



environment ltd

*Specialists in laboratory analysis,
monitoring and
environmental consultancy*

25
1994 - 2019

TMS Environment Ltd
53 Broomhill Drive
Tallaght
Dublin 24

Phone: +353-1-4626710
Fax: +353-1-4626714
Web: www.tmsenv.ie

OPERATIONAL WASTE MANAGEMENT PLAN

FOR PROPOSED RESIDENTIAL DEVELOPMENT

AT IBIS RED COW INTERCHANGE

Report Ref. 30600-1 Rev 1.0

September 2022

Imelda Shanahan

Dr Imelda Shanahan

Contents

1.0	INTRODUCTION	3
2.0	WASTE MANAGEMENT IN IRELAND	3
2.1	Introduction	3
2.2	National Waste Policy and the Circular Economy	3
2.3	Regional and Local Waste Policy	5
2.4	Design Standards for New Apartments	7
3.0	WASTE MANAGEMENT OBLIGATIONS	8
4.0	THE PROPOSED DEVELOPMENT	8
5.0	WASTE TYPES	9
6.0	WASTE MANAGEMENT	11
6.1	Waste arisings	11
6.2	Waste storage facilities	12
7.0	LOCAL WASTE FACILITIES	14
8.0	CONCLUSIONS	14

1.0 INTRODUCTION

This report is an Operational Waste Management Plan (OWMP) for a proposed residential development at the IBIS Hotel Complex site, Red Cow Interchange Dublin. The development will involve the construction of build-to-rent apartments as well as the internal roads and associated landscaping works. Once operational the development will give rise to a variety of different waste streams which will require proper management in accordance with the legislation and appropriate guidelines.

The purpose of this OWMP is to ensure that wastes generated within the development will be managed and disposed of in a way that ensures maximum levels of waste recycling and reuse and to minimise the levels of waste diverted to landfill.

This OWMP will also ensure that waste storage and movement within the development will occur in a manner which complies with relevant legislation and has a minimal impact on the occupants of the development and nearby existing commercial and residential areas.

2.0 WASTE MANAGEMENT IN IRELAND

2.1 Introduction

The subject site is fully situated within the South Dublin local authority area and consequently the proposed development must comply with the waste management requirements of South Dublin County Council as well as the relevant National and Regional waste management requirements. This section sets out a summary of the principal National, Regional and Local waste management requirements which must be considered for this development.

2.2 National Waste Policy and the Circular Economy

The Department of Housing, Planning and Local Government has primary responsibility for waste policy and legislation at a national level in Ireland. A significant proportion of national policy is governed by European Union (EU) initiatives. Such initiatives are usually enacted through European Directives which are then transposed into Irish law through our own legislation. National waste management policy in Ireland is contained in the following policy documents:

- *Waste Management Changing our Ways, 1998;*
- *Preventing and Recycling Waste: Delivering Change, 2002;*

- *Taking Stock and Moving Forward*, 2004;
- *A Resource Opportunity – Waste Management Policy in Ireland*, 2012; and
- *A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025*; September 2020

The current national waste policy, *A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025*, was published in September 2020 and sets out policy measures and actions for each waste management option as well as measures and actions for compliance and enforcement of the waste legislation applicable. The new policy document shifts focus away from waste disposal and onto the production chain. The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement. The previous national waste policy, *A Resource Opportunity – Waste management policy in Ireland*, (2012), drove delivery on national targets under EU legislation, but the Irish and international framework has changed in the intervening years and change was required.

Irish waste policy is grounded on the European Union’s concept of a waste management hierarchy. The European Union’s waste management hierarchy is a series of waste management options, presented in decreasing order of environmental and economic desirability. The hierarchy states that the preferred option is prevention, followed by re-use, recycling, recovery, with the least desirable option being landfill. The overall intent of these policy statements is to move Irish waste management away from disposal and towards the more favoured options higher up the hierarchy and ultimately to achieve the full transition to a Circular Economy. The overall objectives of the current Action Plan are as follows:

- To shift the focus away from waste disposal and treatment by ensuring that the useful lifetime of materials and products is prolonged;
- To shift the burden of environmental responsibility for disposable goods to the producer;
- To ensure that measures for supporting sustainability are fostered;

The current legislative framework relies on the Waste Management Act 1996 and the Environment (Miscellaneous Provisions) Act 2011 as the principal vehicles through which

national waste policy is enacted. The new Policy envisages that a new Waste Management (Circular Economy) Bill will be introduced to provide the legislative underpinning required for new measures required to support the new Waste Policy.

