



Mooresfort,
Lattin,
Co Tipperary,
Tel 062 55385
Fax 062 55483
E-mail info@nrge.ie

Waste Management Plan

for

Timoleague Agri Gen Ltd.

Barryshall

Timoleague

Bandon

Co. Cork

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Prepared by:
M. Mc Eniry BE CIWM

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Table 1: Solid Waste Management Hierarchy

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Figure 1: Proposed Waste Management Plan

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1. INTRODUCTION

NRGE Ltd. has prepared a Waste Management Plan for the development of a biogas plant to process pig manure from the nearby Pig Unit and co-digest it with imported biomass at Barryshall Timoleague, Bandon, Co. Cork. The purpose of this WMP is to ensure that wastes arising from the operation of the proposed Biogas Plant are managed, reused, recovered or disposed of by a method that ensures the provisions of the Waste Management Acts 1996 – 2007 and associated regulations are complied with. It also ensures that the optimum levels of waste reduction, re-use and recycling are achieved.

Waste management priorities of this Project are based on the principle of the EU Waste Management hierarchy as illustrated in the Figure 1 below.

Table 1: Solid Waste Management Hierarchy

Source Reduction and Reuse Recycling/Composting	Most Preferred
Combustion with Energy Recovery	
Land-filling and incineration without energy recovery	Least Preferred

In accordance with the EU Waste Hierarchy, the following Waste Management priorities have been established with respect of this facility.

1. Prevent material wastage
2. Minimise the quantity of waste
3. Reuse of site materials
4. Recycling of waste
5. Energy recovery
6. Disposal

2. DESCRIPTION OF THE PROCESS

The Biogas Plant will accept 48,500 tonnes of organic material per annum to co-digest with the pig manure to increase the efficiency of the proposed Anaerobic Digester. This organic material will be added directly to the mixing tank and will be green crop (maize, grass, oil seed or corn). Alternatively, it will be belly grass material (digestive tract contents separated from the digestive tract) from adjacent meat factories, dairy floatation sludge from adjacent dairy processing plants, fish waste (subject to approval by Department of Communications, Marine and Natural Resources) and Animal By-Products (subject to approval by Department of Agriculture, Food and the Marine). It is proposed to primarily target organic materials that are currently being land-spreading directives. The approval of the Environmental Protection Agency, Cork County Council and the Department of Agriculture, Food and the Marine will have to be granted, to permit the treatment of other waste types at this proposed Anaerobic Digester.

This organic material will be imported onto the site on a needs basis only. It will be delivered directly into the relevant pre-mix tanks. The high fibre material will be transferred directly into the underground pre-mix tanks, and liquid material will be pumped into the sealed storage tanks on-site. Waste material will only be accepted on-site from approved facilities, to be delivered by approved contractors. All deliveries will be recorded on-site and this register will be available for inspection.

3. DETAILS OF THE WASTE PRODUCED

The waste streams produced on the facility are set out in the table on the following page. The predominant waste streams are:

Bulbs (infra-red/florescent) on the facility are small and these are accumulated and stored on the farm until the annual visit Chemcar to the area.

Building materials: Concrete and stone reused on farm roadway, timber cut/chopped and burned in domestic fire-wood.

Electric motors/fans – Metals – Metals accumulated in the compound area for reuse or to have sufficient quantities for a metals collection contractor.

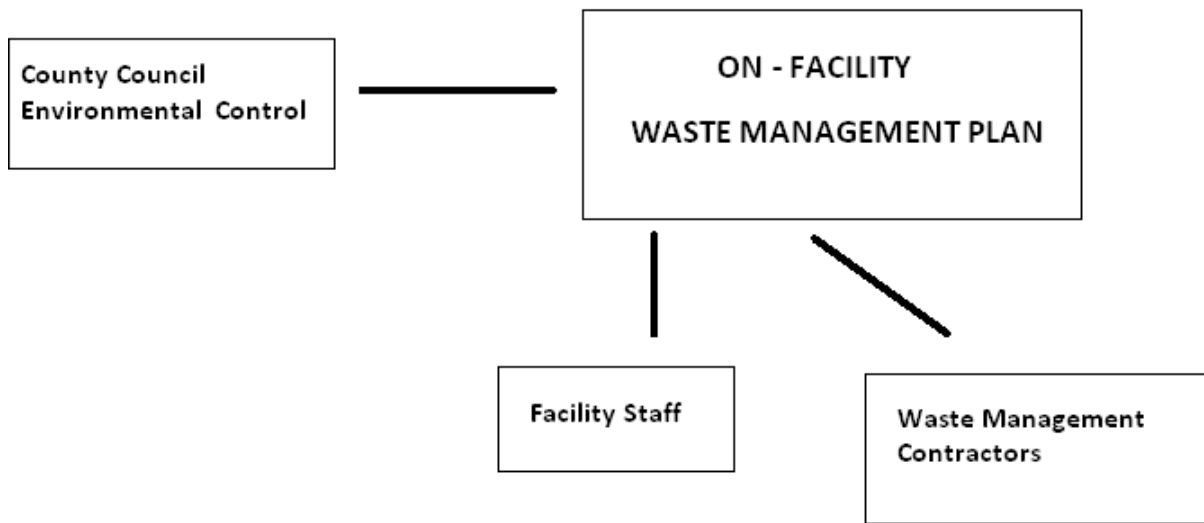
Table 2: Details of the Wastes Produced

Waste Type	EWC Code	Quantities	Management Method	Permit Reference
Fluorescent tubes, domestic waste	20 01 21 20 03 01	<100kg 250kg	Annual delivery to Chemcar	WCP-MO-09-0640
Metals	17 04 05	<1000kgs	Accumulated on-site to have sufficient quantities to justify a visit from a metal's collection contractor, some reused for on-site maintenance & repairs	Contractors to be appointed
Concrete	17 01 01	<2500kgs	Broken/Crushed – reused and utilised for farm road repairs	
Timber	17 02 01	<1000kgs	Cut/Chopped and utilised for domestic firewood	

4. PROPOSED WASTE MANAGEMENT PLAN

Waste will be segregated on-site. See **Figure 1** for an indicative representation of the Waste Storage Area (WSA). The WSA will have skips and/or receptacles for all recyclable wastes. The appointed waste contractor will collect and transfer the recyclable wastes as receptacle as refilled. The non-recyclable waste will be transferred by an authorised waste collector to an appropriate facility. Numerous waste contractors in the region carry out this operation. A successful Waste Management Plan is largely dependent on how readily it can be integrated in to normal site operations by the person responsible. It is recognised that the plan should not be obstructive to site operations and normal facility management. By placing the responsibility of waste management with the Manager, all reuse, recycling, wastage and necessary disposal can be monitored as close to the source as possible. The scale of the operations and the quantities of wastes involved are sufficiently small that the facility manager will not have to delegate the responsibility.

Figure 1: Proposed Waste Management Plan



5. RECORD KEEPING

This proposed Anaerobic Digester facility will require a Waste Licence from the Environmental Protection Agency which will condition the maintenance of waste records on site.