



APPENDIX 4-5

OPERATIONAL WASTE MANAGEMENT PLAN

Meath County Council - Viewing Purposes Only!

**OPERATIONAL
WASTE MANAGEMENT PLAN**

FOR

**SKY CASTLE LIMITED
23 ROCKHILL
BLACKROCK
Co. DUBLIN**

RELATING TO A

STRATEGIC EMPLOYMENT ZONE

AT

**MOYGADDY, MAYNOOTH,
Co. MEATH**

18th August 2022

Ian Byrne

Prepared By: Ian Byrne MSc, MIOA, Dip Environmental & Planning Law

TABLE OF CONTENTS

1.0	Introduction	3
2.0	Waste Management Design Guidance	4
3.0	Key Design Aspects of the OWMP	7
4.0	Methods of waste reduction in Canteen / Kitchenettes	7
5.0	Methods of waste reduction in Offices	7
6.0	Waste Storage & Processing Areas	8
7.0	Waste Management Duties of Facility Management Company	13
Appendix I	Location of Waste Storage Areas	

1.0 INTRODUCTION

This document presents the Operational Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with a Strategic Employment Zone comprised of an Office Innovation Campus at Moygaddy, Maynooth, Co. Meath.

The proposed development includes 3 Office Buildings A, B & C with areas of 10,260m², 5,186.54m² and 5,186.30m².

The **Objective of this OWMP** is to maximise the quantity of waste segregated, recycled, re-used and recovered by providing sufficient waste recycling infrastructure within the development.

The **Goals of this OWMP** are to :

- Achieve a Zero waste to Landfill Target
- Surpass a minimum recycling rate of 50% in accordance with the current *Eastern Region Waste Management Plan*.
- Achieve LEED Gold Standard for Waste Management for the Office Innovation Campus

The OWMP is defined by the following stages of waste management

Stage 1	Occupier Source Segregation
Stage 2	Occupier Deposit and Storage
Stage 3	On-Site waste processing including compaction and composting
Stage 4	Off-Site Removal
Stage 5	End Destination of wastes

The Operational Waste Management Plan shall be integrated into the design and operation of the development to ensure the following:

- That sufficient waste management infrastructure is included in the design of the development to efficiently manage all waste generated.
- That the maximum quantity of different waste types can be segregated and separately stored.
- That the principle of waste segregation at source is integrated into the development by the provision of separate bin systems, signage and notifications.
- That all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996-2011 and all associated Waste Management Regulations.

- That the Facilities Management Company will manage the movement of all wastes throughout the building, shall manage the wastes storage areas and manage the segregation, compaction and removal of wastes off-site.

2.0 WASTE MANAGEMENT DESIGN GUIDANCE

Meath County Development Plan 2021-2027

This OWMP has been prepared with regard to relevant waste management policies, objectives detailed in the *Meath County Development Plan 2021-2027*.

Chapter 6 Infrastructure Strategy - Chapter 6.7 – Waste Management

INF POL 61 To facilitate the implementation of National Waste Legislation, National and Regional Waste Management Policy and the circular economy

INF POL 64 To encourage and support the expansion and improvement of a three-bin system (mixed dry recyclables, organic waste and residual waste) in order to increase the quantity and quality of materials collected for recycling in conjunction with relevant stakeholders.

INF POL 65 To adopt the provisions of the waste management hierarchy and implement policy in relation to the County's requirements under the current or any subsequent Waste Management Plan. All prospective developments in the County shall take account of the provisions of the regional waste management plan and adhere to the requirements of the Plan. Account shall also be taken of the proximity principle and the inter-regional movement of waste.

