

Preliminary Waste Management Plan

Dublin Whitewater Course
Georges Dock, Dublin

for

Urban Agency Architect

N17397

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Disclaimer

It should be noted that this document is preliminary and is to be used only for planning purposes. It is not a substitute for a detailed Construction Waste Management Plan as would typically be completed by the Main Contractor. This document is for the internal use of the project design team and for Part 8 planning purposes only, it is not be used by or sent to any parties external to the appointed design team or Dublin City Councils planning team without the written permission of Patrick Parsons. This document is not to be used under any circumstances for tendering or costing purposes. All information is to be read in conjunction with Patrick Parsons engineering drawings.

1.0 Introduction

1.1 This Preliminary Waste Management Plan (WMP) applies to all activities throughout the project. The document, which is to be developed further by the appointed contractor, assesses the management of the waste that will occur during the construction phase of the project and also the management of waste that will occur during the occupation of the development. It will cover the methods for prevention, minimisation, re-use, recycling, recovery and disposal of waste.

1.2 Physical Development

The development will provide a water based recreational facility at George's Dock and Custom House Quay, Dublin 1, incorporating the following:

1. Provision of a white-water rafting course utilising the existing George's Dock basin, which is a protected structure, including;
 - a. a central flat-water training facility including water polo amenity,
 - b. white water slalom course,
 - c. kayak/raft conveyor,
 - d. pumping station and water treatment plant,
 - e. a mechanical control centre and electrical substations,
 - f. enhancement of existing public lighting and provision of low illumination level floodlighting for water based activities; and
 - g. swift water rescue centre with floodable urban street with mock enclosures forming a 'rescue village'.
2. The demolition of former Dublin Docklands Development Authority office building and removal of 6 no. existing trees at Custom House Quay. Construction of two new quayside buildings with a combined total floor area of 763.98m² and maximum height of 5.5m. The east building incorporating land-based activities including changing rooms, reception, staff amenity area, equipment storage. The west building comprising replacement offices and conference room for the use of Dublin City Council Docklands office. Ancillary landscaped public open space between these proposed quayside buildings including surface water attenuation area and quayside walkway;
3. Reconfigured and resurfaced public open space where necessary to the existing plaza at George's Dock, including the removal of 4 no. existing trees, making good any damage caused by construction work, and the provision of temporary construction compound. Connection to public surface water drainage system; and
4. Conservation and protection works to the lock gate and quay walls together with retention and protection of the triumphal arch on site and the partial removal of the timber boardwalk and insertion of access structures to the canal channel at the sea wall.

1.3 Description of works

The construction activities associated with the Whitewater Course comprises briefly of piling or raft (enabling works), construction of reinforced concrete structures within Georges Dock and mechanical and electrical fit out including a canoe conveyor, 4 axial pumps, water treatment and lighting.

The construction activities associated with the Quayside Buildings building briefly comprises asbestos removal and demolition of the former DDDA building, piling and or raft (enabling works), erection of frame, cladding, roofing and glazing and mechanical and electrical fit out.

2.0 Methodology

This plan has been prepared with reference to The Waste Management Act (1996) and subsequent amendments, Department of Environment policy statements including “Changing our Ways” (1998), “Taking Stock and Moving Forward” 2004 and Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects” (2006).

3.0 Construction Phase Construction and Demolition Waste Management Plan

3.1 A detailed Site Waste Management Plan (SWMP) will be established following the detailed design phase of the project by the appointed contractor. The plan will establish waste management objectives and an outline SWMP is outlined below.

The appointed Contractor will ensure that:-

- All waste from the site is dealt with in accordance with the Waste management Acts 1996-2003 Provision in relation to the prevention, management and control of waste. They also provide for other matters including the prosecution of offences by any person, the transfer of waste, the making of waste management plans, the defrayal of costs incurred by local authorities and the provision of information
- A Waste Champion is appointed within the contractor's organisation to drive the waste minimisation culture on this Project.
- Each waste stream is identified, and appropriate storage and disposal measures provided in line with Duty of Care;
- Wherever practical, waste will be re-used or recycled.
- Only when all other routes are exhausted will waste be sent to landfill, accompanied by a Pre-Treatment Confirmation Form
- Targets for re-use and recycling will be recorded at the start of the project on the Waste Targets & Monitoring Form and monthly progress towards this monitored;
- Waste will be collected centrally on-site and segregated at an off-site facility by a specialist waste management company. All relevant documentation will be filed the main contractor.
- Waste Transfer Notes are correctly completed for each consignment of inert or non-hazardous waste;
- When any waste is removed, records are kept within the plan to —
 - a. The identity of the person removing the waste;
 - b. The waste carrier registration number;
 - c. The site that the waste is being taken to and whether the operator of that site holds a permit under the Waste Management (Registration of Brooker and Dealers) Regulations 2008 or is registered under those Regulations as a waste operation exempt from the need for such a permit.
- Hazardous Waste Consignment Notes are correctly completed for each consignment of hazardous waste;
- Waste contractors' carriers licences and permits are verified as per the Waste Management (Licensing) Regulations 2004 (copies to be placed in the Project File)
- The main contractor must ensure that the site waste management plan is kept:
 - a. At the site office, or
 - b. If there is no site office, at the site.
- The procedures detailed in this Site Waste Management Plan are brought to the notice of all employees and subcontractors' employees.
- This document is guided by and adheres to the regulations of the Waste Management licencing Regulations 2004.

