



APPENDIX 14.2

OPERATIONAL WASTE MANAGEMENT PLAN

Document History

Document Reference		Original Issue Date	
CB/19/11304WMR01		29 September 2022	
Revision Level	Revision Date	Description	Sections Affected
a	19/07/2023	Updated Design	All

Record of Approval

Details	Written by	Approved by
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Date	19 July 2023	19 July 2023

1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) on behalf of Dublin Central GP Limited or shortened to DCGP Ltd. The Dublin Central project is an expansive (c.2.2 Ha) and complex regeneration project. It needs to be delivered in stages to overcome site and project constraints. A site wide cumulative masterplan has been prepared by 'the Applicant' to set out the overall development vision for the Dublin Central project. 'The Masterplan' area encompasses almost entirely three urban blocks. The area is bounded generally by O'Connell Street Upper and Henry Place to the east, Henry Street to the south, Moore Street to the west, and O'Rahilly Parade and Parnell Street to the north. Moore Lane extends south from Parnell Street through the centre of the masterplan area, as far as its junction with Henry Place.

The phrase 'Proposed Development' is used to describe the entire of the proposed development within 2no. separate and concurrent planning applications for Site 2 and No. 61 O'Connell Street. Site 2 is subdivided into Site 2AB and Site 2C with ACME / RKD Architects the lead Architect for Site 2AB and Grafton Architects the lead Architect for Site 2C and for the avoidance of doubt is 1no. planning application. This use of the phrase 'Proposed Development' within the EIAR should not be confused with the separate proposed development that is the subject of each of the 2no. separate and concurrent planning applications.

This OWMP has been prepared to ensure that the management of waste during the operational phase of the proposed development is undertaken in accordance with the current legal and industry standards including, the *Waste Management Act 1996 – 2011* as amended and associated Regulations ¹, *Protection of the Environment Act 2003* as amended ², *Litter Pollution Act 2003* as amended ³, the '*Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021*' ⁴, the Draft National Waste Management Plan for a Circular Economy (NWMPC) (2023) ⁵ and Dublin City Council (DCC) '*Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws*' 2018 ⁶. In particular, this OWMP aims to provide a robust strategy for storing, handling, collection and transport of the wastes generated at site.

This OWMP aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. The OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). The plan estimates the type and quantity of waste to be generated from the proposed development during the operational phase and provides a strategy for managing the different waste streams.

At present, there are no national specific guidelines in Ireland for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given to the requirements of national and regional waste policy, legislation and other guidelines.

2.0 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998 titled as '*Changing Our Ways*' ⁷ which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill and finding alternative methods for managing waste. Amongst other things, *Changing Our Ways* stated a target of at least 35% recycling of municipal (i.e. household, commercial and non-process industrial) waste.

Waste Statistics web resource, which is the most recent study published, along with the national waste statistics web resource (December 2022) reported the following key statistics for 2020:

- **Generated** – Ireland produced 3,210,220 t of municipal waste in 2020. This is a 4% increase since 2019. This means that the average person living in Ireland generated 645 kg of municipal waste in 2020.
- **Managed** – Waste collected and treated by the waste industry. In 2020, a total of 3,180,620 t of municipal waste was managed and treated.
- **Unmanaged** – Waste that is not collected or brought to a waste facility and is, therefore, likely to cause pollution in the environment because it is burned, buried or dumped. The EPA estimates that 29,600 t was unmanaged in 2020.
- **Recovered** – The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In 2020, around 84% of municipal waste was recovered – an increase from 83% in 2019.
- **Recycled** – The waste broken down and used to make new items. Recycling also includes the breakdown of food and garden waste to make compost. The recycling rate in 2020 was 41%, which is up from 37% in 2019.
- **Disposed** – 16% of municipal waste was landfilled in 2020. This is an increase from 15% in 2019.

2.2 Regional Level

he proposed Development is located in the Local Authority administrative area of Dublin City Council (DCC).

