP, which will include any relevant planning conditions. The appointed Contractor will draw up the final WMP and will be responsible for carrying out and managing the construction wastes in accordance with the WMP.

### 1.1 Objective of the Waste Management Plan

This Waste Management Plan (WMP) will be implemented to minimise waste, promote a practice of reduce, reuse and recycle where possible and ultimately to ensure the correct handling and disposal of construction waste streams in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Department of the Environment, July 2006.

Construction wastes will be managed and disposed of in a way that ensures the provisions of the Waste Management Acts and Southern Region Waste Management Plan.

### 1.2 Scope of WMP

This WMP **concentrates on the construction stage** of Ballynalacken Windfarm which is the critical phase in the context of waste management.

### 1.3 Responsibilities

The responsibility of construction waste management will be placed with the Project Supervisor (Construction Stage) (PSCS) so that all reuse, recycling, wastage and necessary disposal can be monitored as close to the source as possible.

The PSCS will be assigned the authority to instruct all site personnel to comply with the specific provisions of this Plan. The PSCS will work closely with the Appointed Contractor to ensure that the Plan is implemented and updated when necessary in order to ensure that a waste management hierarchy of prevent, reduce, reuse, recycle and responsibility is implemented throughout the construction stage of the project.

An Environmental Clerk of Works will be employed by the Project Promoter to monitor the implementation of the WMP throughout the construction stage of the Ballynalacken Windfarm.

All site personnel will have a responsibility to keep the construction works areas tidy, not to litter and to bring wastes back to the Ballynalacken Windfarm Site Compounds on a daily basis for storage.

## 2 Construction Waste & Material Arising

The greatest potential for waste occurs during the Construction stage of the project.

In the course of the construction of Ballynalacken Windfarm, the following construction wastes/ excavated materials will arise:

**Table 1: Construction Wastes/Excavated Materials**

Construction Waste Material	European Waste Code
Concrete	17 01 01
Wood pallets, timber shuttering, timber profiles (cables trench)	17 02 01
Component packaging - paper/plastic/timber profiles	17 02 01 / 17 02 03/ 20 01 01
Hazardous Materials – oil contaminated material, oily rags, construction vehicle fuel and oil	17 03 02
Steel foundation rebar	17 04 05
Canteen Waste – waste water from washing and toilet facilities	20 03 01
Excavated Materials arising - Soil & Stone Note: All <b>excavated soil and rocks</b> will be reused on site to form drainage bunds, for reinstatement of construction works areas and permanent storage berms, and as such <u>will not constitute waste</u> but rather ‘material arising’ on the Ballynalacken Windfarm site.	17 05 04

### 3 Management of construction waste/materials

The waste materials will be moved off site by a specialist waste service contractor, who will possess the requisite authorisations for the collection and movement of waste, and who will bring the material to a facility which holds the requisite license for the specific waste.

All waste will be segregated and securely stored in skips and receptacles, which will be covered to protect the contents from the weather at Ballynalacken Windfarm Site Compounds. The licensed operator, will collect and transfer the skips/receptacles of both recyclable and non-recyclable wastes as they are filled. The Ballynalacken Windfarm Site Compounds will also accommodate the temporary site offices and WC facilities and this area will be secured by fencing and manned security 24/7 to prevent unauthorised access.

#### 3.1 Waste water

Welfare facilities including self-contained toilets, with integrated waste water storage tanks, will be provided for construction workers, at the Temporary Construction Compounds. The wastewater storage tanks associated with the toilet facilities will be emptied on a regular basis, by a licence waste contractor, such as Enva, or other appropriately licenced operator for disposal at a licenced wastewater treatment facility.

#### 3.2 General Waste

Materials such as pallets, packaging, and excess construction and building materials will be generated at windfarm and grid connection construction works areas. All individual waste streams will be identified at source, separated into recyclable and non-recyclable waste and stored in a designated and secure area at the Temporary Construction Compounds. This waste will be removed regularly, by a licence waste contractor for disposal at a licenced waste facility. Following the felling of forestry at the windfarm site, the waste brash and tree stumps will be baled and transported offsite to a licenced facility.

