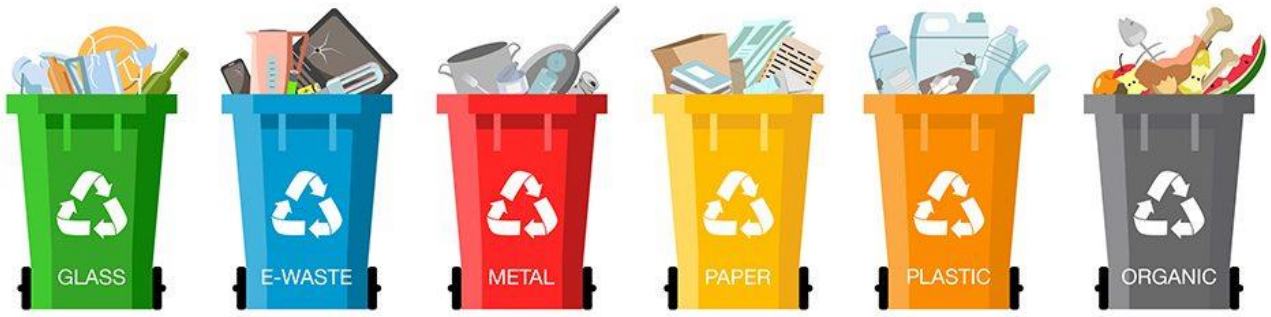
CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN

Project Title: Dalymount Park Redevelopment



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Document Amendment Register

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Signed:				

Contents

1. Introduction

Ashview Consultants Ltd. were commissioned to prepare this Construction & Demolition Waste Management Plan to support the planning application for the planned redevelopmet of Dalymount Park In Phibsboro, Dublin 7.

The purpose of the Waste Management Plan is to provide information necessary to ensure that the management of waste at the proposed development, during its construction and operational phase is undertaken in accordance with current legal and industry standards including the Waste Management Act 1996 and associated regulations.

2. Purpose of C&D WMP

The purpose of the Construction & Demolition Waste Management Plan (C&DWMP) is to provide information necessary to ensure that the waste produced by the site is managed in accordance with all current legal and industrial standards including;

- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects
- Waste Management Act 1996 and associated regulations
- Litter Pollution Act 1997
- Planning and Development Act 2000 as amended

The primary priority of the plan shall be to promote recycling, reuse and recovery of waste and diversion from landfill wherever possible.

Proper guidance will also be provided to ensure appropriate transportation method is used to prevent littering or other serious environmental pollution.

In preparation of the C&DWMP, the following publications have been used as references;

- Best Practice Guidelines on the preparation of waste management plans for construction and demolition projects, Department of the Environment and local Government June 2006.
- Guidelines for preparation of waste management plans for construction and demolition projects, Department of the Environment, Heritage and Local Government
- Eastern Midlands Region Waste Management plan
- Construction and Demolition waste management - A hand book for contractors and site managers, FAS and the construction industry federation 2002.
- DCC's Air Quality Monitoring and Noise Control Unit’s Good Practice Guide for Construction and Demolition

These guidelines cover issues to be addressed at the preplanning stage of the project to right through its completion and operation, it includes,

- Predicted construction and operational wastes from the proposed development;
- Waste recovery/recycling, disposal of construction phase;
- Provision of training for waste managers and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plans;
- Details of consultation with relevant bodies;
- List of sequence of operations to be followed;

3. Waste Management in Ireland

3.1 Overview of Waste Management in Ireland

The Irish Government issued a policy statement in September 1998 known as 'Changing Our Ways', which specially addressed objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. The policy statement set out an initial 50% recycling target by the end of 2003 with a progressive increase to 85% to be achieved by 2013.

In response to the challenges posed by Changing Our Ways, a Task Force B4 – investigating "Recycling of Construction and Demolition Waste" – was established by Forum for the Construction industry in October 1999. Following this publication, the National Construction and Demolition Waste Council (NCDWC) was established in June 2002 as a voluntary industry body with an objective of achieving compliance set up by the government to minimise C&D waste.

The most recent national policy document was published in July 2012, entitled 'A Resource Opportunity - Waste Management Policy in Ireland' published by Department of Environment, Community and Local Government. The policy document sets out the measure through which Ireland will make the further progress necessary to become a recycling society and stresses on environmental and economic benefits of better waste management, particularly in relation to waste prevention.