The EMR Waste Management Plan 2015 – 2021 is the regional waste management plan for the SDCC area which was published in May 2015. Currently the EMR and other regional waste management plans are under review and the Regional Waste Management Planning Offices have issued a Draft NWMPCE in June 2023.

The regional plan sets out the following strategic targets for waste management in the region that are relevant to the proposed development:

- A 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130-150 per tonne of waste, which includes a €75 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2015 (as amended).

The Draft NWMPCE does not dissolve the three regional waste areas. The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector.

Proposed National Targets

1a. (Residual Municipal Waste) 1% Reduction / person /year – Waste decline for landfill or recovery by thermal treatment.

2. (Contamination of Materials) 90% of Material in Compliance – Contamination of recycling and food waste with other materials

- Litter Pollution Act 1997 as amended and
- Planning and Development Act 2000 as amended ¹⁵
- Circular Economy and Miscellaneous Provisions Act 2022.

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996* as amended and subsequent Irish legislation, is the principle of “*Duty of Care*”. This implies that the waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.) As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final disposal area, waste contractors will be employed to physically transport waste to the final waste disposal site.

It is therefore imperative that the residents, tenants and the proposed facilities management company undertake on-site management of waste in accordance with all legal requirements and employ suitably permitted/licenced contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or waste permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended or a waste or IED (Industrial Emissions Directive) licence granted by the EPA. The COR/permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

2.3.1 Dublin City Council Waste Management Bye-Laws

The DCC “Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018)” were brought into force in May 2019. These bye-laws repeal the previous Bye-Laws for the Storage, Presentation and Collection of Household and Commercial Waste. The bye-laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the DCC administrative area. Key requirements under these bye-laws of relevance to the operational phase of the Development include the following:

- Kerbside waste presented for collection shall not be presented for collection earlier than 5.00 pm on the day immediately preceding the designated waste collection day;
- All containers used for the presentation of kerbside waste and any uncollected waste shall be removed from any roadway, footway, footpath or any other public place no later than 10:00 am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law 2.3;
- Documentation, including receipts, is obtained and retained for a period of no less than one year to provide proof that any waste removed from the premises has been managed in a manner that conforms to these bye-laws, to the Waste Management Act and, where such legislation is applicable to that person, to

A detailed description of the development site context is presented in Chapter 3 (Description of the Proposed Development).

61 O'Connell Street

The proposed development consists of the refurbishment of No. 61 O'Connell Street Upper as residential use (comprising 3no. 2-bed apartment units) from 1st to 3rd floor including the creation of a new covered pedestrian link through part of the ground floor connecting O'Connell Street Upper and Henry Place. 2no. café / restaurant units are proposed at ground floor onto O'Connell Street and Henry Place. A leisure studio / gym is proposed at basement including the provision of 2no. changing rooms.

A detailed description of the development site context is presented in Chapter 3 (Description of the Proposed Development).

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the proposed development will include the following:

- Dry Mixed Recyclables (DMR) - includes waste paper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste generated from internal plants/flowers;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

In addition to the typical waste materials that will be generated at the development on a daily basis, there will be some additional waste types generated in small quantities which will need to be managed separately including:

- Green/garden waste may be generated from external landscaping;
- Batteries (both hazardous and non-hazardous);
- Waste electrical and electronic equipment (WEEE) (both hazardous and non-hazardous);
- Printer cartridges/toners;
- Chemicals (paints, adhesives, resins, detergents, etc.) ;
- Lightbulbs;
- Textiles (rags);
- Waste cooking oil (if any generated by the residents and/or tenants);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

Wastes should be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling and recovery of waste with diversion from landfill wherever possible.