2.3 Regional and Local Waste Policy

For the purposes of waste management planning, Ireland is divided into three different regions namely, Eastern-Midlands, Southern and Connacht-Ulster regions with each region led by a Regional Waste Management Planning Office. The Eastern-Midlands Region includes the local authorities of Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow.

The subject site is within the jurisdiction of South Dublin County Council who have adopted the Eastern- Midlands Region Waste Management Plan 2015-2021. The Plan provides a framework for the prevention and management of waste in a sustainable manner in Dublin and the other local authority areas.

The strategic vision of the regional waste plan is to rethink the current approach to managing waste, by viewing waste streams as valuable material resources. It is hoped that making better use of available resources and reducing the leakage of materials as wastes will deliver benefits economically and environmentally to the region.

The plan contains a number of key measures that encourage a positive change in the attitudes and actions of householders, business and industry towards waste prevention. It also seeks to ensure that the Eastern-Midlands Region moves its management of waste from a traditional disposal model to a circular economy model so that waste becomes a future resource.

The Policy actions of the Regional Waste Management Plan include the following:

- A 1% reduction per annum in the quantity of household waste generated per capita over the six year period of the plan;
- A recycling rate of 50% of managed municipal waste by 2020;
- A reduction to 0% for the direct disposal of unprocessed residual municipal waste to landfill commencing in 2016;
- Deliver communication, awareness and on the ground activities which lead to a lasting change in the people's behaviour towards waste;
- Increase the level of source-segregated kerbside collections in the region, with a

Operational Waste Management Plan IBIS Red Cow Residential Development

strong focus on ensuring that a three bin system becomes commonplace at household and commercial levels;

- Enforcement of the regulations related to household and commercial waste to tackle the problem of unmanaged waste;
- Ensure existing and future waste facilities do not negatively impact environmentally sensitive sites through proper assessments and siting;
- Grow the waste management sector into a prosperous and sustainable industry which creates and maintains healthy employment.

Under the terms of the Waste Management Acts 1996 to 2011, the County Development Plan is deemed to include the objectives of the Waste Management Plan for the area. The County Development Plan 2022 - 2028 sets out a number of objectives and actions in line with the objectives of the waste management plan. The County Councils Waste Management Strategy is grounded in EU and National policy and can be summarised by the waste hierarchy of prevention, recycling, energy recovery and disposal.

Section 11.6 of the South Dublin Development Plan 2022 – 2028 sets out the waste management policies and objectives for residential developments in order to comply with the Development Management Standards set for the county with the aim to ensure orderly and sustainable development. The main relevant waste management policy of the County Development Plan is as follows:

IE7 Objective 7:

To require the appropriate provision for the sustainable management of waste within all developments, ensuring it is suitably designed into the development, including the provision of facilities for the storage, separation and collection of such waste.

These Objectives have also been considered in formulating the Operational Waste Management Plan for the proposed development.

The requirements of the South Dublin County Council as set out in the South Dublin County Council Household & Commercial Waste Bye-Laws 2018 are also considered. These Bye Laws specifically address the requirements of relevant national legislation and specifically those relating to New Apartments.

2.4 Design Standards for New Apartments

The Department of Housing, Planning and Local Government published the Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities in 2015 and were updated in 2018 and in 2020. These Guidelines set out standards for apartment development particularly with regard to design quality safeguards such as internal space standards for 1-,2- and 3-bedroom apartments, internal storage and amenity space.

The guidelines require provision be made for the storage and collection of waste materials in apartment schemes. Refuse facilities should be accessible to each apartment stair/lift-core and designed with regard to the projected level of waste generation and types and quantities of receptacles required. Within apartments, there should be adequate provision for the temporary storage of segregated materials prior to deposition in communal waste storage and in-sink macerators are discouraged as they place a burden on drainage systems.

The guidelines set out the following general design considerations which should be taken into account in the provision of refuse storage facilities:

- Sufficient communal storage area to satisfy the three-bin system for the collection of mixed dry recyclables, organic waste and residual waste;
- In larger apartment schemes, consideration should also be given to the provision of separate collection facilities for other recyclables such as glass and plastics;
- Waste storage areas must be adequately ventilated so as to minimise odours and potential nuisance from vermin/flies and taking account the avoidance of nuisance for habitable rooms nearby;
- Provision in the layout for sufficient access for waste collectors, proximity of, or ease of access to, waste storage areas from individual apartments, including access by disabled people;
- Waste storage areas should not present any safety risks to users and should be well-lit;
- Waste storage areas should not be on the public street, and should not be visible to or accessible by the general public. Appropriate visual screening should be provided, particularly in the vicinity of apartment buildings;
- Waste storage areas in basement car parks should be avoided where possible, but

where provided, must ensure adequate manoeuvring space for collection vehicles;

- The capacity for washing down waste storage areas, with wastewater discharging to the sewer.