#### 3.3 Chemical waste

Small quantities of chemical waste, such as solid waste oils and oily rags, will be generated during construction works. All chemical wastes will be stored in secure, bunded and covered storage containers, in a designated part of the Temporary Construction Compounds. This waste will be removed regularly, by a licence waste contractor, such as Enva, or other appropriate licenced operator for disposal at the Enva licenced facility for hazardous and chemical waste in Portlaoise.

All concrete wash down at the site will be completed in a dedicated Roadside Concrete Washout (RCW) concrete wash unit (i.e. Silbuster or similar). This unit catches the solid concrete and filters and holds wash liquid for pH adjustment and further solids separation. The residual liquids and solids will be disposed of off-site at an appropriate waste facility.

#### 3.4 Arisings / Potentially Spoiled Soils

**Construction phase:** There will be c.2,400m of cabling and apparatus (i.e. for Internal Windfarm Cabling, Internal Cable Link, Ballynalacken Grid Connection) laid under the public road. Arisings/Spoiled Soils from the cable trench will include bitumen bound surface dressing and potentially contaminated base layer aggregates comprising topsoil, subsoil and rock. The debris under the dry wheel washes at the site entrances will also be treated as potentially spoiled material. These arisings/potentially spoiled soils will be disposed of by a licensed waste operator to the Enva hazardous waste facility in Portlaoise.

#### 3.5 Hazardous materials

Appropriate storage of all hazardous wastes on-site will be undertaken. There will be a secure, covered, bunded area in a designated part of the Ballynalacken Windfarm Site Compounds. 1 for any waste oil, oily rags and contaminated materials. Storage of any hazardous wastes produced will be kept separate from other waste materials, in order to avoid further contamination.

### **3.6 Training & Communication**

During Site Induction training, personnel will be informed of the objectives of the WMP and their responsibilities under the Plan.

Copies of the Waste Management Plan (WMP) will be made available to all relevant personnel on site. Posters will be designed to reinforce the key messages within the Plan and will be displayed prominently for the benefit of site staff.

## 4 Waste Auditing

The PSCS shall arrange for full details of all arisings, movements and treatment of construction waste discards to be recorded during the construction stage of the Project.

Each consignment of construction waste taken from the site and excavated materials arising on-site will be subject to documentation, which will conform to the table below. This will ensure full traceability of the material to its final destination.

**Table 2: Waste Details to be Provided**

Waste Details to be Provided	
Name of Project of Origin	Ballynalacken Windfarm - Site Compounds
Material being Transported	e.g Canteen Waste
Quantity of Material	tonnes
Date of Material Movement	dd/mm/yyyy
Name of Carrier	e.g. Enva
Destination of Material	e.g. Portlaoise
Proposed Use	-

Details of the inputs of materials to the construction site and the outputs of wastage arising from the Project will be recorded by the PSCS in a Waste Audit, which will identify the amount, nature and composition of the waste generated on the site. The Waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices may inherently contribute to the production of construction waste.

### 4.1 Waste Audit Report

The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit Report, which will also record lessons learned from these experiences which can be applied to future projects. This report will be produced by the PSCS using inputs from the Waste Audit. The total cost of construction waste management will be measured and will take account of the purchase cost of materials, handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc.

Costs will be calculated for the full range of construction waste materials, using the format shown in the table below:

**Table 3: Measured waste quantities and costs**

Material	Estimated Quantities & Costs
Purchase cost of general building materials i.e. import Costs	(€)
Materials Handling Costs	(€)
Material Storage Costs	(€)
Material Transportation Costs	(€)
Revenue from Material Sales	(€)
Material Disposal Costs	(€)

Material	Estimated Quantities & Costs
Material Treatment Costs	(€)
Total Waste General Building Materials Management Costs	(€)
Unit Waste General Building Materials Management Costs	(€)

(Sample relates to General Building Materials – separate record forms will be compiled in respect of each waste material and excavated soil & stone arising).

Final details of the quantities and types of construction waste arising from the Project will be forwarded to the Environment Section, Kilkenny County Council.