

APPENDIX 5.14.2: OPERATIONAL WASTE MANAGEMENT PLAN

1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) at the request of Stephen Little and Associates for the proposed development known as Parnell Square Cultural Quarter.

Parnell Square Cultural Quarter is a proposed development of mixed cultural facilities, anchored by a new City Library, provided in a combination of new building and renovated historic buildings in Parnell Square, Dublin 1.

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 current legal and industry standards including, the Waste Management Act 1996 – 2011 as amended and associated Regulations¹, Protection of the Environment Act 2003 as amended², Litter Pollution Act 2003 as amended³, the 'Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021'⁴ and Dublin City Council (DCC) Bye-Laws for the Storage, Presentation and Collection of Household and Commercial Waste (2013)⁵. 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 specific guidelines in Ireland for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given in 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 Government issued a policy statement in September 1998 titled as 'Changing Our Ways'⁶ 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.

A further policy document 'Preventing and Recycling Waste – Delivering Change' was published in 2002⁷. This document proposed a number of programmes to increase recycling of waste and allow diversion from landfill. The need for waste minimisation at source was considered a priority.

This view was also supported by a review of sustainable development policy in Ireland and achievements to date, which was conducted in 2002, entitled 'Making Irelands Development Sustainable – Review, Assessment and Future Action'⁸. This document also stressed the need to break the link between economic growth and waste generation, again through waste minimisation and reuse of discarded material.

In order to establish the progress of the Government policy document Changing Our Ways, a review document was published in April 2004 entitled 'Taking Stock and Moving Forward'⁹. Covering the period 1998 – 2003 the aim of this document was to assess progress to date with regard to waste management in Ireland, to consider developments since the policy framework and the local authority waste management plans were put in place, and to identify measures that could be undertaken to further support progress towards the objectives outlined in Changing Our Ways.

In particular, Taking Stock and Moving Forward noted a significant increase in the amount of waste being brought to local authority landfills. The report noted that one of the significant challenges in the coming years was the extension of the dry recyclable collection services.

The most recent policy document was published in July 2012 titled 'A Resource Opportunity'¹⁰. The policy document stresses the environmental and economic benefits of better waste management,

particularly in relation to waste prevention. The document sets out a number of actions, including the following:

- A move away from landfill and replacement through prevention, reuse, recycling and recovery.
- A Brown Bin roll-out diverting 'organic waste' towards more productive uses.
- Introducing a new regulatory regime for the existing side-by-side competition model within the household waste collection market.
- New Service Standards to ensure that consumers receive higher customer service standards from their operator.
- Placing responsibility on householders to prove they use an authorised waste collection service.
- The establishment of a team of Waste Enforcement Officers for cases relating to serious criminal activity will be prioritised.
- Reducing red tape for industry to identify and reduce any unnecessary administrative burdens on the waste management industry.
- A review of the producer responsibility model will be initiated to assess and evaluate the operation of the model in Ireland.
- Significant reduction of Waste Management Planning Regions from ten to three.

While A Resource Opportunity covers the period to 2020, it is subject to a mid-term review in 2016 to ensure that the measures are set out properly and to provide an opportunity for additional measures to be adopted in the event of inadequate performance. In early 2016, the Department of the Environment, Community and Local Government invited comments from interested parties on the discussion paper 'Exporting a Resource Opportunity'. While the EPA have issued a response to the consultation, an updated policy document has not yet been published.

Since 1998, the Environmental Protection Agency (EPA) has produced periodic 'National Waste (Database) Reports'¹¹ detailing among other things estimates for household and commercial (municipal) waste generation in Ireland and the level of recycling, recovery and disposal of these materials. The 2014 National Waste Statistics, which is the most recent study published, reported the following key statistics for 2014:

- 2,575 kilotonnes of municipal waste was managed in 2014 (4% increase compared to 2012).
- 79% of managed municipal waste was recovered (59% in 2012). Recovery includes treatment processes such as recycling, use as a fuel (incineration and co-incineration) and backfilling.
- 41% of managed municipal waste was recycled (40% in 2012). Recycling includes reprocessing of waste materials into products, composting and anaerobic digestion.
- 21% of managed municipal waste was disposed (41% in 2012).