3.3 List of Waste Codes

In 1994, the *European Waste Catalogue* ¹⁶ and *Hazardous Waste List* ¹⁷ were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List* ¹⁸, which was a condensed version of the original two documents and their subsequent amendments. This document has recently been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*' ¹⁹(2018). This waste classification system applies across the EU and is the basis for all national and

Masterplan

Waste Type	Waste Volume (m ³ /week)			
	Residential Units (combined)	Retail and F&B Units (combined)	Hotel Units (Combined)	Office Units (Combined)
Organic Waste	1.14	3.17	2.49	3.82
Dry Mixed Recyclables	8.06	17.15	5.08	30.04
Glass	0.22	1.73	3.52	0.69
Mixed Non-Recyclables	4.24	23.51	5.95	36.46
Confidential Paper	-	-	-	5.71
Cardboard (For Baling)	-	36.41	-	29.06
Plastic (For Baling)	-	11.60	-	24.81
Total	13.66	93.57	14.55	130.60

Table 4.1 Estimated waste generation for the Masterplan Site UnitsSite 2AB

Waste Type	Waste Volume (m ³ /week)		
	Office Units (combined)	Retail Units (combined)	F&B Units (combined)
Organic Waste	2.30	0.57	0.55
Dry Mixed Recyclables	10.75	3.10	2.97
Glass	0.24	0.31	0.30
Mixed Non-Recyclables	12.43	4.26	4.08
Confidential Paper	8.66	-	-
Cardboard (For Baling)	10.03	6.59	6.31
Plastic (For Baling)	9.79	2.10	2.01
Total	54.19	16.94	16.22

Table 4.2 Estimated waste generation for the Site 2AB UnitsSite 2C

Waste Type	Waste Volume (m ³ /week)		
	Office Units (combined)	Retail & Cultural Units (combined)	F&B Units (combined)
Organic Waste	2.58	0.25	0.16
Dry Mixed Recyclables	12.02	1.34	0.85
Glass	0.27	0.14	0.09
Mixed Non-Recyclables	13.91	1.84	1.17
Confidential Paper	9.69	-	-
Cardboard (For Baling)	11.23	3.20	1.81
Plastic (For Baling)	10.96	0.51	0.58
Total	60.64	7.33	4.65

Table 4.3 Estimated waste generation for the Site 2C Units

will be collected on a twice weekly basis. The WSA is located on basement level and will be brought to ground level by a dedicated service lift. From their it will be taken by the Laneway to Moore Lane for collection.

Site 2 C

Commercial Waste

Using the estimated figures in Tables 4.3 it is anticipated that glass waste will be collected on a weekly basis, while DMR, MNR, organic, cardboard and plastic waste will be collected on a twice weekly basis. The WSA is located on ground level and will be brought to the collection area on Moore Lane via the adjoining laneway.

61 O'Connell Street

Commercial Waste

Using the estimated figures in Tables 4.3 It is anticipated that DMR, MNR, glass and organic waste will be collected on a weekly basis. The WSA is located on ground level and will be brought to the collection area on Henry Place via the adjoining laneway.

Residential Waste

It is anticipated that DMR, MNR, glass and organic waste will be collected on a weekly basis. The WSA is located on ground level and will be brought to the collection area on Henry Place via the adjoining laneway.

Waste storage requirements are presented in Table 5.1.

Area/Use	Bins Required					Equipment Required
	MNR ¹	DMR ²	Glass	Organic	Carboard/ Plastic (Bales)	
Site 2AB Commercial WSA	10 no. 1100L	8 no. 1100L	4 no. 240L	8 no. 240L	17	Baler
Site 2C Commercial WSA	8 no. 1100L	7 no. 1100L	2 no. 240L	7 no. 240L	13	Baler
61 O'Connell Street Commercial WSA	1 x 240L	2 x 240L	1 x 120L	1 x 240L	-	-
61 O'Connell Street Residential WSA	1 x 240L	2 x 240L	1 x 120L	1 x 120L	-	-

Table 5.1 Waste storage requirements for the proposed development

Note: 1 = Mixed Non-Recyclables

2 = Dry Mixed Recyclables

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimate into the holding capacity of each receptacle type.

5.2 Waste Storage – Retail, Cultural and F&B Units

The retail, cultural and F&B tenants will be required to segregate waste within their own unit into the following main waste types:

- DMR;
- MNR;
- Organic waste;
- Glass;
- Plastic; and
- Carboard.