3.0 WASTE MANAGEMENT OBLIGATIONS

There are currently no specific guidelines in Ireland for the preparation of OWMPs and consequently this document considers national and regional waste policy, legislation and other relevant guidelines.

The Waste Management Act adopts the “polluter pays” principal, whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect transport of waste produced by the waste producer. Therefore the waste producer is required to ensure that all waste contractors employed by them are legally compliant with respect to waste transport and disposal.

A valid waste permit to transport waste must be held by the relevant waste contractor and a contractor shall not be permitted to receive any waste at their site, unless in possession of a waste permit granted by a local authority under the Waste Management (Permit) Regulations, 1998 or a waste licence granted by the EPA. The permit will specify the types of waste a contractor is licensed to receive, store, sort and recycle on their site.

The Facilities Management Company appointed for the management of the development shall be responsible for the implementation of all aspects of the Operational Waste Management Plan as detailed in this report.

4.0 THE PROPOSED DEVELOPMENT

The proposed development for which planning permission is sought in this application comprises a residential development and associated and ancillary infrastructure and open space provision.

The proposed development, will is a build-to-rent development, incorporating 115 units comprising the following;

- 10 no. Studio units

- 62 no. 1 Bedroom units
- 38 no. 2 Bedroom units
- 5 no. 3 Bedroom units

The timeframe for the completion of the development is 5 years (2022-2027). The associated site and infrastructural works will include car parking spaces, public open space, bin and bike stores, landscaping, boundary walls, railings, fences, surface water and foul water drainage infrastructure.

Figure 4.1 Site context



5.0 WASTE TYPES

The wastes types that will be generated at the development include the following which will typically be discarded on a daily basis:

- Mixed Dry Recyclables (DryR)-is defined as a collection of solid waste materials that can be stored and collected in one bin or in separate bins to increase recycling value. These materials include cardboard, paper, newspaper, plastic film, plastic bottles, steel and aluminium cans.
- Organic Waste - organic waste is defined as waste that is organic in nature and

comprises mainly of food, be it cooked or uncooked, from kitchens and other catering establishments and is generally classified as putrescible.

- Mixed Non Recyclables (NonR) – this is the residual waste that is the remaining waste material after separate diversion of waste components through reduction, reuse, recycling and food waste collections.
- Glass.

In addition to the above categories small quantities of the following wastes will also be generated but on a much lower frequency and volume but will also require appropriate management:

- Waste electrical and electronic equipment (WEEE) such as TVs, mobile phones, printers, radios batteries etc;
- Green Waste – organic materials generated from landscaping;
- Chemicals - paints, adhesives, detergents, etc;
- Lighting – including light bulbs;
- Metal – fixtures and fittings;
- Furniture and Textiles; and
- Bulky wastes – fridges, freezers, washing machines etc.

6.0 WASTE MANAGEMENT

6.1 Waste arisings

British Standard 5906:2005 Waste Management in Buildings – Code of Practice sets out typical weekly waste arisings for various types of buildings. The Code of Practice sets out an equation to estimate the weekly waste arisings for domestic or residential buildings as follows:

$$\text{weekly waste (litres)} = \text{number of dwellings} \times [70 \times \text{average number of bedrooms} + (30)]$$

For the purposes of the waste storage calculations the waste will be segregated and stored into three designated waste streams namely mixed dry recyclables, organic food waste and residual waste. The glass recycling will be stored in centrally located containers with easy access for all residents of the development.

When using volume as the unit measurement for waste arisings, it is considered that a 60:25:10:5 split between mixed dry recyclables, mixed non recyclables, organic waste and glass waste is a best estimate fit for waste breakdown for the proposed development and typical residential living. The above equation can be used to estimate the waste arisings for each of the different residential types based on the number of bedrooms present in the dwelling unit. Table 6.1 presents the estimated volume of waste that will be generated each week by each of the residential units based on the number of bedrooms per unit.

