



Cairn Homes Construction Ltd.

CONSTRUCTION WASTE MANAGEMENT
PLAN

Lands at Newcastle South and Ballynakelly,
Newcastle,
Co. Dublin.

August 2019

Overview

1. LOCATION

The subject lands are located in the administrative area of South Dublin County Council and are situated in the townlands of Newcastle South and Ballynakelly. The lands are situated to the south of Main Street, Newcastle. Main Street is formed of the R120 which links the M4 Motorway at Lucan with the N7 National Primary Route at Rathcoole Interchange. The R405 joins the R120 on Main Street. The R405 links the M4 Motorway via Celbridge and Hazelhatch Rail Station to the N7 at Rathcoole. The Greenogue Industrial Estate and Aerodrome Business Park are located just beyond the village to the east.

2. NATURE OF PROJECT

Housing Development & construction of new road network and services within the site.

Contract period should be assumed as 3 years + (starting in Quarter 1 2020).

There is enough space on the main development area for car parking, site compounds, storage and segregation of materials

3. PROJECT AIM

At Cairn Homes Construction Ltd. (Cairn) we are committed to implement the project environmental plan and the Site Waste Management Plan (SWMP) so that it is effective, accurate and economical and ensure that the procedures put into place are working and are maintained.

4. MANAGEMENT

The Site Agent (to be appointed), is the SWMP co-ordinator of the project and as such is responsible for ensuring the instruction of workers, implementation and overseeing of the SWMP. He will monitor the effectiveness and accuracy during the routine site visits.

5. DISTRIBUTION

The Site Agent shall distribute copies of this plan to the Client and PSDP and each Subcontractor at the pre appointment meeting where relevant/applicable. This will be undertaken every time the plan is updated.

6. INSTRUCTION & TRAINING

The Site Agent will provide on-site briefing via induction of appropriate separation, handling, recycling, reuse and return methods to be used by all parties and at appropriate stages of the Project where applicable. Toolbox talks will be carried out regularly on waste issues and all subcontractors will be expected to attend. This will ensure that everyone feels they are included and that their participation is meaningful.

7. WASTE MANAGEMENT ON SITE

Surplus or waste materials arise from either the materials imported to site or from those generated on site. Imported materials are those, which are brought to the project for inclusion into the permanent works.

Generated materials are those, which exist on the project such as topsoil, sub-soil, materials from demolition works etc.

However, there are other considerations to waste management such as waste reduction, segregation of waste, disposal of waste, financial impacts of waste disposal and recording, monitoring, education

and reviewing. This plan outlines the procedures that have been put in to place and demonstrate how they benefit the environment, how we can measure the effects and how these procedures and practices are sustainable.

Waste Management Plan

1. General

This Waste Management Plan specifies the procedure for the management, control and disposition of items designated as waste material for the Project. The following is a list of the different categories of materials that will be generated during the project:

- a. Recyclable Materials
- b. Waste/Refuse Materials
- c. Reusable Materials
- d. Soil & stone

The procedures for the management, control and disposition of these items are described in subsequent sections of this plan. All Cairn subcontractors are required to identify, maintain proper control, and provide documentation for the disposal of materials described in this plan. The intension of this plan is to minimize the amount of waste generated on this project to the extent practicable.

The goal for this project is to ensure that maximum volumes of all waste material generated will be recycled, re-used, or otherwise diverted from direct landfill disposal. To accomplish this goal Cairn intends to recycle and reuse as many types of construction material as possible.

Each subcontractor is required to follow this plan for the disposition of the waste generated by the subcontractor's activity. Waste Management will be an agenda item at construction meeting that Cairn conducts. The waste management activities described in this plan will be maintained until substantial completion of the project.

2. Waste Minimization

Cairn is dedicated to maintaining a stringent set of guidelines to control the amount of construction waste and debris disposed in a landfill. Cairn will be responsible for communication between field personnel and subcontractors regarding minimization requirements during internal weekly construction meetings.

An example of waste minimization will be the reuse of top soil stripped and stockpiled on the site. This reduces significantly the volume of heavy traffic into and out from the site and ensures the materials are reused on site.

Packaging

All vendors and their suppliers are encouraged to minimize the packaging for materials and equipment. Packing materials should be selected based on whether they can be recycled on this project. This request will be communicated through project meetings.

Housekeeping

Housekeeping activities must minimize the amount of waste and maximize the amount of recyclable material that can be efficiently gathered at the local collection points and minimize the amount of

refuse materials. Cairn will assign housekeeping responsibility to an on-site employee who will oversee and manage the field operations with regards to housekeeping and waste management. Any issues identified by this person will be discussed during internal weekly construction meetings.