Tenants will be required to take their segregated waste materials to their designated commercial WSA and dispose of their segregated waste into the appropriate bins. Locations of all WSAs can found on the plans submitted with the application.

Suppliers for the tenants should be requested by the tenants to make deliveries in reusable containers, minimize packaging or to remove any packaging after delivery where possible, to reduce waste generated by the development.

If any kitchens are allocated in unit areas, this will contribute a significant portion of the volume of waste generated on a daily basis, and as such it is important that adequate provision is made for the storage and transfer of waste from these areas to the WSA.

If kitchens are required it is anticipated that waste will be generated in kitchens throughout the day, primarily at the following locations:

- Food Storage Areas (i.e. cold stores, dry store, freezer stores and stores for decanting of deliveries);
- Meat Preparation Area;
- Vegetable Preparation Area;
- Cooking Area;
- Dish-wash and Glass-wash Area; and
- Bar Area.

Small bins will be placed adjacent to each of these areas for temporary storage of waste generated during the day. Waste will then be transferred from each of these areas to the appropriate waste store within their unit.

A trolley/tug or suitable vehicle may be required to convey the bins to/from the WSAs.

All bins/containers in the tenants areas as well as in the WSAs will be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which wastes can be put in each.

Other waste materials such as textiles, batteries, lightbulbs, printer toner/cartridges, cooking oil and WEEE may be generated infrequently by the tenants. Tenants will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them appropriately. Further details on additional waste types can be found in Section 5.6

5.3 Waste Storage – Hotels

The operator(s) will be required to segregate their waste within the development into the following main waste types:

- DMR;

- Organic waste;
- Glass;
- Plastic; and
- Carboard.

Personnel nominated by the office tenants will empty the bins in the AWSs, as required, and bring the segregated waste using trolleys/carts/bins to their allocated WSA. Locations of all WSAs can found on the plans submitted with the application.

The office unit(s) may be occupied by a single tenant or multiple tenants. It is recommended that the office tenants implement the 'binless office' concept where employees do not have bins located under desks and instead bring their waste to Area Waste Stations (AWSs) located strategically on the office floors, at print stations/rooms and at any canteens, micro kitchens or tea stations which may be provided within the tenant's office space. Experience has shown that the maximum travel distance should be no more than 15m from the employee's desk to the AWS. This 'best in class' concept achieves maximum segregation of waste in an office setting.

Typically, an AWS would include a bin for DMR and a bin for MNR. It is recommended that a confidential paper bin with a locked lid/door should also be provided for at each AWS and/or adjacent to photocopy/printing stations, as required. In addition, it is recommended that organic and glass bins should be provided at any canteens or micro kitchens or tea stations, where appropriate.

A printer cartridge/toner bin should be provided at the print/copy stations, where appropriate.

It is recommended that all bins/containers should be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage should be posted on or above the bins to show which wastes can be put in each bin.

The binless office concept, in addition to assisting in maximising recycling rates and minimising associated landfill disposal costs, also has the advantage of substantially reducing cleaning costs, as cleaners visit only the AWSs on each floor, as opposed to each desk.

Suppliers for the tenants should be requested by the tenants to make deliveries in reusable containers, minimize packaging and/or to remove any packaging after delivery where possible, to reduce waste generated by the development.

It is proposed that confidential paper waste will be managed separately to non-confidential paper waste. Tenants will be required to engage with an appropriately permitted/licenced confidential waste management contractor for collection and shredding of confidential paper. It is anticipated that tenants will place locked confidential waste paper bins as required throughout their office areas. The confidential waste company will typically collect bins directly from the office areas, under agreement with the tenant, and bring the locked bin or bags of confidential waste via the lifts to their collection truck.

Other waste materials such as textiles, batteries, lightbulbs, printer toner/cartridges, cooking oil and WEEE may be generated infrequently by the tenants. Tenants will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them appropriately. Further details on additional waste types can be found in Section 5.6

Site 3

Bins from the residential WSA will be collected from the existing loading area on Moore Street, while The waste truck will enter the passageway between block 3A & 3B to collect the commercial and hotel waste directly from the shared commercial and the hotel WSAs.