These guidelines documents are considered to define best practice for construction projects in Ireland and describe how these projects are to be undertaken such that environmental impacts and risks are minimised and maximum levels of waste recycling are achieved. Since 1998, EPA has produced reports and update estimated for waste generation and the level of waste recovered, reduced or recycled and disposed from household and commercial developments. According to EPA reports, Ireland produced about 2,763,166 t of municipal waste in 2016 out of which 2,718,298 t of municipal waste was managed. About 74% of this was recovered by using as a fuel for incinerators and 41% recycled to form compost.

3.2 Eastern-Midlands Regional Waste Management Plan

The Eastern-Midlands Region encompasses the local authorities: Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow. The regional plan provides the framework for waste management and sets out a range of policies and actions in order to meet the specified mandatory and performance targets.

The Regional Plan sets out the strategic targets for waste management in the region and also specifies a mandatory target of 70% of C&D wastes to be prepared for reuse, recycling and material recovery (excluding soil and stones) by 2020. This reflects the target for management of C&D waste in the Waste Framework Directive.

With regards to construction and operational phase waste specifically the regional plan requires that the 'Construction and Operational Waste Management Plan, as a minimum, should include provision for the management of all construction, demolition and operational waste arising on site, and make provision for the reuse of said material and / or the recovery or disposal of this waste to authorised facilities by authorised collectors.' It also requires that where possible, excavated material from development sites should be reused on the subject site.

3.3 Legislative Requirements

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

- 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) and regulations made under the acts.
- Planning and Development Act 2000 as amended (S.I. No. 30 of 2010) as amended (S.I. No. 310 of 2015).
- Protection of Environment Act 1992 as amended (S.I. No. 413 of 2003) as amended by the Planning and Development Act 2000 (S.I. No. 30 of 2000) as amended.
- Litter Pollution Act 1997 (S.I. No. 12 of 1997) as amended by Protection of the Environment (amendment) Act 2003 as amended.

4. Project Description

The project will involve the demolition of the existing stadium infrastructure, to allow for the for the construction of a new 8,000 spectator stadium, consisting of a new bar area, changing rooms and concession stands. The orientation of the pitch will also be changed to suit the new design.

This Construction and Operational Waste Management Plan is prepared in relation to the above and which includes the following;

- The demolition of the existing stadium and structures located on the site;
- The development of a new c.8,066 capacity stadium with provision for c. 6,272 seats and c.1,794 standing and new modern floodlighting;
- Reorientation of the pitch to a North/South Axis (105m x 68m) and installation of a new sand based grass pitch;
- A basement area (640 sq.m) to facilitate competition area changing rooms and facilities;
- The provision of modern match-day facilities for teams and officials;
- Club offices & a merchandise shop for the anchor tenants Bohemian FC;
- The provision of a stadium bar/function room;
- The provision of 12 car parking spaces and 25 bicycle spaces within the site;
- A community facility with an area of 673sq.m over two floors to include a multi-functional community room and a community gym;
- The provision of a public plaza and public thoroughfare along the eastern boundary to include various shops and eateries; and
- All associated plant, substation, waste storage, landscaping, boundary treatment, lighting and all ancillary site works to facilitate the proposed development.

The Construction Manager for this project, when appointed, will assist in the implementation of site waste management measures and the adherence by site personnel to the procedures. They will co-ordinate all activities with respect to waste management activities on site.

5. Demolition Phase Waste

The project will first Involve the removal of ACM's as identified in the RDAS completed by About Safety, Document Ref: RD922401 (Appendix A). The appointed contractor will have to detail in their plan of work the method and strategy the propose to use for the remediation of the site and the precautions to be put in place. Background reassurance air monitoring will be required during the remediation and include for personal monitoring of operatives working within a designated exclusion zone. All ACM'S removed will be to a licensed recovery facility, who will confirm the quantities received and the waste transfer notes will be made available for the site safety file. Following the removal of the ACM's the

contractor will produce a certificate of reoccupation, whichh will aloow for the soft strip of all stands, outhouses, changing rooms and toilets to take place.