Table 6.1 Estimated main waste volume for each individual residential unit per week

Waste Stream	Waste Volume (litres/week)					
	1-bedroom unit		2 bedroom unit		3 bedroom unit	
	Total, L	L / Unit	Total, L	L / Unit	Total, L	L per Unit
DryR (60%)	4320	60	3876	102	720	144
NonR (25%)	1800	25	1615	42.5	300	60
Organic (10%)	720	10	646	17	120	24
Glass (5%)	360	5	323	8.5	60	12
Total	7200	100	6460	170	1200	240

6.2 Waste storage facilities

There is a common waste storage area identified as a bin store, where the waste generated will be stored for collection and subsequent management off-site. There is a bin store proposed for the Site as shown in Figure 6.1.

Figure 6.1 Bin store location



The bin store has been designed as covered buildings to ensure safe access for all users in a brightly lit area, spacious enough for easy manoeuvrability, good ventilation and ready access for the control of vermin if required. The bin store also provides for sufficient access and egress to enable the bins to be easily moved from the stores to an appropriate collection point nearby. The bin stores all comply with the following requirements:

- A well-defined pedestrian route shall be marked from the relevant residential units to the nearest waste storage area.
- A non-slip surface shall be provided within the waste storage area.
- Adequate ventilation to avoid the creation of stagnant air or foul odours.
- Sensor controlled lighting.

Operational Waste Management Plan IBIS Red Cow Residential Development

- Appropriate wastewater drainage to allow for cleaning and disinfection.
- Provision of appropriate signage to inform residents of their obligation to reduce waste, segregate waste and to use the correct bins for each waste.
- The waste storage area shall be designed to provide safe access from the duplex units by mobility impaired persons.
- All waste storage bins shall be clearly labelled with exactly what type of waste materials may be deposited within them. Provision shall be made for sufficient segregated storage of mixed dry recyclables, mixed non-recyclables, organic waste and glass at each bin store.

It shall be the responsibility of the Facilities Management Company to ensure that all waste generated by residents is managed to ensure correct storage prior to collection by an appropriately permitted waste collection company on a weekly basis.

Residents will be required to take their segregated waste materials to the bin store and to dispose of their segregated waste into the appropriate bins. The specific bin allocation for the bin stores is presented in Table 6.2. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by the facility when operating at full capacity. Table 6.2 assumes a weekly emptying of the bin stores.

Table 6.2 Weekly bin requirement for the bin stores

Bin Store Location	Bins required for weekly storage			
	DryR	NonR	Organic	Glass
All Units	8 x 1100 L	4 X 1100 L	6 X 240 L	4 X 240 L

Other waste materials such as waste electrical and electronic equipment, chemicals, lighting, furniture and textiles may be generated infrequently.

Refuse collection is addressed in section 4.5 of the Traffic and Transportation Assessment. A lay-by is proposed to run alongside the eastern face of the residential development block (12.0 metres in length x 2.8 metres in width, with a 4.3-metre-long taper). This lay-by is proposed to accommodate refuse collection vehicles, in addition to servicing, delivery and drop-off requirements.

It is proposed that refuse (and other such) vehicles shall enter the lay-by from the internal access carriageway in forward gear, turn internally and exit in forward gear. The lay-by is located in close proximity to the bin store room, which is located on ground floor level to the east of the building, and opens directly onto the footpath adjacent to the loading bay.

7.0 LOCAL WASTE FACILITIES

There is a bring bank located at the Red Cow complex nearby and there are three additional facilities in Clondalkin Village. All glass generated by the housing units at the development can be handled here or the on-site collection facility.

The closest civic amenity centre is located at Ballymount which is located 2km southeast of the development site. The civic amenity centre can be used for the disposal of other household wastes as outlined in Section 6. The Ballymount Station also provides a WEEE recycling facility and drop off point for all waste types.

8.0 CONCLUSIONS

This OWMP has been prepared to show that the proposed residential development at IBIS, Red Cow shall be designed and managed to provide residents with waste management infrastructure that will minimise the generation of residual waste and maximise the opportunities for segregating and recycling waste generated by the development. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source and managed to ensure effective diversion from landfill wherever possible.

The waste management strategy presented in this report provides for sufficient waste storage capacity for the segregated waste types that will be generated at the residential development. Sufficient provision of appropriate waste storage capacity is provided for based on the estimated waste generation levels for the development when at full capacity.

In conclusion this report presents a waste strategy that fully complies with all relevant waste legislation, waste policies and best practice guidelines and will ensure effective waste management at the proposed development site.