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**Project Title:** Development of Market Lands,  
Smithfield, Dublin 7

**Report Title:** Preliminary Construction & Demolition  
Waste Management Plan

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**Client:** The Fruitmarket Partnership

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## **1.0 Introduction:**

Lohan & Donnelly were commissioned to prepare this Construction & Demolition Waste Management Plan for the proposed demolition of Blocks A-D of the Market Lands, Smithfield, Dublin 7, to provide refurbished office accommodation and a cafe.

The purpose of the Waste Management Plan is to provide information necessary to ensure that the management of waste at the site is undertaken in accordance with current legal and industry standards including the Waste Management Act 1996 and associated regulations, The Greater Dublin Waste Management Plan 2005 – 2010 and the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects”, published by the Department of the Environment, Heritage and Local Government in July, 2006.

## **2.0 Project Description:**

The development will consist of:

1. Demolition of all existing structures on site (excluding protected archway at 16/17 Halston Street) and the construction of a Shared Accommodation development with a gross floor area of c.16,152 sq.m. set out in 4 no. blocks, ranging in height from 5 to 14 storeys to accommodate 360 no. bedroom units on a total site area of 2,466 sq.m.

i. Block A: construction of 186 no. bedroom units (in 40 no. “cluster” apartment units), with living/kitchen space provided in each of the 40 no. apartments; shared communal space, reception, laundry and café at ground floor level, gym, games area/general amenity areas, co-working space at first floor level and bicycle parking provided at basement level (224 no. spaces provided), in a 9 to 14 storey block (c.8,025 sq.m. gross floor area) above basement (c.551 sq.m.) on a site measuring c.905 sq.m at 6 and 8 Mary’s Lane bounded by Mary’s Lane to the south and Halston Street to the west.

ii. Block B: construction of 35 no. bedroom units (in 7 no. “cluster” apartment units), with living/kitchen space provided in each of the 7 no. apartment units, shared communal space, communal amenity space at ground floor level, rooftop garden and bicycle parking provided at ground level (35 no. spaces provided), in a nine storey block (c.1,887) sq.m. gross floor area) on a site measuring c.345 sq.m at 2 Little Green Street bounded by Little Green Street to the east.

iii. Block C: construction of 42 no. bedroom units (7 no. “cluster” apartment units), with living/kitchen space provided in each of the 7 no. apartment units, shared communal space, communal amenity space at ground floor level, rooftop garden and bicycle parking provided at basement level (39 no. spaces provided), in a nine storey block (c.2,091 sq.m. gross floor area) above basement (c.306 sq.m.) on a site measuring c.427 sq.m at 4/5 Little Green Street bounded by Little Green Street to the east.

iv. Block D: the construction of 97 no. bedroom units (7 no. cluster units), with living/kitchen space provided in each of the 7 no. cluster units, shared communal space,

reception/lobby, support office, co-work space, amenity areas and coffee dock at ground floor level, meeting rooms, management office, rooftop gardens/terraces provided on a number of floors, and bicycle parking provided at ground level (100 no. spaces provided), in a 5 to 8 storey block (c.4,149 sq.m. gross floor area) on a site measuring c.789 sq.m. at 16/17 Halston Street.

2. Conservation of and works to the existing protected archways located at 17 Halston Street and maintenance works to the Protected Structure with the cleaning of the Stone façade.

3. A total of 398 no. bicycle spaces are proposed to be provided

- 4. All ancillary site development and landscape works, including retaining walls, sub-station, provision of bin stores, boundary treatments, hard and soft landscaping and provision of foul, surface water and water services on site with connections and modifications to existing.