Japanese Knotweed has been Identified as an Invasive species In a number of areas around the site, mostly confined to the carpark area of the Connaught Street Stand entrance and behind one of the goals. A Knotweed management plan Is currently being Implemented on site, with the aim being to eradicate or seriously reduce the current presence of knotweed on site and to stop it further establishing elsewhere. All Knotweed found on site was treated with glyphosate, the weed has been left in situ to die off. The knotweed has not spread to any new areas, containment measures appear to be working.
The presence of the knotweed has been greatly reduced, there is now very minimal amounts of knotweed on site. All growth present on site at the inspection has be treated. Treatment is working to contain the knotweed and it is anticipated there will be very low levels of green knotweed growth on site.

Before any demolition of structures takes place, the appointed contractor will first complete a soft strip of all locations and out-buildings, including changing rooms, toilets, members bar, electrical and mechanical switch and plant rooms.
The appointed contractor will take appropriate steps to ensure that all the different elements removed from the soft strip will be separated into different waste streams and where possible reused or recycled where possible, including materials such as timber, metal, glass and fabrics.

For the demolition stage of the stands, the roofing should first be removed before the concrete structures are broken down. The appointed contractor should understand that for any crushing to be completed on site that a waste facility permit is to be applied for.

The repositioning of the playing field will require the movement of spoil, the spoil has been found to be non-hazardous and should be reused on site where possible.

A waste Characterisation Assessment was completed by IGSL Limited, on behalf of O'Callaghan Moran & Associates, of samples of made ground collected from five (5 No.) trial pits installed at the site of a new stand.

The made ground at all locations comprises sandy gravelly clay with some cobble content. The Made Ground is between 2.30-3.00m thick at WS01-WS03.

The Made Ground is circa 1.00m thick at WS04 and WS05 and is underlain by Natural Ground composed of firm to stiff, sandy gravelly CLAY with some cobble content.

The Made Ground at all locations was found to contain man-made material >2% of the soil matrix at all locations. This includes red brick fragments, concrete, ash and timber. All of which are classed as non-hazardous materials, with a LoW Code 17 09 04.

The Waste Stream from the Demolition Phase and the Waste Controller Information Is as follows:

Type and Projected Quantity of waste	EW Code	Waste Collection Company & Waste Collection Permit Reference	Waste Destination Company Name	Waste Destination Company Address & Waste Facility License Reference
Asbestos Containing Materials	17 06 05	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Mixed C&D	17 09 04	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Timber	17 02 01-03	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Metals	17 04 01 - 11	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Spoil	17 09 04	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor

6. Construction Phase Waste

During construction activities, waste will be produced from surplus materials such as broken or off-cuts of timber, plasterboard, concrete tiles, glass etc. some packing waste is also expected to be produced. Surplus soil / gravel can be expected to be produced due to cut / fill activities. This is anticipated to consist of materials arising from cut-offs of concrete blocks, bricks, tiles, timber joists, steel reinforcement etc. Waste from packaging and oversupply of materials can also be expected. The bulk of waste material generated is due to the demolition of the existing stadium and excavation of subsoil to accommodate the new development.

The Waste Stream from the Construction Phase and the Waste Controller Information Is as follows:

Type and Projected Quantity of waste	EW Code	Waste Collection Company & Waste Collection Permit Reference	Waste Destination Company Name	Waste Destination Company Address & Waste Facility License Reference
Soil	17 05 03	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor

Mixed C&D	17 09 04	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Timber	17 02 01-03	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Plasterboard	17 08 01 & 02	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Metals	17 04 01 - 11	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Concrete	17 01 01-03 & 07	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor
Other	17 06 01	TBC by Appointed Contractor	TBC by Appointed Contractor	TBC by Appointed Contractor

7. Categories Construction Waste Generated

Environmental Protection Agency in 1996 published a single list incorporating both the European Waste Catalogue and the Hazardous waste list. The list is used for the classification of all wastes and hazardous wastes and are designed to form a consistent waste classification system across the EU. They form the basis of all national and international waste reporting obligations, such as those associated with waste licences and permits, the national waste database and the transport of waste.

