

OUTLINE OPERATIONAL WASTE MANAGEMENT PLAN

for

A PROPOSED STRATEGIC HOUSING DEVELOPMENT

at

ST MICHAELS HOSPITAL CAR PARK, DÚN LAOGHAIRE

for

FITZWILLIAM DL LTD.

Muir Associates Limited,
Consulting Engineers,
Project Managers,
Marketing Network House,
Argyle Square, Morehampton Road,
Dublin 4, D04 K0Y1

Tel: +353-1-6762788
Email: info@muir.ie
www.muir.ie



DOCUMENT HISTORY

Job Ref: D1855

Date	Revision	Prepared	Approved	Issue
22.02.19	A	SS	SOR	Draft
07.03.19	B	SS	SOR	Revised and Reissued as Draft
11.03.19	C	SS	SOR	Revised and Reissued as Draft
22.03.19	D	SS	SOR	Revised and Reissued for Pre-Planning
13.02.20	E	SS	SOR	Revised and Reissued for Pre-Planning
21.08.20	F	SS	SOR	Draft
25.09.20	G	SS	SOR	Revised and Issued as Final Draft
16.10.20	I	SS	SOR	Final Draft
22.10.20	J	SS	SOR	Issued for Planning
03.12.20	K	SS	SOR	Final Draft
10.12.20	L	SS	SOR	Revised and Issued for Planning

Copyright Muir Associates Limited. All rights reserved.

This report has been prepared on behalf of Fitzwilliam DL Ltd. in accordance with the terms and conditions of the related appointment.

Opinions and information provided in this report are on the basis of Muir Associates Limited using due skill, care and diligence and no warranty is provided as to their accuracy.

No part of this report may be copied or reproduced by any means without prior written permission from Muir Associates Limited.

It is expressly stated that no independent verification of any of the documents or information supplied to Muir Associates Limited has been made.

CONTENTS

1. INTRODUCTION	3
2. DESCRIPTION OF PROPOSED DEVELOPMENT	3
3. GUIDELINES/REQUIREMENTS.....	4
4. PROPOSED WASTE MANAGEMENT STRATEGY.....	5

1. INTRODUCTION

This Outline Operational Waste Management Plan (OWMP) has been prepared on behalf of Fitzwilliam DL Ltd. by Muir Associates Limited to accompany a planning application for a proposed Strategic Housing Development located at St Michaels Hospital Car Park, Dún Laoghaire.

The Plan has been prepared with the primary objective of ensuring that all wastes arising from the occupation of the proposed development are dealt with from generation to disposal in a systematic way taking cognisance of the many guidance documents on the management of waste from buildings including:

- **Waste Management Act 1996 as amended;**
- **Environmental Protection Agency Act, 1992 as amended;**
- **Litter Pollution Act 1997 as amended**
- **BS 5906:2005 Waste management in buildings. Code of Practice;**
- **Eastern-Midlands Region Waste Management Plan 2015 – 2021;**
- **Dún Laoghaire-Rathdown County Council (Segregation, Storage and Presentation of Household and Commercial Waste) Byelaws, 2019;**
- **Dún Laoghaire-Rathdown Development Plan 2016-2022;**

The purpose of this Outline OWMP is to set a high-level strategy for waste management within the development which will be developed into a more detailed Operational Plan by the management company.

2. DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development will consist of the demolition of an existing 2 No storey house on the site and the construction of 102 No build-to-rent residential apartments (80 No 1-bed and 22 No 2-bed units) across 2 No buildings (Building 01 and Building 02), along with ancillary residential amenities and a publicly accessible café on a c. 0.42ha site. Building 01 to the north extends to part 5, part 6, part 8 and part 13 No storeys in height. Building 02 to the south extends to part 8, part 9 No storeys in height, with a setback 9th storey.

Residential amenity space in the form of a reception, coworking/study space, gym, games area, lounge/kitchen area, and multi-purpose recreational space is provided at ground floor level of Building 01, alongside a reception and postal storage area. External roof terraces are included at storeys 6 and 9 at Building 01, with an enclosed glazed amenity space at 13th storey level, with external terrace. An external roof terrace is provided at 9th storey level at Building 02.

The development includes a vehicle right of way providing access to St. Michael's Hospital along the western perimeter of the site, accessed from Crofton Road. This provides access to 3 No car parking spaces (including 1 No disabled space) located between the two buildings. A secondary right of way is provided via a landscaped pedestrian route along the eastern perimeter of the site providing access to St. Michael's Hospital. A total of 150 No bicycle parking spaces are provided

at the ground floor level of Building 02 (alongside a bicycle repair area), 26 No within the central courtyard and 8 No adjacent to the café at the northern perimeter.