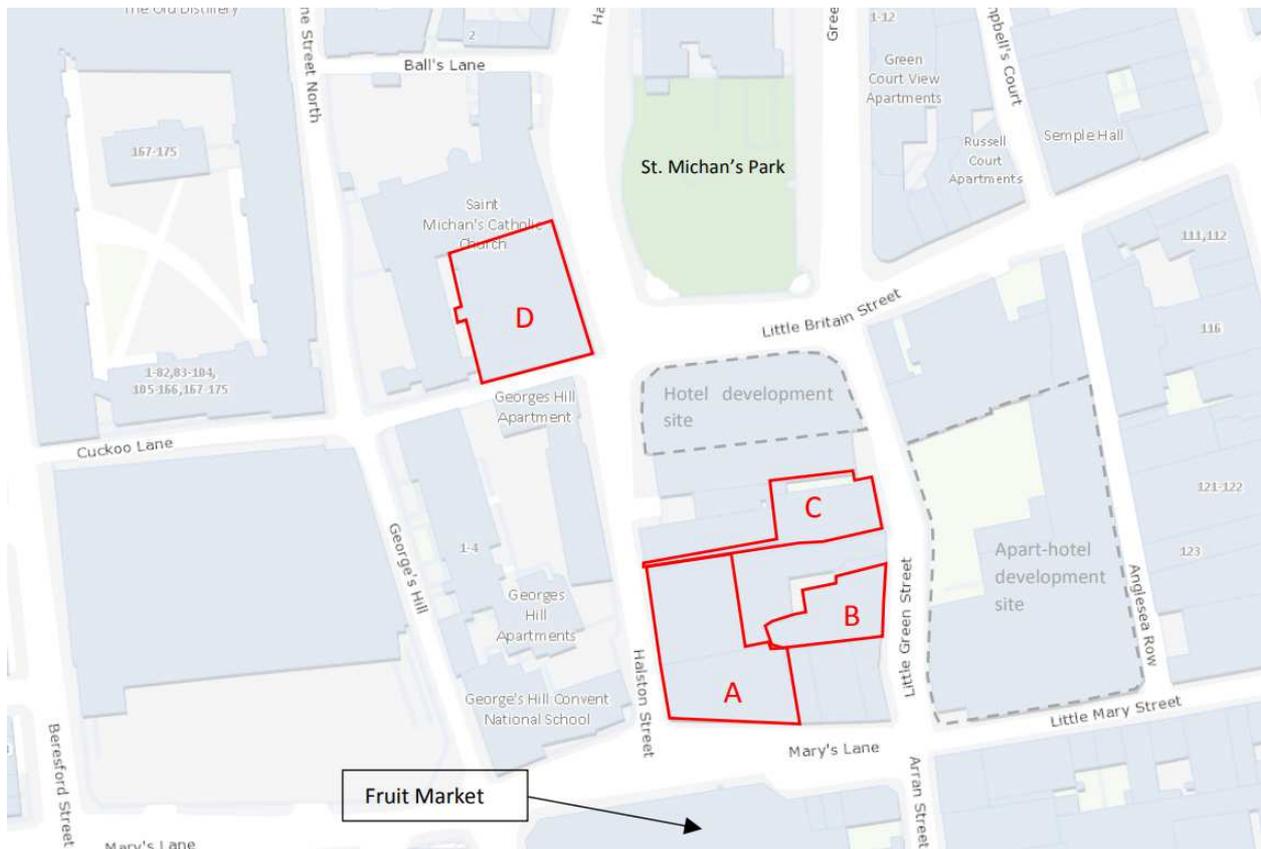


Figure 1 Site Location.

## **3.0 Predicted Waste Types:**

### **3.1 Non-Hazardous Waste:**

The predicted non-hazardous wastes that will be generated as part of the demolition include the following:

- Concrete, masonry;
- Metals (segregated into iron, aluminium, high grade stainless steel, low grade stainless steel etc., where practical);
- Hard plastics;
- Plasterboard;
- Glass;
- Wood;
- Packaging (paper/cardboard, plastic, wooden, metallic, glass, textile, etc.)
- General (non-recyclable) waste;
- Organic waste (shrubs, topsoil etc.).

Wastes will be segregated into the above waste types where practical to ensure compliance with waste legislation and guidance while maximizing the recycling, reuse and recovery of waste with diversion from landfill wherever possible.

### **3.2 Hazardous Waste:**

The predicted hazardous wastes that will be generated as part of the demolition include the following:

- Lamps / lighting (fluorescent, mercury);
- Insulation materials and asbestos containing materials (if present following an asbestos survey prior to commencement of any works on-site);
- PCB containing materials (sealants, resin-based flooring etc.);
- Oil wastes and wastes of liquid fuels.

A site investigation will be carried out in order to establish if any contamination exists in the soils. This site investigation report will be available to the contractor. In the event that any potentially contaminated material is encountered it will be classified and disposed of in accordance with Council Decision 2003/33/EC9 which specifies detailed criteria for acceptance of waste at landfills.