No burning of waste permitted. Waste shall not be wind-blown around the site. All materials stored in secure fashion with containers capped and marked, with spillages controlled immediately using soakage materials.

Maximizing Product Use

Layout and cutting procedures should be used to minimize the amount of waste materials. Cut-offs and other scrap materials should be reduced to the fullest extent practicable. This procedure will be emphasized to all subcontractors during internal weekly construction meetings.

Materials Management

All material should be stored in weatherproof containers or otherwise protected from contamination and deterioration prior to use. Containers should be opened as needed and work should be sequenced to use materials efficiently and in a timely fashion. This ensures that the material meets the specified requirements and that unused or off-spec product will not become a waste. This procedure will be emphasized to all subcontractors during internal weekly construction meetings.

3. Licenses, Permits, Fees, and Taxes

All subcontractors working on the Project will be required to maintain and be responsible for all fees, licenses, permits, to comply with Local Regulations and requirements.

Each subcontractor will identify haulers or trucking firms they will be using on this project and the destination licenced facility receiving waste.

4. Recyclable Material

All material for recycling will be placed in designated containers or Laydown area furnished by Cairn. These containers / areas will be labelled clearly and according to types of material. Material must be stored and handled so it is acceptable to the recycler. Cairn will ensure containers protect the contents from environmental contamination.

It is proposed that an area shall be designated for timber, metals and for plastics. General waste skip shall be provided also, for materials designated as not recyclable.

Cairn Furnished Skips / Segregated Areas

The location of the containers and pickup/delivery will be coordinated by Cairn. Cairn will haul the containers to the designated compound.

Pick-up Frequency

Recycled material containers will be hauled on an as needed basis, with coordination required between Cairn and collection agent.

Empty Containers

A container that held any chemical or hazardous material, except a substance identified as an acute hazardous waste, is defined as an empty container if both of following criteria are met:

1. All material has been removed that can be removed using the practices commonly employed to remove material from that type of container, such as pumping, pouring, or aspirating, and
2. No more than 3% by weight of the total capacity of the container remains in the container.

Containers with capacity of 25 gallons or less that meet above criteria may be placed in the appropriate recycling container (i.e., roll-off, hopper, basket). Empty containers with capacity of greater than 25 gallons shall be managed separate from the recycle material collection containers. Those containers shall be marked with words "Empty Container" and staged separate from the recycling collection containers.

Any containers that hold an acutely hazardous substance shall be regarded as and managed as a hazardous waste

Non- Recyclable or Refuse Materials

All materials designated as not recyclable or reusable will be considered refuse material. It will be the responsibility of Cairn to load and transport all material identified as refuse to a landfill through a designated Disposal company who shall issue a receipt / certificate of disposal. This material may either be demolition debris or construction waste. Any permits required by the designated landfill site, will be the responsibility of each subcontractor. Cairn will ensure that all procedures are followed.

Personal trash such as papers, food containers, beverage cups, etc. shall be bagged, removed from the site, and properly disposed of by each subcontractor

Measurement of Waste Material

Haulers of refuse and recyclable/reusable materials must provide weight or volume documentation for all shipments from the project site. If methods other than weighing are used, the proposed method of generating the weight must be approved (for example: density, volume estimation).

5. Waste Arisings and Proposals for Managing Waste

Analysis of Waste Arisings

The main waste stream arisings, including surplus material, which are likely to be generated during the project are presented in Table 5.1 hereunder:

Waste Type	1 European Waste Classification Code	Waste Classification
Concrete	17 01 01	Non - hazardous
Soil and Stones	17 05 04	Non - hazardous
Scrap Metal	17 04 05	Non - hazardous
Bitumen / Tarmacadam	17 03 02	Non - hazardous
Surplus Bitumen / Tarmacadam	17 04 11	Non - hazardous

Surplus Cabling	17 03 02	Non - hazardous
Plastic Pipe Cut-Offs	17 03 02	Non - hazardous
Timber	17 02 01	Non - hazardous
Biodegradable Garden and Park Waste	20 02 01	Non - hazardous
Plastic Packaging	15 01 02	Non - hazardous
Paper and Cardboard Packaging	15 01 02	Non - hazardous
Mixed Municipal Waste	20 03 01	Non - hazardous
Fuel oil and diesel	13 07 01	Hazardous
Asbestos containing material	17 06 05	Hazardous
Waste Adhesives and sealants	08 04 09	Hazardous

Table 5.1: Main Waste Types and Associated EWC codes

Note:

1. The selected European Waste Classification (EWC) codes provided are provisional only. In several instances more than one EWC may be considered appropriate. Care should be taken to ensure that the waste collectors permit includes all EWC codes specified in the appropriate documentation. In addition, there will be a requirement for a technically competent person to assess waste as it arises and to decide as to the classification of the material in accordance with the Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous.
2. For the purpose of this plan it is assumed that all the waste arising from the project will be categorised as non-hazardous.