2.2 Regional Level

The proposed development is located in the Local Authority area of Dublin City Council.

The Eastern and Midlands Region Waste Management Plan 2015 – 2021 is the new regional waste management plan for the DCC area published in May 2015. This plan replaces the previous Dublin region plan due to changing National policy as set out in A Resource Opportunity: Waste Management Policy in Ireland and changes being enacted by the Waste Framework Directive (2008/98/EC) ¹².

The new regional plan sets out the following strategic targets for waste management in the region:

- 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 €120 per tonne of waste which includes a €75 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2013.

The Dublin City Development Plan 2016 – 2022 ¹³ sets out a number of policies and objectives for Dublin City in line with the objectives of the regional waste management plan. The plan identifies a need to further reduce the role of landfilling in favour of higher value recovery options.

Waste policies and objectives with a particular relevance to this development are:

Policies:

- SI19: To support the principles of good waste management and the implementation of best international practice in relation to waste management in order for Dublin city and the region to become self-reliant in terms of waste management.
- SI20: To prevent and minimise waste and to encourage and support material sorting and recycling.
- SI21: To minimise the amount of waste which cannot be prevented and ensure it is managed and treated without causing environmental pollution.
- SI22: To ensure that effect is given as far as possible to the "polluter pays" principle.

Objectives:

- SIO16: To require the provision of adequately-sized-recycling facilities in new commercial and large scale residential developments, where appropriate.
- SIO18: To implement the current Litter Management Plan through enforcement of the litter laws, street cleaning and education and awareness campaigns.
- SIO19: To implement the Eastern-Midlands Waste Management Plan 2015 -2021 and achieve the plan targets and objectives.

2.3 Legislative Requirement

The primary legislative instruments that govern waste management in Ireland and applicable to the project are:

- Waste Management Act 1996 (No. 10 of 1996) as amended.
Sub-ordinate legislation includes:
 - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended
 - Waste Management (Collection Permit) Regulations (S.I No. 820 of 2007) as amended
 - Waste Management (Facility Permit and Registration) Regulations 2007 (S.I No. 821 of 2007) as amended
 - Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended
 - Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended
 - Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997)

- Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015)
- European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014)
- European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended
- Waste Management (Food Waste) Regulations 2009 (S.I. 508 of 2009), as amended
- European Union (Household Food Waste and Bio-waste) Regulation 2015 (S.I. No. 191 of 2015)
- Waste Management (Hazardous Waste) Regulations, 1998 (S.I. No. 163 of 1998) as amended
- Waste Management (Shipments of Waste) Regulations, 2007 (S.I. No. 419 of 2007) as amended
- Waste Management (Movement of Hazardous Waste) Regulations, 1998 (S.I. No. 147 of 1998)
- European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994)
- European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (S.I. No. 233 of 2015)
- Environmental Protection Act 1992 (No. 7 of 1992) as amended.
- Litter Pollution Act 1997 (No. 12 of 1997) as amended.
- Planning and Development Act 2000 (No. 30 of 2000) as amended.¹⁴

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 - 20011 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 staff and building management company undertake on site management of waste in accordance with all legal requirements and employ suitably permitted/licenced

waste contractors to undertake off-site management of 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 Bye-Laws

Bye-Laws for the Storage, Presentation and Collection of Household and Commercial Waste were brought into force by Dublin City Council in May 2013. The Bye-Laws set a number of enforceable requirements on waste holders and collectors with regard to storage, separation, presentation and collection of waste within the Dublin City Council functional area. Key requirements under these bye-laws of relevance to the proposed development include the following:

- A holder shall maintain all waste containers in such condition and state of repair so that the waste placed therein shall not be a source of nuisance, litter or odours and so that the waste may be conveniently collected;
- A holder shall separate at source such recyclable waste as prescribed by the approved waste collector employed by the holder and this fraction of waste shall be stored separately by the holder in a waste container;
- Within the Central Commercial District (CCD) waste collection is only to take place between 7pm & 12 midnight on collection day. Waste is not to be presented for collection before 5pm. This proposed development falls within the CCD.
- The management company of a multi-unit development and its managing agent shall ensure that adequate access and egress

is available for the collection of waste from that multi-unit development

The full text of the DCC Waste Bye-Laws is available from the DCC website.