The European four-digit waste codes (EWC) expected to for typical waste materials expected to be generated for this site are tabulated below as follows;

Table 1: Waste types and EWC

Waste Material	**EWC**
Non-Hazardous	
Concrete, bricks, tiles, ceramics	17 01
Wood, glass and plastic	17 02
Bituminous mixtures, coal tar and tarred products	17 03
Metals (including their alloys)	17 04
Soil, stones and dredged soil	17 05

Gypsum- based construction material	17 08
Hazardous	
Electrical and Electronic Components	16 02
Batteries	16 06
Wood Preservatives	03 02
Liquid Fuels	13 07
Soil and stones containing dangerous substances	17 05 03
Insulation materials containing asbestos	17 06 01
Other insulation materials containing of or containing dangerous substances	17 06 03
Construction materials containing asbestos	17 06 05
Construction and demolition waste containing mercury	17 09 01
Construction and demolition waste containing PCB's	17 09 02
Other Construction and demolition waste containing dangerous substances	17 09 03
Asbestos Containing Materials	17 06 01

8. Non-Hazardous Waste

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

- Concrete, masonry;
- Stone
- Wood;
- Packaging (paper/cardboard, plastic, wooden, metallic, glass, textile, etc.)
- General (non-recyclable) waste;
- Further waste types maybe added during the construction phase.
- 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.

9. Hazardous Waste

Fuels used during construction will be classified as hazardous and this will be stored for site machinery etc., in suitable tanks with the draw-off points bunded. In this case, it is not expected that there will be any fuel wastage.

Any hazardous waste/ waste mixture containing dangerous substances, i.e., Asbestos Containing Materials will be classified as Hazardous waste. This waste will be stored separately from other wastes generated and only disposed of in licensed hazardous waste facility.

10. Waste arising from the Site

The following tables are a preliminary estimate of the waste which might be generated during both the demolition phase and the constructioin phase, based on information currently available.

Table 2 (i): Demolition Waste Quantities

Waste Materials	EWC	Quantity in Tonnes
Non-Hazardous		
Concrete, bricks, tiles, ceramics	17 01	
Wood, glass and plastic	17 02	
Metals (including their alloys)	17 04	
Soil, stones and dredged soil	17 05	
Gypsum- based construction material	17 08	
Hazardous		
Electrical and Electronic Components	16 02	
Insulation materials containing asbestos	17 06 01	
Construction materials containing asbestos	17 06 05	
Construction and demolition waste containing mercury	17 09 01	
Construction and demolition waste containing PCB's	17 09 02	

Other Construction and demolition waste containing dangerous substances	17 09 03	

Table 2 (ii): Construction waste quantities

Waste Materials	EWC	Quantity in Tonnes
Non-Hazardous		
Concrete, bricks, tiles, ceramics	17 01	
Wood, glass and plastic	17 02	
Metals (including their alloys)	17 04	
Soil, stones and dredged soil	17 05	
Gypsum- based construction material	17 08	
Hazardous		
Electrical and Electronic Components	16 02	
Batteries	16 06	
Wood Preservatives	03 02	
Liquid Fuels	13 07	
Soil and stones containing dangerous substances	17 05 03	
Insulation materials containing asbestos	17 06 01	
Other insulation materials containing of or containing dangerous substances	17 06 03	
Construction materials containing asbestos	17 06 05	
Construction and demolition waste containing mercury	17 09 01	
Construction and demolition waste containing PCB's	17 09 02	
Other Construction and demolition waste containing dangerous substances	17 09 03	

Table 3: Predicted Waste Management for the proposed development

Waste Type	Tonnes	Reuse/Recovery		Recycle		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Concrete, bricks, tiles, ceramics							
Wood, glass and plastic							
Metals (including their alloys)							
Soil, stones and dredged soil							
Gypsum- based construction material							

It should be noted that until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

11. Proposed Waste Management Options

Waste materials generated will be segregated on site, wherever practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be practised. The site waste storage area will have skips and receptacles provided to facilitate segregation at the source. All waste receptacles leaving site will be covered or enclosed to avoid spillage. The appointed waste contractor will collect and transfer the wastes as receptacles are filled.

All waste arising's on site, will be handled by an approved waste contractor holding a current waste collection permit. All waste arising's requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required.
Written records will be maintained by the contractor(s) detailing the waste arising throughout the C&D phases, the classification of each waste type, waste collection permits

for all waste contactors who collect waste from the site and COR/permit or licence for the receiving waste facility for all waste removed and disposed off-site.