3.2 Periodic Reviewing of the SWMP

As often as necessary to ensure that the plan accurately reflects the progress of the project, and in any event not less than every six months, the contractor must—

- a. Review the plan;
- b. Record the types and quantities of waste produced;
- c. Record the types and quantities of waste that have been—
 - i. Re-used (and whether this was on or off site);
 - ii. Recycled (and whether this was on or off site);
 - iii. Sent for another form of recovery (and whether this was on or off site);
 - iv. Sent to landfill; or
 - v. Otherwise disposed of; and
- d. Update the plan to reflect the progress of the project.

3.3 Details of Waste Streams during Demolition

During the demolition phase of the project, the existing former DDDA building is to be removed. An asbestos survey and report was commissioned by Dublin City Council in March 2018. This found that the former DDDA building contains asbestos in the form of bitumen adhesive on the floor beneath the screed in a vacant office. This survey was focused on a disused part of the building but a full survey will be carried out after the building is vacated to inform the full requirements for the removal of asbestos prior to any demolition works in accordance with the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006.

Once asbestos has been removed, the building will be demolished and this will generate the following waste streams:

- Stones / topsoil and subsoil
- Concrete, brick, tiles and ceramics
- Plasterboard
- Scrap metal
- Wood
- Service pipes
- Glass
- Building service equipment / machinery

3.4 Details of Waste Streams during Construction

Material will be excavated from the base of George's Dock down to formation level. This material is likely to be mainly granular fill which will be tested for contamination prior to the detailed design of the scheme. The results of chemical testing will inform how this material is disposed off site.

Excavated material can be stockpiled within the dock and segregated if necessary, prior to removal from site or where possible, re used.

All contracted hauliers and disposal facilities used to dispose of excavation waste from site must be authorised to dispose of this waste, and all licences and permits must be valid and conditions adhered to in accordance with all applicable Waste Management Regulations.

3.5 Predicted Waste Management for the proposed development

Waste Type	Tonnes	Reuse /Recovery		Recycle		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Granular Stone	28,875	10	28,875	90	25,987	0	0
Concrete	2,000	0	2,000	100	2,000	0	0
Bitumen	78	0	78	100	78	0	0
Metals	135	0	135	100	135	0	0
Bricks	176	0	176	100	176	0	0

The above estimates are approximate only and are provided to give magnitude of the various waste materials likely to be generated. More accurate figures will be provided by the contractor following intrusive surveys and detailed design.

3.6 Good and Best Practice Areas for Consideration

Though not legal requirements, the following items are suggestions for “good” and “best practice” that could improve the overall standard of waste management:

- Rather than placing the onus of being responsible for waste management on a site to an individual, to ensure cooperation among site staff it would be a good idea to divide the site into several areas and assign such responsibility to a number of individuals, one for each area and, possibly on a rota basis to gradually train all relevant members of the project team;
- Involve waste management contractors at the early stages of the project to discuss opportunities for recycling and agree high levels of recycling of waste;
- Set targets for trade contractors in relation to the following parameters: waste diverted from landfill, waste minimisations recycling rates and waste recovery rates.
- Set targets for trade contractors in relation recycled content of materials employed;
- Use clearly labelled containers optimised for segregation of specific waste streams;
- Consider the use of compacters and balers;
- Designate a reuse area within the site logistics;
- Use just-in-time delivery (e.g. through a consolidation centre) for materials and avoid double-handling;
- Set a procedure to collect feedback from trade contractors, visitors etc. for the purpose of reviewing, revising and refining the plan

3.7 Storage & Transportation

Under the Waste Management (Registration of Brokers and Dealers) 2008 Provide for a registration system of waste brokers and dealers who arrange for the shipment of waste to and from Ireland and also the passage of waste through the State.

At the site compound the waste will be stored in an appropriate, clearly labelled containers. The Waste Champion will maximise the recycling opportunities and ensure that waste streams are separated to facilitate this.

All materials brought to site will be stored and handled appropriately to minimise unnecessary wastage. Any site welfare facilities will be equipped with sufficient waste disposal containers for their needs, including recycling containers for plastic and cans.

