

# ATTACHMENT K

Remediation, Decommissioning, Restoration and Aftercare

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**ATTACHMENT K.1**

Decommissioning

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## Attachment K.1 Decommissioning

There is no short or long term proposal to shut down or decommission any element of the facility. In the unlikely event that the facility has to close, the shut down will be carried out in accordance with the measures set out in the Decommissioning Plan, included in this Attachment.

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**DECOMMISSIONING PLAN FOR  
GREENWASTE COMPOSTING FACILITY**

**AT  
COOLBEG  
CO. WICKLOW**

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## 1. INTRODUCTION

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The Decommissioning Plan is based on the following: -

- A review of the types of activities to be carried out on the site, including waste handling and recovery operations.
- Identification of potential hazards, including an evaluation of the raw materials and waste products that typically will be stored on-site, site hydrogeology, sewer and bund integrity.
- Identification of control measures to prevent incidents.
- Identification of all items of plant and other materials, including buildings that may be decommissioned, rendered safe or removed from site for disposal or recovery in the event of closure of the facility.
- Identification of all possible on-site locations where cleaning, decontamination or remediation works may be required in the event of decommissioning to prevent environmental pollution.

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## 2. DESCRIPTION OF ON-SITE ACTIVITIES

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### 2.1 Proposed Site Operations

#### 2.1.1 Site Layout

The facility will include the reception office (240 m<sup>2</sup>), workshop (540 m<sup>2</sup>) and weighbridge and parking areas, the waste reception area (c. 1250 m<sup>2</sup>), windrows (c. 9500 m<sup>2</sup>), maturation area (700 m<sup>2</sup>), finished product storage (c. 2375 m<sup>2</sup>) and a leachate storage lagoon (1250 m<sup>2</sup>).

#### 2.1.2 Waste Types and Volumes

The majority of the waste will comprise forestry, garden and park waste with only a small quantity of timber C&D waste, as the latter typically contains contaminants that can impact on compost quality. Hazardous waste, liquid waste and sludges will not be accepted. The types and quantities of waste accepted are shown in Table 2.1.

**Table 2.1** Total Waste Inputs

Waste Type	EWC Code	Tonnes
Waste from agriculture, horticulture, forestry... (plant tissue waste, waste from forestry)	02-01-03 02-01-07	32,000
Garden & Park Waste (biodegradable waste)	20-02-01	5,600
Waste from Wood Processing (waste bark)	03-01-01	400
Construction and Demolition Waste (Wood)	17-02-01	2,000
<b>Total</b>		<b>40,000</b>

### 2.1.3 Waste Acceptance Procedures

Green wastes delivered to the facility will be subject to waste acceptance procedures to ensure that only suitable wastes are accepted. Initially, the majority of the waste will be generated by KTS and delivered to the facility either by KTS employees, or hauliers employed by KTS. This will minimise the risk of the delivery of unsuitable material. KTS has received Waste Collection Permits from Wicklow County Council and Dublin City Council.

All waste delivery vehicles arriving at the facility will be obliged to enter onto the weighbridge where they will be weighed, the accompanying documentation checked, where applicable and the waste inspected by the weighbridge operator.

Any waste delivered to the facility that does not have the appropriate documentation or which, upon inspection at the weighbridge, is deemed not to be suitable will not be accepted. In such events the weighbridge operator will record the name of the waste delivery contractor, the driver, the registration number of the vehicle and the nature and origin of the waste. The operator will instruct the vehicle driver to return the waste to the producer. Records of any such incidents will be maintained on-site and reported to Wicklow County Council.

Following inspection at the weighbridge the waste will be off-loaded in the waste reception area, where a further inspection will be carried out. Any waste identified as not suitable following off-loading will be immediately removed and, where practical, returned to the delivery vehicle. If this is not practical, the waste will depending on its nature either be stored in the quarantine area pending its removal off-site by the waste producer or the contractor who delivered the waste.

## 2.2 Material Storage

Facility operations will involve the storage and handling of fuel for the site plant and trucks, and engine and lubricating oils used in plant and equipment maintenance. Fuel oil will be stored in a bunded above ground tank that will be located inside the workshop. The bund will have a capacity of 110% of the tank volume and will be water tight. All tank valves and outlets will be inside the bund.



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### **3. SCOPE OF THE DECOMMISSIONING PLAN**

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#### **3.1 Scope of the Plan**

This Plan sets out the actions to be taken by KTS in the unlikely event of facility shut down, or a planned cessation for a period of greater than six months of all or part of the site involved in the licensed activity.

Should either of the above conditions occur KTS will decommission, render safe or remove for disposal/recovery, all materials, waste, plant and equipment that may result in environmental pollution. The methodology used to determine the areas that must be addressed in the plan is outlined in Section 4.

#### **3.2 Criteria Which Determines Successful Implementation**

Successful decommissioning will only be complete when all buildings, equipment, materials, wastes or any other materials, which could result in environmental pollution, are removed from the site and recycled, recovered or disposed of in accordance with all regulations in force at the time. The programme to achieve the criteria set out in the plan is outlined in Section 5.

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## **4. AREAS ADDRESSED BY THE PLAN**

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The following aspects of the proposed facility operation were assessed.

### **4.1 Materials**

It is anticipated that any shutdown of all or part of the site operations would be preceded by a scaling down of activities therefore further reducing the quantities of materials, particularly oils and fuel to be dealt with.