Special or hazardous wastes shall be retained in isolation from other wastes to avoid further contamination. Proper storage facilities will be provided for hazardous wastes which may arise such as batteries, oils, paints, chemicals etc. if required.

The management of the main waste streams are detailed as follows:

11.1 Soil, Subsoil

Excess excavated soil that is not required for use as a fill on site will be recovered off site. Clean material may be used as fill material in other construction projects or engineering fill for waste licensed sites. Beneficial reuse of surplus excavation material as engineering fill may be subject to further testing to determine if materials meet the specific engineering standards for their proposed end-use.

Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011.

If the material is deemed to be a waste, then removal and reuse/ recycling/ recovery/ disposal of the material will be carried out in accordance with the Waste Management Acts 1996 – 2011 as amended, the Waste Management (Collection Permit) Regulations 2007 as amended and the Waste Management (Facility Permit & Registration) Regulations 2007 as amended. The volume of waste removed will dictate whether a COR, permit or licence is required by the receiving facility. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.

If contaminated soil, classified as hazardous is encountered, this soil will be stored separately from any non-hazardous materials. It will require off site treatment at a suitable facility.

11.2 Concrete, Bricks, Tiles and Ceramics

Most concrete, bricks, tiles and ceramics generated as part of the construction works are expected to be clean, inert material and should be recycled, where possible. The appointed contractor is to understand that for any crushing to be completed on site that a waste facility permit Is to be applied for.

11.3 Plastic, Glass and Plasterboard

Plastic is primarily generated from material cut offs. All recyclable plastic will be segregated and recycled, where possible.

Glass materials will be segregated for recycling, where possible.
Currently, there are number of recycling facilities for plasterboard in Ireland.

11.4 Timber

Timber that is uncontaminated, i.e. free from paints, preservatives, glues etc., will be disposed of in a separate skip and recycled off-site.

11.5 Metal

Metals will be segregated into mixed ferrous, aluminium cladding, high grade stainless steel, low grade stainless steel etc., where practical and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

11.6 Other Recyclables

Where any other recyclable wastes such as WEEE, cardboard and soft plastic are generated, these will be segregated at source into dedicated skips and removed off-site.

11.7 Non-Recyclable Waste

C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and cardboards, will be placed in separate skips or other receptacles. Prior to removal from site, the non-recyclable waste skip/receptacle will be examined by a member of the waste team to cross check if proper segregation is carried out.

11.8 Hazardous Materials

If contaminated material is encountered during the development and subsequently classified as hazardous, a specialist contractor will be employed to carry out environmental clean-up to remove traces of contaminated materials from the site. These should be licensed under Waste Management (Collection Permit) regulations 2007. This will be disposed of in a facility licensed under the Waste Management Act 1996 and waste management (Facility Permit) regulations of 2007. Every effort will be made to avoid transferring waste to abroad countries.

12. Tracking and Documentation

All waste will be weighed and documented prior to leaving site. Waste will be weighed by the contractor, either by weighing mechanism on the truck or at the receiving facility. These waste records will be maintained on site by the nominated project Waste Manager.

All movement of waste and the use of waste contractors will be undertaken in accordance with the Waste Management Acts 1996 - 2011, Waste Management (Collection Permit) Regulations 2007 and Amendments and Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments. This includes the requirement for all waste contractors to have a waste collection permit issued by the NWCPO. The nominated project waste manager will maintain a copy of all waste collection permits on-site.

If the waste is being transported to another site, a copy of the Local Authority waste COR/permit or EPA Waste/IED Licence for that site will be provided to the nominated project waste manager. If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) notification document will be obtained from DCC (as the relevant authority on behalf of all local authorities in Ireland) and kept on-site along with details of the final destination (COR, permits, licences etc.). A receipt from the final destination of the material shall be kept as part of the on-site waste management records.

All information will be entered in a waste management recording system to be maintained on site.

The waste management plan for the proposed project is depicted in the table below:

Table 4: Waste management plan for the proposed project.