INF POL 66 To ensure that hazardous waste is addressed through an integrated approach of prevention, collection, and recycling and encourage the development of industry-led producer responsibility schemes for key waste streams

Development Management Standards - Chapter 11.6.7 – Industrial, Office, Warehousing and Business Park Development includes Waste Objectives as detailed below:

DM OBJ 61: Any planning application for industrial, office, warehousing and Business Park Development shall address the following development assessment criteria:

- To require that proposals for and location of onsite areas for storage and disposal (if applicable) of waste be provided as part of any planning application. All external storage including bin storage, oil tanks, etc, shall be visually screened from public areas.
- To require that waste and recycling areas be covered, screened and enclosed from public view and wind, compliant with the Council's Waste Management Strategy.

British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice

The OWMP has been prepared with regard to *BS 5906* which provides guidance on methods storage, collection, segregation for recycling and recovery for commercial buildings.

3.0 KEY DESIGN ASPECTS OF THE OWMP

In order to ensure that the development is designed and operated to maximise the opportunities for maximising recycling waste streams and minimising the generation of unrecyclable mixed waste streams, the following key design aspects shall be implemented.

- All Tenants of the development shall be provided with training by the Facility Management Company on how the wastes that they produce shall be managed in accordance with the OWMP.
- All Tenants of the development shall be provided with information by the Facility Management Company on the segregation of waste at source and how to reduce the generation of un-segregated wastes.
- All Canteens / Kitchenettes shall include 6-bin waste system to facilitate the segregation of waste at source for

Organic compostable waste
Plastics
Paper and Cardboard
Aluminium cans
Non-recyclable mixed waste
Glass

- Each floor will contain an interim Waste Storage Area in which Tenants of that floor will deposit their waste types into the 7-bin system.

Organic compostable waste
Plastics
Paper and Cardboard
Aluminium cans
Non-recyclable mixed waste
Glass
WEEE

- The Facility Management Company shall transfer the contents of the intermediate waste bins to the Waste Management Areas of each Office Block.

Figure 1 Typical Canteen / Kitchenette waste segregation bin system



Figure 2 Typical Office waste segregation bin system



4.0 METHODS OF WASTE REDUCTION IN CANTEEN / KITCHENETTES

The following measures will be implemented to reduce the amount of waste generated by the operation of the Canteen / Kitchenettes

- Bulk purchasing of food such as jams/sugars, condiments, cakes/biscuits shall minimise packaging waste.
- Sugar / condiments shall not be provided in single servings.
- Sauces shall be provided in plastic containers instead of individual single servings.
- Paper and Plastic Plates, Cups and Plastic cutlery will not be available.
- Drinks in glass bottles will not be stocked.

5.0 METHODS OF WASTE REDUCTION IN OFFICES

The principal types of waste generated in an office environment are:

- Paper & Cardboard
- Ink and Toner Cartridges
- WEEE
- Bulky Waste (e.g., Furniture)
- Plastic packaging

In order to reduce the generation of office waste and to maximise the opportunities to recycle office waste, the following Best Practices shall be adopted by the Tenants of the Office Spaces:

- Remove individual desk bins, consolidating collection in common areas with labelled waste containers using example pictures and colour coding.
- Single use cups, plates and tableware including plastic water cups shall not be permitted as part of Tenant lease agreement.
- Company branded promotional materials can be a significant source of waste. Consider reducing or eliminating paper brochures and leaflets, plastic pens, and other single use or non-recyclable items.
- Avoid unnecessary printing
- Avoid unnecessary colour printing
- Print on both sides of the page
- Reduce font size to reduce paper
- Implement a Green Purchasing Policy

6.0 WASTE STORAGE & PROCESSING AREAS

The purpose of the waste storage and processing areas are:

- To provide receptacles so that all wastes can be segregated thus minimising unrecyclable mixed waste streams.
- To provide mechanical systems i.e., Mobile Compactors and Bailing Units to reduce the volume of waste generated thus reducing the frequency that waste collection vehicles attend site, thus reducing fuel and energy use required for off-site processing.
- To integrate a streamlined waste reduction, segregation and recycling Policy into the design and operation of the Office Innovation Campus.