The development also includes an ESB substation, bin store, services and drainage infrastructure, boundary treatments, access provision at Crofton and all ancillary development works necessary to facilitate the development.

A full development description is provided in the planning report which accompanies the submission.

3. GUIDELINES/REQUIREMENTS

In the preparation of this Outline OWMP the guidelines set out in BS5906:2005 Waste Management in Buildings – Code of Practice were consulted and followed where applicable. In addition, the requirements of the Regional Waste Management Plans published by the EPA and the Dún Laoghaire-Rathdown County Council (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-laws, 2019 will be adhered to in the provision of waste management facilities at the proposed development.

3.1 Waste Policy and Legislation

National waste management strategy in Ireland is outlined in several policy statements the first of which entitled 'Changing Our Ways' was published in September 1998 by the Department of Environment and Local Government. This document has been expanded and updated by two further documents "Delivering Change" (2002) and "Taking Stock and Moving Forward" (2004). More recently the Department of Environment, Community and Local Government published "A Resource Opportunity" (2012) which sets out the measure through which Ireland will make the further progress necessary to become a recycling society, with a clear focus on resource efficiency and the virtual elimination of landfilling of municipal waste. These documents outline Government policy and objectives for managing waste from 1998 to the present.

One of the main aims of these policy documents is to reduce national dependence on landfill and to aid local authorities in a transition to a modernised waste system. 'Changing Our Ways' set out the following national targets for waste management (percentages relate to waste arisings recorded in 1995):

- 50% of household waste is diverted away from landfill
- Recycling of 35% of municipal waste
- Development of waste recovery facilities as an alternative to landfill
- Recycling of at least 50% of construction and demolition waste by 2003 with a progressive increase to at least 85% by 2013
- Minimum of 65% reduction in biodegradable waste consigned to landfill

“Taking Stock and Moving Forward” sought to update the situation and consider developments since publication of earlier policy documents. The document identified a series of 21 key points that are intended to “provide a solid basis for ensuring speedier and more effective realisation of policy objectives” aimed at modernising Irish waste management infrastructure and services.

3.2 Waste Management Planning and Development

In order to achieve the targets, set out in “Changing Our Ways” and to comply with EU and national waste legislation, regional waste management planning has been introduced in Ireland. Within each region waste management strategies and plans to assist in providing a co-ordinated approach to all aspects of waste management have been devised.

The proposed development is located in the Eastern-Midlands Waste Management Region. A key objective of the Waste Management Plan and its policies is the diversion of waste from landfill. The proposed development will comply with the policy objectives of the Regional Waste Management Plan by providing facilities at the proposed development to store segregated waste in designated areas in order to maximise the quantities of waste that can be reused, recycled, and recovered.

Waste management at the development will be carried out in accordance with best practice and modern collection systems that incorporate pay by weight/volume schemes.

4. PROPOSED WASTE MANAGEMENT STRATEGY

In accordance with the above guidance the following measures will be implemented under the OWMP for the proposed development. The proposed development will give rise to a wide variety of waste streams which will be generated, stored, segregated, and disposed of as outlined below. Residents will be required to segregate their waste into the following waste categories:

- Dry Mixed Recyclables (DMR);
- Mixed Non-Recyclables (MNR);
- Organic (food and garden) waste;
- Glass (segregated by colour);
- Mixed Non-Recyclable (MNR)/General Waste.

The Environmental Protection Agency’s (EPA) Household Food Waste and Bio-Waste regulations are designed to promote the segregation and recovery of household food waste and the proposed development will adhere to the EPA guidance on the segregation of domestic waste.

Reuse or Recycling of Items to Avoid Landfill

The reuse and recycling of items will be encouraged as the preferred option to disposal. This strategy is well supported by existing reuse and recycling infrastructure in the local area.

Use of Brown Waste containers for Organic Waste

The Compositing Association of Ireland has prepared a recommended list of acceptable materials for household brown waste containers in order to standardise such schemes.

4.1 Waste Contractor

A number of private waste management contractors operate in the area and currently provide a comprehensive waste recycling and disposal service. In addition, various waste contractors operate a multi container collection system.