2.4 Regional Waste Management Service Providers and Facilities

Various contractors offer waste collection services for the residential and commercial sectors in the DCC region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and are all operated by the private sector. There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second facility in Poolbeg in Dublin.

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all waste/IED licenses issued are available from the EPA.

3.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Location, Size and Scale of the Development

The subject site is located adjacent in Parnell Square, Dublin 1. The proposed development entails approximately 11,400 m² of cultural facilities, including a high-quality Library facility of c.8,000 m², to be accommodated in a combination of new buildings and renovated historic buildings at the former Colaiste Mhuire site (nos. 23-28) and Nos. 20-21 Parnell Square, and integrated with the existing Hugh Lane Gallery (site area c. 0.99 ha, including protected structures). Associated works to the public realm to result in alterations to the traffic network, existing on street car parking and city bikes facility.

The proposed development will consist of a four-story building with a basement level which will house the new city Library which will be transferred from its current Location in the Ilac Centre. The Library will include A roof garden, roof terrace, enclosed planted area, conference hall, restaurant and associated kitchen. The development will form part of the new Parnell Square Cultural Quarter.

3.2 Typical Waste Categories

Waste generation will vary by use (i.e. library facilities, conference centre, and restaurant/cafe) but the typical hazardous and non-hazardous waste 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 plants/flowers;
- Glass;
- Mixed Non-Recyclable (MNR)/General Waste;
- Printer cartridges/toners;
- Green/garden waste may be generated from rooftop garden landscaping;
- Chemicals (paints, adhesives, resins, detergents, etc.);
- Batteries;
- Waste Cooking Oil;
- Waste Sludge;

- Waste electrical and electronic equipment (WEEE);
- Fluorescent tubes and other mercury containing waste; and
- Bulky waste/Furniture

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 European Waste Codes

In 1994, the European Waste Catalogue¹⁵ and Hazardous Waste List¹⁶ were published by the European Commission. In 2002, the EPA published a document titled the European Waste Catalogue and Hazardous Waste List¹⁷, 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'¹⁸ which became valid from the 1st June 2015. This waste classification system applies across the EU and is the basis for all national and international waste reporting, such as those associated with waste collection permits, COR's, permits and licences and EPA National Waste Database.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code (also referred to as European Waste Code (EWC) for typical waste materials expected to be generated during the operation of the proposed development are provided in Table 3.1 below.

Table 3.1: Typical Waste Types Generated and EWCs

Waste Material	The List of Waste code and European Waste Code
Paper and Cardboard	20 01 01
Plastics	20 01 39
Metals	20 01 40
Mixed Non-Recyclable Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats*	20 01 25/26*
Textiles	20 01 11
Batteries and Accumulators*	20 01 33* - 34
Printer Toner/Cartridges*	20 01 27* - 28

Green Waste	20 02 01
WEEE *	20 01 35*-36
Chemicals (solvents, pesticides, paints & adhesives, detergents, etc.)*	20 01 13*/19*/27*/28/29*30
Fluorescent tubes and other mercury containing waste*	20 01 21*
Bulky Wastes	20 03 07

* Individual waste type may contain hazardous materials

4.0 ESTIMATED WASTE ARISING

A waste generation model (WGM) developed by AWN, has been used to predict waste types, weights and volumes arising from operations within the proposed development. The WGM incorporates building area and use and combines these with other data including Irish and US EPA waste generation rates.

The estimated quantum/volume of waste that will be generated from the conference center has been determined based on the predicted usage of the conference hall. The waste generation estimates for the library and restaurant/cafe are based on waste generation rates per m² floor area for the proposed building uses.

The total estimated waste generation for the development for the main waste types is presented in Table 4.1 and is based on the uses and areas as advised by the project architects (Shaffrey Associates Architects) July 2018.