### 3.3 Estimated Waste Arising:

The quantity of waste arising was estimated based on a review of the site and the make-up of the buildings currently on site. See Table 1 below for estimated quantities of each waste material.

<b>C &amp; D Waste</b>	<b>Material Quantities</b>
Concrete, Masonry	5110m <sup>3</sup>
Metals	100m <sup>3</sup>
Plastics	5m <sup>3</sup>
Wood	40m <sup>3</sup>
Glass	33m <sup>3</sup>
Plasterboard	200m <sup>3</sup>
Hazardous Waste	1m <sup>3</sup>
General Waste	50m <sup>3</sup>
Soils	3786m <sup>3</sup>

**Table 1: Estimated C & D Waste Arising on Site**

### **4.0 Project Waste Management Approach:**

The Waste Management Hierarchy (Article 4 of the Waste Framework Directive (Directive 2008/98/EC)) states that the most preferred option for waste management is prevention and minimization of waste, followed by re-use and recycling, other recovery (i.e. waste to energy and anaerobic digestion) and, least favoured of all, disposal. Re-use and recycling will be undertaken on site for the waste types highlighted in the following paragraphs.

Concrete waste will be segregated and collected in receptacles with mixed waste materials for subsequent separation and recovery at a licensed facility. Masonry and wood will be segregated and collected in receptacles with mixed waste materials, for subsequent separation and recovery at a remote facility.

Hazardous wastes will be identified, removed and kept separate from other waste materials in order to avoid further contamination.

In the event that any contaminated material is encountered on the site during the site works, it will be tested, classified and disposed of in accordance with Council Decision 2003/33/EC, which establishes criteria for the acceptance of waste at landfills.

#### **4.1 Contractor Requirements**

It is the intention to engage specialist waste service contractors who will possess the requisite authorisations for the collection and movement of waste off-site and to bring the material to a facility which currently holds a Waste Licence/Waste Permit/Certificate of Registration.

Before a waste contractor is appointed the main contractor must ensure that the waste contractor has a current waste collection permit in accordance with the Waste Management (Collection Permit) Regulations 2008 and amendments and current waste facility permits/licences for any waste facilities that will be used in accordance with the Waste Management (Facility Permit & Registration) Regulations 2008 and Amendments and the Waste Management (Licensing) Regulations 2000 as amended 2004 and 2010.

In order to transfer waste off site a waste collection permit to transport waste must be held by each waste contractor, 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 waste permit granted by the relevant Local Authority (where the facility is located) under the Waste Management (Facility Permit & Registration) Regulations 2008 and amendments or a waste licence granted by the EPA. The permit/licence will specify the type and quantity of waste able to be received, stored, sorted, recycled and/or disposed of at the specified site.

## 4.2 Demolition Procedure

The demolition works shall be undertaken in a manner which maximizes the potential for recycling, including source segregating waste where appropriate. Activities shall be carried out in the following sequence:

Demolition Activity Sequence	General Description
Disconnection of Services	Shutoff of ESB, Gas, Sewers etc.
Inventory of Hazardous Wastes	e.g. Lighting, Lamps, Asbestos Survey
Removal of abandoned furniture / equipment	e.g. Furniture, White Goods etc.
Removal of Hazardous Materials	e.g. Application of H&S Procedures
Removal of Fixtures	e.g. Fitted Units etc.
Removal of Timber	e.g. Removal of Doors, Floors etc.
Demolition of Structural Shell	Manual or Mechanical Demolition
Source segregation of Material Fractions	Separation into Designated Material Fractions
Transport of Material from Site to Treatment Facilities	e.g. C&D Waste Recycling Facility
Transport of Material from Site to Controlled Disposal Sites	e.g. Inert/Hazardous Landfill Sites
Site Preparation	e.g. Formation Level for New Structure

**Table 2: Demolition Procedures**

The following sequence of works will be followed during the demolition stage:

## 4.3 Check for Hazards

Prior to commencing works, buildings and structure to be demolished will be checked for any likely hazards including asbestos containing materials, electric power lines or cables, gas reticulation systems, telecommunications, unsafe structures, and fire and explosion hazards, e.g. combustible dust.

A full site investigation will be completed prior to the demolition of parts of the existing buildings on site, these reports are available to the contractor.