Communal waste storage will be provided for the residential occupants of the proposed development. The frequency of the waste collection will be agreed with the Waste Contractor and will be reviewed when the proposed development is fully occupied and as waste management trends evolve. An outline of the anticipated waste generation and subsequent storage requirements is set out below.

4.2 Waste Storage Requirements (Residential)

BS5906 indicates that the volume of waste generated by a residential development is calculated by multiplying the number of dwellings by the average number of bedrooms (volume arising per bedroom is 70 litres) per dwelling + 30 litres to establish the average volume of waste produced on a weekly basis. Based on an average of 1.22 bedrooms per unit this results in an average volume of waste per dwelling of 115 litres per week (e.g. 11,730 litres for the residential development as a whole).

For communal storage, waste containers that comply with IS EN 840 1997 will be used at the proposed development. 1,100 litre waste containers have dimensions in the region of 1.3m long by 1.0m wide by 1.3 m high (including wheels) and a load capacity of approximately 0.5 tonnes. Based on weekly waste collections, this suggests that 11 No 1,100 litre waste containers will be required for the collection and storage of waste from the proposed development. Given the high number of waste containers required, it is recommended that consideration be given to multiple weekly collections and the use of a compaction system to minimise the storage requirements.

A small additional provision should be made for glass. Glass waste storage is typically provided in the form of bottle banks. As space is at a premium at the proposed development, it is recommended that a special arrangement be made with the appointed waste contractor to provide glass storage waste containers, one for clear, green, and brown glass, respectively. These can be stored in smaller 270 litre waste containers. Collections can be organised as required but it is unlikely that this will be any more than weekly. Commercial waste can also include waste electrical and electronic equipment, batteries, ink toners and cartridges etc Specialist take back of these items should be arranged by the producer of the wastes once the proposed development is occupied.

4.3 Waste Storage Requirements (Commercial)

Guidance for commercial buildings set out in the governing bye laws of the regional waste management plan requires one 1,100 litre container for every ten bags of waste generated by a commercial activity. Using a “bag of waste” as the standard unit of measurement makes this guideline difficult to use when attempting to quantify and predict waste generation prior to the occupation of the proposed development. It is considered that calculations based on BS5906 give a more accurate representation of the likely waste arisings from the proposed development and thus requirement for storage.

BS5906 indicates that the volume of waste generated by a café is calculated by multiplying the number of covers by 75 litres to calculate the average weekly volume of waste. This results in an estimated volume of waste for the publicly accessible café of 2,625 litre of waste per week.

Waste storage containers that comply with the relevant part of I.S. EN 840 will be used at the proposed development. 1,110 litre waste containers have dimensions in the region of 1.4m long by 1.1m wide by 1.5m high (including wheels) and a load capacity of approximately 0.45 tonnes. Based on a weekly waste collection, this suggests that 3 No 1,100 litre waste containers will be required for the collection and storage of waste from the café.

Given the number of waste containers required, it is recommended that consideration be given to the use of a compaction system to minimise the storage requirements. The proportions of waste types generated by the café will be 50% DMR, 30% food and 20% residual.

4.4 Access Provisions

BS5906 identifies the ground floor as the ideal location for waste storage facilities and that the storage area should be directly accessible by waste collection vehicles.

In accordance with the requirements of BS5906, waste storage chambers will be constructed within a fire compartment structure i.e. designed to contain a fire. Walls and roofs of chambers shall be formed of non-combustible material. Suitable firefighting measures will be provided at each storage area. Consultation will be held with a fire safety officer in this regard.

BS5906 also recommends that storage areas be located so that wastes need not be carried over a distance of not more than 30 metres whilst also allowing access for collectors of the waste. Waste storage areas will be designed so that each container within the storage area is readily accessible. Waste storage areas will be equipped with wastewater drainage points for cleaning and disinfecting purposes.

Sufficient access and egress will be provided to enable waste containers to be moved easily from the storage area to the collection point. The access and egress area should have no steps and have a minimal inclined ramp.

4.5 Implementation

The proposed development will appoint a fully Licensed Waste Management Company to manage the waste disposal process. All documentation, such as licences, waste transfer notes will be made available to the management company and a record will be held on site.

4.6 Record Keeping

Documentation will be retained to demonstrate legal disposal of all types of waste. Written documentation such as collection dockets, invoices, and waste transfer notes with the following information will be required:

- A copy of the waste management company licence and registration number. For each load of waste collected; the date, type of waste, quantity of waste in that load, signature of authorized representative of the company