Table 0.1: Estimated waste generation for the development for the main waste types

Waste type	Waste Volume (m ³ /week)	
	Library/Conference Centre	Restaurant
Organic Waste	0.35	0.14
Mixed Dry Recyclables	3.90	0.36
Glass	0.04	0.01
Mixed Municipal Waste	1.47	0.36
Total	5.77	0.86

5.0 WASTE STORAGE & COLLECTION

This section provides information on how waste is to be stored within the developments. This has been prepared with due consideration of the proposed site layout as well as best practice standards, local and national waste management requirements including those of Dublin City Council (DCC). In particular, consideration has been given to the following documents:

- BS 5906:2005 Waste Management in Buildings – Code of Practice 19;
- EMR Waste Management Plan 2015 – 2021;
- Dublin City Council Development Plan 2016 – 2022 (Appendix 10); and
- DCC, Bye-Laws for the Storage, Presentation and Collection of Household and Commercial Waste (2013);

5.1 Waste Storage

5.1.1 Library and Conference Centre

The library and conference centre tenants will segregate waste into the following main waste streams:

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

It is recommended that the library and conference centre have an Area Waste Stations (AWSs). AWS should be located strategically around the library, in the conference centre, at print stations/rooms and at any micro kitchens or tea stations which may be provided within the library or conference centre space. Experience has shown that the maximum travel distance should be no more than 15m from working/activity locations 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. In addition, it is recommended that organic and glass bins should also be provided in the kitchen for the conference centre 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 AWS concept, helps in assisting in maximising recycling rates and minimising associated landfill disposal costs.

The kitchen for preparing food for the conference centre is also likely to generate extra packaging waste material such as cardboard and plastic from decanting of goods received. The estimated waste volumes in Table 4.1 include for waste from the provision of a canteen that provides light lunches of sandwiches and hot beverages.

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.

Cleaning staff will empty the bins in the AWSs, as required, and bring the segregated waste using trolleys/carts/bins via lifts to a central waste storage area located on ground level 0.

Other waste materials such as batteries, WEEE and printer toner/cartridges will be generated less frequently. The tenants will be required to temporarily store any of these additional waste items within their own space pending collection by an authorised license contractor.

It is currently proposed that DMR, MNR, organic waste and glass will be collected on a weekly basis. Other waste types (e.g. WEEE, batteries etc.) will be collected less frequently, as required.

A central WSA for use by the library and conference centre has been allocated on the ground floor. However, the kitchen for the conference which will be located on level -1, will store the waste generated in the kitchen from deliveries, food preparation etc. in a designated WSA within or adjacent to the kitchen. Waste from this WSA will be conveyed to ground level for collection via a dedicated lift and the waste will be presented on the kerb on Parnell Square for collection on designated days/times.

Access to the central WSA will be restricted to employees, facilities management and waste contractors.

It is proposed that all waste generated within the library and conference centre will be brought to the central WSA with the

exception of the waste from the kitchen, chemicals (which will be stored in the cleaners/housekeeping stores) and waste furniture (which will not be stored on site and will be collected by waste contractor on request). The other waste types that will not be brought to this WSA are discussed in further detail in Section 5.3

Based on the estimated waste generation volumes detailed in Table 4.1, the space available and a suitable collection frequency, the recommended bin requirements for the central WSA is as follows:

Table 0.1: Estimated waste storage requirements for the proposed development

Area/Use	Bins Required			
	MNR ¹	DMR ²	Glass	Organic
Library/Conference Centre	1 x 1100L	2 x 1100L	1 X 120L	1 x 120L

Note: ¹ = Mixed Non-Recyclables

² = Dry Mixed Recyclables

5.1.2 Restaurant

The restaurant tenant will need to segregate waste into the following categories:

- DMR;
- MNR;
- Organic waste;
- Glass; and
- Waste Cooking Oil (if generated).

The tenant will be required to provide bins within their own space for segregation and temporary storage of waste. It is recommended that all bins/containers should be clearly labelled and colour coded to avoid cross contamination of the different waste streams. It is also recommended that signage should be posted on or above the bins to show which wastes can be put in each bin.