It may be possible to return some materials to the suppliers e.g. diesel, engine and hydraulic oils to the suppliers for resale or reuse. The finished product will, where possible, be sold to customers. The remaining materials may have to be disposed of as waste, some of which may be deemed hazardous waste due to their composition e.g. oils. Such materials will be disposed of off-site in accordance with appropriate waste management regulatory requirements and facility waste management procedures.

### **4.2 Equipment & Processes**

The main pieces of plant include the trommel, loading shovel shredder and hydraulic excavator. All of the plant would be suitable for use in other similar facilities. Given the nature of the waste to be handled at the facility, none of the items of plant equipment intended for resale or disposal would require specialist decontamination prior to removal off-site.

### **4.3 Environmental Monitoring Results & Reports**

Environmental monitoring will be carried out in accordance with the conditions set in the Waste Licence and will include routine monitoring of sewer, dust and noise emissions. The monitoring programmes will be designed to identify any long term impact associated with the operation of the facility so as to allow effective remedial action and prevent or minimise environmental pollution.

#### 4.4 Environmental Incidents

The site has been designed to minimise the impact of any environmental incident that may arise e.g. spills/leaks of oils/chemicals. Any environmental incidents that do occur will be thoroughly investigated and where necessary remedial measures will be implemented. A detailed review of all historic incidents will be completed as part of the decommissioning plan to assess the potential for residual soil contamination arising from such incidents.

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## 5. IMPLEMENTATION PROGRAMME

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### 5.1 Consumable Materials

All materials and wastes will be stored in the designated areas. In the event of closure materials and waste will either be returned to the supplier, or be disposed or recovered by a licensed waste disposal contractor. All wastes will be removed for recovery/treatment/disposal at a licensed waste management facility.

Table 5.1 below presents the maximum quantities of consumable materials, broken down by generic types that it is anticipated would need to be removed off-site in the event of activation of the plan. The actual quantities may be smaller as any shutdown of all or part of the facility would most likely be preceded by a scaling down of activities that would allow a stage reduction in inventory.

**Table 5.1 Maximum Quantities of Consumable Materials to be Removed Off-Site**

Resource	Quantity
Diesel Oil	5,000 litres
Hydraulic Oil	50 litres
Engine oil	50 litres

The largest contributors to the above is diesel which could be returned to the supplier.

### 5.2 Equipment & Process Materials

In the event of activation of the plan the plant equipment will be either sold for operational use or for scrap at an approved waste recycling/recovery facility. Following the removal off-site of all waste and finished product the waste processing and storage areas will be washed down and the run-off collected in the leachate lagoon. The liquid in the lagoon will be removed off-site for disposal in an off-site wastewater treatment plant.

### 5.3 Environmental Incidents

Any incidents that occur will be dealt with in accordance with the conditions of the Licence and the requirements of the Agency.

### 5.4 Environmental Monitoring Results & Reports

The environmental monitoring carried out by KTS as part of the licence conditions will identify if any investigations or post closure monitoring is required to ensure that the facility poses no continuing risk to the environment. The baseline data compiled as part of the Waste Licence application indicates that the site presents no such risk. This will be reviewed based on monitoring data obtained during the operational period.

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## 6. TEST PROGRAMME & VALIDATION REPORT

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### 6.1 Test Programme

The monitoring and reporting requirements, which will be set out in the Waste Licence, will be complied with until the licence is surrendered to the Agency. The monitoring will identify, if any environmental pollution has occurred during the lifetime of the Waste Licence. If the monitoring programme or the investigation of any future environmental incident identifies that any such contamination has occurred, a test programme will be set up to identify the nature and scale of any associated environmental pollution.

### 6.2 Validation Report

Following implementation of the plan, KTS will produce a validation report that demonstrates its successful implementation. This report will confirm that there is no continuing risk of environmental pollution to the environment from the site.

This report shall address: -

1. Disposal of raw materials,
2. Disposal of wastes,
3. Decommissioning of plant and equipment,
4. Disposal of obsolete equipment,
5. Results of monitoring and testing,
6. The need for on-going monitoring or investigations.

This report will be submitted to the Agency within three months of execution of the Plan.

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## 7. FINANCIAL PROVISIONS

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It is estimated that the entire decommissioning of plant and equipment, removal/disposal of materials, testing to evaluate the successful implementation of the plan and preparation of a final validation report to complete the Decommissioning Plan will cost in the region of €45,000.

This sum includes for the following: -

1. Disposal of consumable materials,
2. Disposal of unprocessed wastes,
3. Decommissioning of plant and equipment,
4. Disposal of obsolete equipment,
5. Monitoring and testing to ensure compliance with licence conditions,
6. Preparation of reports.

The above figure is based on current disposal costs and waste quantities that would be generated in the event of activation of this plan. It will be possible to recuperate some of the costs through the sale of plant.

**ATTACHMENT K.2**

**Aftercare Management Plan**

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## Attachment K.2 Aftercare Management Plan

The majority of the site will be either paved or occupied by buildings with minor landscape works at the site boundary. It is not anticipated that the waste processing activities will cease in the medium to long term. In the unlikely event that the facility shuts down it will be decommissioned in accordance with the Decommissioning Plan. Post closure measures for the monitoring and maintenance of the building and the restored areas will be agreed with the Agency.

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