All work involving materials composed of or containing asbestos requires a written risk assessment and a management plan to be prepared under The Safety, Health and Welfare at Work (Construction) Regulations 2013 and subsequent amendments.

The asbestos survey will include an assessment of the likely exposure to asbestos fibres of those site workers involved and any other risks identified which may adversely affect their health and safety. In carrying out the surveys, the following has been undertaken:

- Identification of the type of asbestos or materials containing asbestos;
- Identification of the condition of the asbestos or materials containing asbestos;
- Assessment of the risk created by that exposure to the health of those employees and of the steps that need to be taken to prevent or minimize the exposure and to comply with the requirements of The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2010 and amendments;
- Recording the significant findings of that risk assessment as soon as is practicable after the risk assessment is made;
- Recording and retaining every risk assessment in a permanent form.

If the asbestos material is identified as asbestos cement and it is determined that the action level will not be exceeded during the course of the work activity, then the contractor may draw up a management plan and proceed on that basis to perform the work activity. If, however, the asbestos is identified as any other type of material containing asbestos the management plan and the related work activity must be performed by a specialist asbestos contractor.

#### **4.4 Removal of Components**

All components from within the buildings that can be salvaged will be removed first. This will primarily include steel, however, may also include structural timbers, doors, windows, cabinets, appliances, hardwood flooring, piping, wiring and ducting etc.

#### **4.5 Demolition**

The breakdown of roofs and walls will be carried out once all salvageable or reusable materials have been taken from the buildings. Any existing foundations will be excavated.

### **5.0 Assignment of Responsibilities:**

A member of the contracting engineers team shall be designated as the Waste Manager and have overall responsibility for the implementation of the Project Waste Management Plan. The Waste Manager will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan and maintain a live document until project completion. At the operational level, appropriate personnel from the main contractor and each sub-contractor on the site shall be assigned the direct responsibility to ensure that the discrete operations stated in the Project Waste Management Plan are performed on an on-going basis.

The Waste Manager shall arrange for full details of all arisings, movements and treatment of waste discards to be recorded during the project. Each consignment of waste taken from the site will be subject to documentation, which will conform to Table 3 below and ensure full traceability of the material to its final destination.

<b>Detail</b>	<b>Particulars</b>
Name of Project	e.g. Marys Lane, Smithfield, Dublin 7
Material being Transported	e.g. Demolition Concrete, Crushed Asphalt etc.
Quantity of Material	e.g. 16.5 tonnes (estimate on site, exact weight available from waste contractor at their facility)
Date of Material Movement	e.g. 01/10/2017
Waste Transporter and Collection Permit No.	e.g. Authorised Transporters Ltd. Permit No. ABC1234
End Destination and Collection Permit No.	e.g. Authorised Waste Facility and relevant EPA Licence number or Waste Facility Permit number.
Recovery/Disposal Code	e.g. R001/D001

**Table 3: Details to be Included within Transportation Dockets**

## **6.0 Training:**

The Waste manager will be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on site and know how to implement the Waste Management Plan. The training of the site staff is the responsibility of the Waste Manager. All site personnel and sub-contractors will be instructed about the objectives of the Project Waste Management Plan and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation, selective demolition and material reuse techniques apply, each member of staff will be given instructions on how to comply with the Project Waste Management Plan.

The Waste Manager will be given responsibility and authority to select a waste team if required, i.e. members of the site crew that will aid him/her in the organization, operation and recording of the waste management system implemented on site.

The Waste Manager will have overall responsibility and authority to oversee, record and provide feedback on everyday waste management at the site. Authority will be given to the Waste Manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and salvage.

A waste training programme will be organized. A basic awareness course will be held for all site crew to outline the Waste Management Plan and to detail the segregation of waste materials at source. This will be incorporated into the site induction course.

The basic course will describe the materials to be segregated, the storage methods and the location of the waste storage areas. A subsection on hazardous wastes will be incorporated and the precise dangers of each hazardous waste will be explained.

## **7.0 Waste Auditing:**

The Waste Manager will be responsible for conducting a waste audit on a weekly/monthly basis at the site. If waste movements are not accounted for, the reasons for this should be established in order to see if and why the record keeping system has not been maintained. On-going consultation with waste contractors and Dublin City Council will be undertaken to ensure that the best practicable option is being followed for waste management on site.