Where raw food is prepared waste receptacles should be located adjacent to the food preparation areas. It is not intended to install a food macerator.

The tenant will be required to allocate a suitable space within their unit for storage of waste pending collection by an authorised waste contractor.

Other waste materials such as batteries, printer toner/cartridges and WEEE may be generated infrequently. The tenant will be required to identify suitable temporary storage areas for these waste items themselves and arrange for their collection by an authorised waste contractor, as required.

Based on the receptacles outlined in section 5.1.3, dry mixed recyclables, mixed non-recyclables, organic waste and glass will be required to be collected on a weekly basis. More frequent collection of waste receptacles can be arranged if required.

The restaurant tenant will be required to store their waste internally in bins or waste bags supplied by an authorised waste contractor.

The waste will be conveyed to ground level via a dedicated lift and the waste will be presented on the kerb for collection on designated days/times.

5.1.3 Waste Storage Area Design

Waste storage receptacles required will vary in size, design and colour depending on the appointed waste contractor. However, examples of typical receptacles to be used in the WSAs are shown in Figure 5.1. All waste receptacles used will comply with the IS EN 840 2012 standard for performance requirements of mobile waste containers.



Figure 0.1 Typical waste receptacles of varying size (Wheeled bins shown are 240L and 1100L)

The WSAs should meet the following requirements:

- 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;
- Provide suitable lighting – a minimum Lux rating of 220 is recommended;

- Be easily accessible for people with limited mobility;
- Be restricted to access by tenants/staff, facilities management and waste contractors only;
- Be supplied with hot or cold water for washing of bins;
- Be fitted with suitable power supply for a power washer, if required;
- Have a sloped floor to a central foul drain for bin wash water run-off;
- Have appropriate signage placed above and on bins indicating correct use; and
- Have measures for potential control of vermin, if required.

The tenants/staff or facilities management company depending on the agreement will be required to maintain the bins and WSAs in good condition.

5.2 Waste Collection

There are numerous private contractors that provide commercial waste collection in the Dublin City area. All waste contractors servicing the proposed development must hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered, permitted and/or licensed facilities only.

A waste marshalling/collection area has been allocated on Fredrick Lane North. It will be used for the temporary storage of waste bins from the central WSA pending collection by the appointed waste contractor(s).

Library and conference centre waste bins will be conveyed from the WSA on the ground floor level via the logistics bay to the collection point on Bethesda Place just prior to or at the allocated waste collection times on the agreed days. Once the bins are collected/emptied, the empty bins will be returned to the WSA.

The conference centre kitchen staff and the restaurant staff will take their waste from their internal waste rooms in either bins or waste bags via dedicated lifts/hoist and will present the waste for collection at the kerb on Parnell Square North. Once the bins are collected/emptied (if bins used), the empty bins will be returned to the internal WSAs.

Other waste types (e.g. batteries, WEEE, waste cooking oil etc.) are discussed in Section 5.2.

It is recommended that waste collection times/days are staggered for the different waste types to reduce the number of bins required to be presented for collection/emptying at the collection points on Bethesda

Place and Parnell Square North at any one time. As detailed in Section 2.3.1, in accordance with the DCC Waste Bye-Law waste collections can only take place between 7pm & 12 midnight on a given collection day and waste cannot be presented for collection before 5pm on the collection day.

The building management company or the waste contractor will be responsible for conveying the bins to the collection point on Bethesda Place for collection/emptying. A trolley/tug or other suitable vehicle may be required to convey the bins from the central WSA up the to the marshalling area.

All waste receptacles presented for collection will be clearly identified as required by waste legislation and the requirements of the DCC Waste Bye-Laws. Also, waste will be presented for collection in a manner that will not endanger health, create a risk to traffic, harm the environment or create a nuisance through odours or litter.

5.3 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/garden waste

Green/garden waste may be generated from external landscaping (from the roof top garden) and internal plants/flowers within the buildings. Green/garden waste generated from landscaping of the external garden should be removed by the external contractor. Green waste generated from internal plants/flowers can be placed in the organic waste bins in the central WSA.