Site 4

All commercial and residential bins from this development will be brought to a temporary collection point on Moore Street, from the WSAs by the waste contractor or facilities management company, immediately prior to collection. There are two bin stores in Site 4 – one in the north, the other in the south.

South: The waste vehicle will utilise the existing loading provision on Moore Street to access the southern bin store within Site 4, as existing. This bin store is approximately 20m from Moore Street. The commercial operator will collect the bins before emptying them and returning the empty bins to the bin store.

North: The waste vehicle will utilise the existing loading provision on Moore Street to access the northern bin store within Site 4, as existing. This bin store is approximately 22m from Moore Street. The commercial operator will collect the bins before emptying them and returning the empty bins to the bin store.

Site 5

Waste vehicles will utilise the proposed loading area on O'Rahilly Parade to access the proposed Site 5 bin store directly. The waste contractor will return the bins to the bin store immediately after collection.

61 O'Connell Street

Waste collections for 61 O'Connell Street are proposed to continue to occur via the rear entrance to the building on Henry Place.

5.6 Additional Waste Materials

In addition to the typical waste materials that are generated on a daily basis, there will be some additional waste types generated from time to time that will need to be managed separately. A non-exhaustive list is presented below.

Green waste

Green waste may be generated from external landscaping and internal plants/flowers. Green waste generated from landscaping of external areas will be removed by external landscape contractors. Green waste generated from gardens internal plants/flowers can be placed in the organic waste bins.

Batteries

A take-back service for waste batteries and accumulators (e.g. rechargeable batteries) is in place in order to comply with the Waste Management Batteries and Accumulators Regulations 2014 as amended. In accordance with these regulations consumers are able to bring their waste batteries to their local civic amenity centre or can return them free of charge to retailers which supply the equivalent type of battery, regardless of whether or not the batteries were purchased at the retail outlet and regardless of

Textiles

Where possible, waste textiles should be recycled or donated to a charity organisation for reuse.

Waste Cooking Oil

If the commercial tenants use cooking oil, waste cooking oil will need to be stored within the individual units on a bunded area or spill pallet and regular collections by a dedicated waste contractor will need to be organised as required. Under sink grease traps will be installed in any cooking space.

If the residents generate waste cooking oil, this can be brought to a civic amenity centre.

Furniture (and other bulky wastes)

Furniture and other bulky waste items (such as carpet etc.) may occasionally be generated by the commercial tenants. The collection of bulky waste will be arranged as required by the tenants. If residents wish to dispose of furniture, this can be brought to a civic amenity centre.

Abandoned Bicycles

Bicycle parking areas are planned for the development. As happens in other developments, residents sometimes abandon faulty or unused bicycles and it can be difficult to determine their ownership. Abandoned bicycles should be donated to charity if they arise.

5.7 Waste Storage Area Design

The WSAs should be designed and fitted-out to meet the requirements of relevant design Standards, including:

- Be fitted with a non-slip floor surface;
- Provide ventilation to reduce the potential for generation of odours with a recommended 6-10 air changes per hour for a mechanical system for internal WSAs;
- Provide suitable lighting – a minimum Lux rating of 400 is recommended;
- Be easily accessible for people with limited mobility;
- Be restricted to access by nominated personnel only;
- Be supplied with hot or cold water for disinfection and washing of bins;
- Be fitted with suitable power supply for power washers;
- Have a sloped floor to a central foul drain for bins washing run-off;
- Have appropriate signage placed above and on bins indicating correct use;
- Have access for potential control of vermin, if required; and
- Be fitted with CCTV for monitoring.

The facilities management company, residents and tenants will be required to maintain the WSAs in good condition as required by the DCC *Waste Bye-Laws*.

6.0 CONCLUSIONS

In summary, this OWMP presents a waste strategy that addresses all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of 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 to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the *EMR Waste Management Plan 2015 – 2021*.

7.0 REFERENCES

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