

ATTACHMENT-8-1-WASTE-HIERARCHY

Table of Contents

1. Construction & Demolition waste	1
1.1 Construction waste management/hierarchy	2
2. Operational Waste	2

1. Construction & Demolition waste

The Southern Waste Region Statistical Indicators Annual Report 2012 – 2015 and 2nd Annual Report in 2017 show that the southern regional collection of C & D waste was approximately 1¹ million tons in 2015 increasing to approximately 1.4² million tons in 2017 with corresponding pressure on licensed facilities to accept this waste. The EC (Waste Directive) Regulations 2011 set a 70% target for the reuse, recycling and recovery of man-made C&D waste in Ireland by December 2020. Section 11.2.3³ of the Southern Region Waste Management Plan 2015 -2020 states that, in general this target is being achieved, but within the region backfilling activities account for a significant portion of the recovery rate, with recycling of C&D wastes not as prevalent. Approximately 80% of this waste within the region is soil and stone.

Construction waste will arise from the refurbishment works in houses. Where refurbishment works are carried out any excavated soil and stones will be re used on the site to facilitate landscaping around the perimeter of the site and as a sub-layer for roads, yards and hard-core areas. The construction waste will be minimized by insuring electrical, non-painted or treated timbers and metal waste items are recycled. C & D waste will be carefully segregated on site and stored in separate skips. Records of all wastes will be kept in accordance to the requirements of the IPPC License. The waste hierarchy pyramid principles will be implemented to prevent and minimize waste as illustrated in Figure 1.

Hazardous waste and electrical components (20 01 35 and 20 01 36)

If Asbestos Containing Materials (ACMs – 17 06 05) are suspected then an approved licensed contractor will be employed to test, handle and dispose of these materials.

Electrical components in the buildings such as fluorescent tubes and wiring will be removed from the buildings and stored in dedicated covered receptacles for Waste Electrical and Electronic Equipment (WEEE) recycling. There are no activities that give rise to contaminated soil on the site, however, if paints, glues, batteries, oils or chemicals are encountered they will be stored in a dedicated leak-proof covered container and recycled appropriately.

Concrete and Concrete Blocks (17 01 01)

Prior to refurbishment works slurry tanks will be emptied and slurry will be land-spread. The concrete recovered from the internal walls partitions and floors is an inert material and will be re used on site as a sub-layer for hard-standing yards and road-ways.

¹ Page 8 of Southern Region Statistical Indicators Annual Report 2012 -2015

² Page 8 of Southern Region Waste Management Plan 2015 -2021

³ <http://www.southernwasteregion.ie/sites/default/files/Part%202b.pdf>

Timber (17 02 01 and 17 09 04)

It is assumed that more 50% of the refurbished timber will have to be sent for land-fill or incineration because it will be painted or treated. Timber that is uncontaminated, i.e. free from paints, preservatives, glues etc., will be segregated into separate skips. Timber panels from doors and vent shutters will be segregated and stored in skips for land-fill or incineration.

Metal (17 04 05 and 17 04 07)

Metals will be segregated into high grade stainless steel (roofing members), steel alloys (roof sheeting) and feed silos and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

Glass (17 02 02)

Glass will be dismantled from the pig houses prior to refurbishment and stored in a skip for recycling.

Pre-fabricated panels with insulation (17 08 02)

There are currently a number of recycling services for plasterboard in Ireland. Where tin foil or insulation is attached land-fill is the only option.

By segregating materials and re-using the heavier concrete rubble the rate of re use and recycling is expected to be in excess of the EC (Waste Directive) Regulations 2011 which sets a 70% target and proposed construction waste produced during the refurbishment of the pig houses should be less than 10 tons – which is a tiny proportion of the regional capacity.

The rate of re use and recycling is estimated to be approx. >90% and therefore is well in excess of the EC (Waste Directive) Regulations 2011 which sets a 70% target.

1.1 Construction waste management/hierarchy

- Construction and demolition materials will be stored in approved waste contractor skips and building materials will be secured to prevent weather damage;
- Haul distances will be minimised by selecting locally sourced materials where possible;
- Order in bulk to minimise deliveries and resulting wear and tear on local road network;
- Where possible replacement material will be considered such as Ground Granulated Blast Furnace Slag (GGBS) and Pulverised Fly Ash (PFA) as replacements for Portland cements;
- Recycled materials will be used where possible. Re-using and recycling 90% of the demolition materials on site will reduce CO₂ emissions during the construction phase by reducing the amount of fill material imported into the site and by reducing the transport of waste material from the site; and

2. Operational Waste

Carcass waste (02 01 02) will be prevented by minimising mortality. This will also minimise / prevent sharps waste (18 02 03) . Canteen waste will be segregated into recyclable packaging, bottles, cans etc. (20 01 01) to be placed in Blue Bin. Food waste will be kept in Brown Bin compostable waste bin.

Plastics and other waste will be land-fill / black bin waste (20 03 01). Only licensed hauliers will be used. Fluorescent tubes (20 01 21) will be stored on site and returned to suppliers for recycling.

Figure 1: Waste Hierarchy



Table3; Waste Hierarchy

Hierarchy	Waste				
	Animal Tissue Waste (02 01 02)	Sharps Needles (18 02 03)	Mixed Municipal Waste (20 03 01)	Packaging (20 01 01)	Fluorescent Tubes (20 01 21)
Estimated Quantity (tons)	137	0.01	1	0.5	0.01
Prevention	Maintain a high health status	Maintain a high health status	Minimise plastic packaging	Delivery of bulk materials (feed)	Regular maintenance of electrical fixtures
Preparing for re-use	Sealed skip storage; regular collection	Specialised storage containers	Weekly collection. Stored in dedicated wheelie bin. If brown bin is available use it.	Weekly collection. Stored in dedicated wheelie bin.	Stored in barrels for return to supplier.
Recycling	Yes / rendered into	No	No	Yes	Yes - return to supplier

Hierarchy	Waste				
	Animal Tissue Waste (02 01 02)	Sharps Needles (18 02 03)	Mixed Municipal Waste (20 03 01)	Packaging (20 01 01)	Fluorescent Tubes (20 01 21)
	animal protein.				
Disposal	Licensed haulier to licensed rendering plant	Licensed haulier to transfer station prior to incineration.	Licensed haulier to land-fill	Licensed haulier - recycling	Recycling

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