Batteries

A take-back service for waste batteries and accumulators (e.g. rechargeable batteries) is in place in order to comply with the European Union (Batteries and Accumulators) Regulations 2014. Waste batteries must be separately collected for recycling and recovery of resources and the producer is responsible for arranging and financing this. A system for the free take-back of waste batteries is well established through retail outlets and recycling centres.

Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive 2002/96/EC and associated European Union (WEEE) Regulations 2014 have been enacted to ensure a high level of recycling of electronic and electrical equipment. It is the manufacturers' responsibility to take back the WEEE, regardless of whether a

replacement product is purchased or not and retailers are required to take back WEEE where a similar product is purchased. Residents can avail of the one-for-one return scheme at any EEE retailer or bring WEEE waste to their local recycling centre at Ringsend.

Printer Cartridge/Toners

Waste printer cartridge/toners generated by library users and staff can usually be returned to the supplier free of charge.

Chemicals (solvents, pesticides, paints, adhesives, resins, detergents, etc)

Waste chemicals (such as solvents, pesticides, paints, etc) are largely generated from building maintenance works. Such works are usually completed by external contractors who are responsible for the off-site removal and appropriate recovery/recycling/disposal of any waste materials generated.

Fluorescent Tubes (and other mercury containing waste)

Fluorescent tubes (and other mercury containing waste) will be generated by external electrical/maintenance contractors servicing the building. It is anticipated that these contractors will be responsible for the off-site removal and appropriate recovery/disposal of these wastes.

Waste Cooking Oil

Waste cooking oil generated by the kitchen for the conference centre or the restaurant must be collected by an authorised waste contractor.

Furniture (and other bulky wastes)

Furniture and other bulky waste items (such as carpet etc.) may occasionally be generated. It is the responsibility of the building management to dispose of this appropriately.

6.0 CONCLUSIONS

This OWMP provides a strategy for segregation (at source), storage and collection of all wastes generated within the building including dry mixed recyclables, cardboard and plastic packaging, organic waste, glass and mixed non-recyclable waste as well as green waste, batteries, WEEE, printer/toner cartridges, chemicals and fluorescent tubes/lamps. Waste will be conveyed by the library and conference centre nominated personnel to the dedicated central waste storage area on the ground floor. The bins of segregated waste/recyclables will be conveyed by the building management company (or waste contractor) via the logistics bay to the street for collection/emptying by the waste contractor(s). The temporary collection point on Bethesda Place will be readily accessible by the waste contractor(s) during the designated collection days/times.

Staff managing the kitchen for the conference centre and the tenant/staff of the restaurant unit will be required to bring their waste receptacles to the kerb for collection/emptying on Parnell Square via dedicated waste lifts.

In summary, this OWMP presents a waste strategy that complies with 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.

REFERENCES

1. Waste Management Act 1996 (No. 10 of 1996) as amended 2001 (No. 36 of 2001), 2003 (No. 27 of 2003) and 2011 (No 20 of 2011). Sub-ordinate and associated legislation includes:
 - European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) as amended 2011 and 2016 (S.I. No. 323 of 2011)
 - Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820 of 2007) as amended 2008 (S.I. No 87 of 2008) and 2016 (S.I. 24 of 2016)
 - Waste Management (Facility Permit and Registration) Regulations 2007 (S.I. No. 821 of 2007) as amended 2008 (S.I. No. 86 of 2008), 2014 (S.I. No. 310 and S.I. No. 546 of 2014) and 2015 (S.I. No. 198 of 2015)
 - Waste Management (Licensing) Regulations 2000 (S.I. No. 185 of 2000) as amended 2004 (S.I. No. 395 of 2004) and 2010 (S.I. No. 350 of 2010)
 - European Union (Packaging) Regulations 2014 (S.I. No. 282 of 2014)
 - Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997)
 - Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015)
 - European Communities (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014)
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 - European Union (Household Food Waste and Bio-waste) Regulations 2015 (S.I. No. 191 of 2015)
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