1. COMPANY DETAILS						
Company Trading Name:						
Site Address:						
Postal Address:						
Company Site Waste Contract:						
2. WASTE COLLECTION & MANAGEMENT DETAILS					Contact No.:	
COLLECTION			MANAGEMENT			
Waste type to be collected from site	Company carrying Waste offsite	Waste collection Permit Ref.	Name of facility where the waste is first offloaded and address	Waste Facility Permit/License Ref.	Waste Management (Reused, Recycled, Recovered, Landfilled)	
General Waste						
Concrete						
Timber						
Steel						
Other						
Other						

13. Training Provisions

A member of the construction team will be appointed as the project waste manager to ensure commitment, operational efficiency and accountability during the C&D phases of the project.

13.1 Waste Manager Training and Responsibilities

A dedicated waste manager will be appointed to ensure commitment, efficiency and site protocols upheld during construction stage. The nominated 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 organisation, operation and recording of the waste management system implemented on site. The waste manager will have overall responsibility to oversee,

record and provide feedback to the client on everyday waste management at the site. Authority will be given to the waste manager to delegate responsibility to subcontractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.

The waste manager will be trained in how to set up and maintain a record keeping system, how to perform an audit and how to establish targets for waste management on site. The waste manager will also 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 be knowledgeable in how to implement this C&D WMP.

13.2 Site Crew Training

It is the responsibility of the waste manager to train a site crew and as such to organise a training program. A basic awareness course will be held for all site crew to outline the C&D WMP and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

This basic course will describe the materials to be segregated, the storage methods and the location of the Waste Storage Areas. A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

14. Record Keeping

Records will be kept for all waste material which leaves the site, either for reuse on another site, recycling or disposal. A recording system will be put in place to record the construction waste arising's on site. A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will always be maintained on site.
This shall take the following basic outline form:

- Waste taken for reuse off site
- Waste taken for recycling
- Waste taken for disposal
- Reclaimed waste materials brought to site for reuse.

For each movement of waste off-site, a signed docket will be obtained by the Waste Manager from the contractor, detailing the weight and type of the material and the source and destination of the material. This will be carried out for each material type and the system will be linked with the delivery records. In this way, the percentage of C&D waste generated for each material can be determined.

This will allow ease of comparison of figures with targets established for the recovery, reuse and recycling of Construction waste. It will also highlight the source of failure in meeting these targets.

15. Waste Audit Procedure

15.1 Responsibility for waste audit

The appointed waste manager shall perform audits at the site during the complete construction and demolition phase of the works. This shall ensure that all records are being maintained for all movements of all materials.

15.2 Review of Records and Identification of Corrective Actions

A review of all the records for the waste generated and transported off-site should be undertaken mid-way through the project. 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. The waste records will be compared with the established recovery/reuse/recycling targets for the site. Each material type will be examined, in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved.

Waste management costs will also be reviewed. Upon completion of the C&D phase, a final report will be prepared, summarising the outcomes of waste management processes adopted and the total recycling/reuse/recovery figures for the development.

16. Consultation with Relevant Bodies

16.1 Local Authority

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 Cork City Council will be undertaken to ensure that the best practicable option is being followed for waste management on site.

16.2 Recycling/Salvage Companies

Companies that specialise in C&D waste management will be contacted to determine their suitability for engagement. Where a waste contractor is engaged, each company will be audited in order to ensure that relevant and up-to-date waste collection permits, and facility COR/permits/licences are held. In addition, information regarding individual construction materials will be obtained, including the feasibility of recycling each material, the costs of recycling/reclamation and the means by which the wastes will be collected and transported off-site, and the recycling/reclamation process each material will undergo off site.

17. References

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- 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 legislation includes:
  - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended 2011 (S.I. No. 323 of 2011) and 2016 (S.I 315 of 2016).
  - Waste Management (Collection Permit) Regulations (S.I No. 820 of 2007) as amended 2008 (S.I No 87 of 2008), 2015 (S.I. No. 197 of 2015) and 2016 (S.I. No. 24 and 346 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) as amended 2014 (S.I No. 320 and No. 546 of 2014) and as amended 2015 (S.I. No. 198 of 2015)
  - Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended 2010 (S.I. No. 350 of 2010)
  - Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended 2015 (S.I No 542 of 2015)
  - Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997)
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Appendix A - Site Asbestos Survey Report

Appendix B - Site Ground Investigations

Appendix C - Site Invasive Plant Species Survey - Japanese Knotweed Inspection Report

Appendix D - Waste Carrier Acceptance Letter

To be provided upon appointment of main contractor and their chosen waste carrier.