Site sewerage will be disposed of through connection to existing network.

3.8 Disposal of Waste

Any waste which cannot be used on site will be recycled or disposed of offsite, via a registered carrier to :-

- A licensed landfill site; or
- A licensed transfer station; or
- A licensed recycling facility, or
- An exempt site

Any waste disposed of to landfill must be pre-treated first. This is most easily achieved by recycling at least one of the project's waste streams. Licensed landfill sites will not accept waste unless accompanied by a declaration of pre-treatment. The Contractor pre-treatment confirmation form fulfils this requirement and must accompany any waste disposed of to landfill. Every proposed destination site will be checked to ensure that a valid permit or waste exemption has been issued by the Environmental Protection Agency for the type of waste to be received.

To further comply with Contractor Duty of Care, if there are any suspicions regarding the waste contractor the Project Team will confirm that the waste is being taken to the site agreed with the Carrier. This may be done by:

- Telephoning the destination site to confirm arrival
- Receiving written confirmation of receipt from the destination site
- Timing the carrier's return trips
- Following a load and taking photographs as necessary.

Any actions from the above list will be recorded in the Project File.

Any illegal activities will be dealt with immediately by notification to the Environmental Protection Agency.

The disposal of non-hazardous and inert waste will be covered by a fully completed by the Contractor.

Disposal of hazardous waste is strictly controlled by separate legislation Waste Management Acts 1996 - 2003

Every movement of waste must be accompanied by a Transfer Note, or, in the case of Hazardous Waste, a Consignment Note. These will be retained, filed and held at the site office. Waste

Transfer Notes will be retained for at least two years and Consignment Notes for three years as required by the legislation. Completed Waste Transfer Notes and Consignment Notes will be filed in the Project File.

When any waste is removed the contractor must record on the plan—

- a. The identity of the person removing the waste;
- b. The waste carrier registration number of the carrier;
- c. A copy of, or reference to, the written description of the waste required by the Waste Management (Licensing) Regulations 2004.
- d. The site that the waste is being taken to and whether the operator of that site holds a permit under the Waste Management (Registration of Brokers and Dealers) Regulations 2008 or is registered under those Regulations as a waste operation exempt from the need for such a permit.

The Waste Champion will be responsible for ensuring the skips are checked regularly and the contents disposed of correctly, and for keeping all relevant Hazardous Waste Consignment Notes and Waste Transfer Notes for filing.

Decisions taken to minimise quantities of waste produced on site.

According to the Waste Management (Licensing) Regulations 2004, “It must record any decision taken before the site waste management plan was drafted on the nature of the project, its design, construction method or materials employed in order to minimise the quantity of waste produced on site”. Below indicate what decisions were taken before the SWMP to reduce wastes produced on site:

1. Nature of the project
2. Its design
3. Construction methods
4. Materials employed

3.9 Estimated Cost of Waste Management

The cost of waste management should be estimated by the appointed contractor and included for at Tender Stage of the project. This should include the purchase cost of waste materials, handling costs, storage and transportation costs and disposal costs including landfill tax.

This will help to ensure that unproductive and avoidable costs of construction and demolition waste management are eliminated and will effectively drive the contractor to have a full appreciation of the financial (as well as environmental) benefits associated with good waste management practices. The estimated cost of waste management should be updated throughout the project.

4.0 Life Cycle Phase

The proposed Quayside Buildings will be used as office space for Dublin City Council and also provide facilities for the users of the White Water course. Dublin City Council strive to achieve best practice in the management of its waste and this development will be the exemplar for best practice and will avoid the use of single use plastics, will fully segregate waste and monitor progress in the reduction of waste.

Typically, the waste that will be generated will be paper, cardboard, packaging, cups and cans from the drinks dispenser and litter left by the users of the centre. Users will be encouraged to dispose of waste into designated recycling bins with the use of signage within the building.

The development contains a dedicated self-contained & managed refuse collection area at the eastern end of the Quayside east building envelope. This bin storage area will contain colour coded bins for recyclable, normal waste and organic waste in accordance with best practice.

The internal management will be responsible for the weekly movement of the bins to a collection point at the street frontage on Hanover Quay to the loading bay on the days of refuse collection. The proposed bin types are of a sufficiently small size so that they can be easily propelled by hand to the road edge for collection and can also be removed in a similar manner.

The White Water course part of the development will produce by products from its water treatment system but this will be safely disposed into the Irish Water drainage system via a link to the foul drainage.

Containers used to transport chemicals involved in the treatment process will be disposed of by the supplier in accordance with The Chemicals Acts 2008 & 2010 and the Waste Management Acts 1996 – 2003.

UK locations:

Newcastle upon Tyne

London

Manchester

Glasgow

Huddersfield

Chester

Birmingham

Guildford

International locations:

Dubai

Sydney



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