Predicated Waste Arising

At this stage of the development the figures provided should be considered as provisional only; however, they do provide an indication as to achievable recycling rates. In the course of the Project, it is estimated that the quantities of Construction waste / materials surpluses will arise as in Table 5.2. The tonnage figures provided are indicative and based on conversion factors (subject to revision).

6. Contractor Waste

Based on the number of size of the skips used for each material type and the frequency of the skip removal from the site the following table shows the anticipated waste removal from the site. This is based on the following skips being available on site.

- General waste skip. – 20 cubic meters removed 1 per week from site avg. weight 5t per skip

- Concrete waste skip – 20 cubic meters removed 2 per month from site. Avg weight per skip 15t
- Plasterboard waste skip – 20 cubic meters removed 3 per month from site avg. weight 3t per skip.
- Timber waste is included in mixed waste total.
- Average weights were provided from waste facility weigh bridge and represent average weights of these typical loads.

Waste Type	Tonnes
Concrete, Bricks, Tiles, Ceramics	1,080
Plasterboard	324
General Waste – packaging, plastics timber, etc.	540
Total	1,944

Table 6.1: Estimated Waste Arising for disposal after all recycling and reuse of materials has been implemented on site.

7. Demolition Waste

There are 5 no. existing buildings to be demolished on this project as part of the site clearance work.

The following points will be observed prior to the commencement of any demolition work on site.

- Works will be carried out by a demolition contractor and all waste streams will be documented and removed from the site to licenced facility.
- Records of the demolition waste haulage and destination facility will be maintained on file.
- Prior to appointing the demolition contractor, the buildings will undergo a full Asbestos Survey to ensure the demolition work is correctly costed.
- If the survey finds the presence of Asbestos, a specialist contractor will be appointed to remove the asbestos and issue a full clearance certificate prior to commencing demolitions.
- Soft furnishings, electrical cabling, pipework, timbers and plasterboard will be stripped from the building to allow segregation of waste on site in line with the rest of this waste management plan prior to removal to a licenced waste facility.
- The demolitions work can then commence by the appointed specialist contractor under a site-specific Risk Assessment and Method Statement.
- Water suppression will be used to ensure the potential for rising dust is minimised.

8. Excavations

Excavations will be required to facilitate construction of the development. It is estimated that approximately 12,000 m³ of material will be excavated from the site to provide for house foundations

and services. Excavated material including surplus soils/stones not required for reuse on site will be removed from site as a waste product by a permitted contractor as appropriate to a licenced facility.

9. Minimise Waste and Opportunities for Re-use/Recycling

Construction waste will arise on the Project mainly from excavation for the site clearance, services and foundations and services for the housing units.

All spoil from excavation work including Topsoil will be stockpiled on site for reuse with excess materials removed from site by licenced contractor. Topsoil will be reused for gardens, green areas and playing fields. Stockpiling this material will greatly reduce the movement of heavy vehicles off site and the impact on the local community.

The site manager shall ensure that materials are ordered so that the quantity delivered the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.

- Concrete will be collected in receptacles prior to delivery to a licenced recycling centre.
- Masonry and wood will be collected in receptacles with mixed construction waste materials, for subsequent separation and recovery at a remote facility.
- Hazardous wastes will be identified (although not anticipated), removed and kept separate from other construction waste materials in order to avoid further contamination, all in compliance with relevant legislation and codes of practice (e.g. HSG 71 Chemical Warehousing – The Storage of Packaged Dangerous Substances).
- Other Construction waste materials will be collected in receptacles with mixed construction waste materials, for subsequent separation and disposal at a remote facility.
- Miscellaneous Waste Arisings: Small volumes of a variety of waste streams will be generated including packaging waste, plastic pipe and cable cut-offs, green and mixed municipal type waste. The generation of surplus waste streams will be minimised through careful planning; however, it will not be possible to eliminate all surplus waste arisings e.g. cable and pipe cut-offs.
- Most of the packaging will be returned to suppliers, other cardboard will be flattened, and paper and cardboard containers will be covered to prevent ingress of water. Plastic will be segregated at source and kept as clean as possible prior to placement in a covered container. Paper, cardboard and plastics will be recycled, while mixed municipal waste arisings will be sent for disposal.