Each Office Block (A, B, C) shall contain a separate Waste Storage and Processing Area which will include the following:

Mobile compactor / bailing units for paper/cardboard and plastics and aluminium cans

Organic waste composter system for food waste

Glass Bins

WEEE/ Battery recycling cage

Hazardous waste banded container for oils, maintenance hydrocarbon liquids

Bulk 1100 litre Bins for non-recyclable materials

Compactor Unit

Mobile Compactor have the compactor units attached to the waste container and are removed by the provider when the container is full and replaced by an empty unit. Figure 3 provides an image of a typical mobile compactor unit.

Bailing Unit

Bailing Units are used to compact cardboard/paper and plastic waste and to produce a compressed uniform sized waste bale. The use of balers reduces the volume of waste on site thus reducing the space required to store waste and the frequency of waste collections. Figure 4 provides an image of a typical bailing unit.

Figure 3 Image of mobile compactor with bin lift



Figure 4 Cardboard/Plastic Bailing Units



WEEE Battery & Lamp Recycling

Waste Electrical and Electronic Equipment (WEEE) Batteries and Fluorescent Lamps shall be safely stored in dedicated WEEE recycling cages, Battery Boxes and Lamp Boxes supplied by WEEE Ireland as shown in Figures 5,6 and 7 below. These items contain precious metals, plastics and glass which can be recovered for re-use.

Figure 5 WEEE Recycling Cage



Figure 6 Lamp Recycling Box



Figure 7 Image of Battery Recycling Box



Waste Oil Management & Recycling

Waste oils will be generated from plant maintenance and from food preparation in the canteens. Oils can be processed recycled and reused by specialist waste contractors including ENVA. Maintenance and cooking oils shall be separately stored in secure containers as indicated in Figures 8 & 9.

Figure 8 Image of waste cooking oil storage containers



Figure 9 Image of waste maintenance oil storage container



Organic/Food Waste Management & Recycling

Organic food waste shall be composed on-site in a composting unit. Generated compost can then be used on-site for fertilising landscaped areas and can also be made available to employees to take home for domestic garden use.

This initiative will significantly increase the segregation of food waste in the development and will significantly reduce the volume of foodwaste contaminating other recyclable waste streams.

Figure 10 Food Waste Composter



7.0 WASTE MANAGEMENT DUTIES OF THE FACILITY MANAGEMENT COMPANY

The Facilities Management Company shall be responsible for the implementation of all aspects of the Operational Waste Management Plan which are detailed as follows:

- The Facilities Management Company shall employ an appropriately qualified and experienced staff member who will be responsible for all aspects of waste management at the development.
- The Facilities Management Company shall be responsible for the operation and management of the Compactors/Bailers, Composting Units and the bulk waste storage containers in the Waste Storage and Processing Area.
- The Facilities Management Company shall maintain a register detailing the quantities and breakdown of general mixed unrecyclable waste, recyclable waste, organic waste and hazardous wastes removed from the development. Supporting documentation shall be provided by the Waste Collection Contractor(s) on a monthly basis.
- All Tenants shall be provided with training and Waste Management Information document, by the Facilities Management Company which shall clearly state the methods of source waste segregation, storage, and recycling initiatives that shall be implemented. This Information document shall be issued on an annual basis.
- The Facilities Management Company shall conduct daily inspections of the intermediate waste storage areas on each floor and shall sign a daily check list which shall be displayed within the area.
- It shall be the responsibility of the Facilities Management Company to maintain and ensure the cleanliness of all waste storage areas to prevent odours.
- It shall be the responsibility of the Facilities Management Company to maintain and ensure the cleanliness of the external waste management areas to prevent odours and the attraction of vermin.
- The Facility Management Company shall maintain a register of all waste collection contractors engaged to remove waste from the site and the details of the Waste Facility Permits / Licenses of all waste acceptance facilities that wastes are exported to.

APPENDIX I
LOCATION OF WASTE STORAGE AREAS

