

**CONSTRUCTION PHASE & OPERATIONAL PHASE
WASTE MANAGEMENT PLAN**

FOR THE

PROPOSED STRATEGIC HOUSING DEVELOPMENT

AT

DUNSHAUGHLIN EAST, CO. MEATH

15th November 2018



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TABLE OF CONTENTS	PAGE
1.0 INTRODUCTION	3
2.0 DESCRIPTION OF PROPOSED DEVELOPMENT	5
3.0 CONSTRUCTION PHASE WASTE MANAGEMENT PLAN	6
4.0 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL	7
5.0 ON-SITE WASTE REDUCTION REUSE RECYCLING AND MANAGEMENT	11
6.0 RECORD KEEPING & AUDITING	13
7.0 CONSTRUCTION WASTE MANAGEMENT AUDITING	13
8.0 OPERATIONAL PHASE WASTE MANAGEMENT PLAN	14
9.0 WASTE COLLECTION STRATEGY	19
10.0 COMMUNAL WASTE STORAGE AREA DESIGN	19
11.0 WASTE QUANTITIES GENERATED	20
12.0 CONCLUSIONS	21

1.0 INTRODUCTION

This document presents the Waste Management Plan for the control, management and monitoring of waste associated with the proposed strategic housing development at Dunshaughlin East, Dunshaughlin, Co. Meath during both the Construction and Operational Phases of the development.

The development relates to the construction of 913 No. residential units in a mix of houses (505 No.), duplex apartments (186 No.) and apartments (222 No).

The proposed development consists of a residential development comprising of 913 no. residential units, a neighbourhood centre, including 2 no. retail units, a café / restaurant unit, a primary healthcare / gym, a community facility and a childcare facility, all associated open space, a section of the Dunshaughlin Outer Relief Road, internal roads, cycle and pedestrian infrastructure, services and all other associated development on a site of c. 28.3 hectares.

The proposed neighbourhood centre facilities consist of a childcare facility with a GFA of 1,282 sq.m, a community facility with a GFA of 180 sq.m, 2 no. retail units with GFA of 1,000 sq.m and 190 sq.m, a café / restaurant unit with a GFA of 370 sq.m, and a primary healthcare / gym unit with a GFA of 1,040 sq.m.

The Objectives of this Waste Management Plan is

- 1 To minimise the volume of waste generated during the construction and operational phases of the development and
- 2 To maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information services to the residents of the operational phase of the development.

The Goals of this Waste Management Plan are

- 1 To construct the development in accordance with *Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – July 2006*
- 2 To achieve an operational phase residential recycling rate of 50% of managed municipal waste by 2021 with regard to *The Eastern-Midlands Region Waste Management Plan 2015-2021*

The Waste Management Plan shall be implemented throughout the construction phase by the Main Contractor and for the operational phase of the development by the Facilities Management Company to ensure the following:

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996 and all associated Waste Management Regulations.
- The Waste Management Plan for the Operational Phase of the development which will ensure that users of the development are provided with sufficient facilities to store, segregate and recycle waste.

The proposed Waste Management Plan has been prepared to demonstrate how the Construction Phase will comply with the following relevant legislation and relevant Best Practice Guidelines:

Waste Management Acts 1996

Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)

Waste Management (Collection Permit) Amendment Regulations 2008 (SI No. 87 of 2008)

Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – July 2006

The proposed Waste Management Plan has been prepared to demonstrate how the Operational Phase will comply with the following relevant Best Practice Guidelines:

British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice which provides guidance on methods of storage, collection, segregation for recycling and recovery for residential buildings.

Section's 4.8 and 4.9 Refuse Storage of The Department of Housing, Planning and Local Government – Sustainable Urban Housing : Design Standards for New Apartments – Guidelines for Planning Authorities. 2018.

The Eastern-Midlands Region Waste Management Plan 2015-2021.

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT SITE ACTIVITIES

The range of development works to which this Waste Management Plan will be integrated into during the design phase, construction phase and operation phase of the site are summarised as follows:

- Ground preparation works
- Development of site infrastructure
- Construction of buildings, roads and hardstanding areas
- Landscaping of entire site including open soft landscaped areas
- Waste Management for the Operational Phase of the development

The residential component of the development will consist of 913 No. Residential Units as follows:

505 No. Houses
186 No. Duplex Units
222 No. Apartments

The commercial aspect of the development will include the following:

The proposed neighbourhood centre facilities consist of a childcare facility with a GFA of 1,282 sq.m, a community facility with a GFA of 180 sq.m, 2 no. retail units with GFA of 1,000 sq.m and 190 sq.m, a café / restaurant unit with a GFA of 370 sq.m, and a primary healthcare / gym unit with a GFA of 1,040 sq.m.

CONSTRUCTION PHASE WASTE MANAGEMENT PLAN

3.0 PRINCIPALS OF CONSTRUCTION OF CONSTRUCTION WASTE MANAGEMENT PLAN

Waste materials generated by construction activities will be managed according to the Department of the Environment, Heritage and Local Government's 2006 Publication - *Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects*.

The Waste Management Plan specifically addresses the following points:

- Analysis of waste arisings / material surpluses
- Specific Waste Management objectives for the Project including the potential to re-use existing on-site materials for further use in the construction phase.
- Methods proposed for Prevention, Reuse and Recycling
- Waste Handling Procedures
- Waste Storage Procedures
- Waste Disposal Procedures
- Waste Auditing
- Record Keeping

3.1 Waste Minimisation

Waste minimisation and prevention shall be the primary responsibilities of the Construction Project Manager who shall ensure the following:

- Materials will be ordered on an "as needed" basis to prevent over supply
- Materials shall be correctly stored and handled to minimise the generation of damaged materials
- Materials shall be ordered in appropriate sequence to minimise materials stored on site
- All staff and Sub contractors shall be advised through tool box talks on how to dispose of their waste correctly on-site.

3.2 Construction Waste Reduction

It is proposed that the construction Contractor as part of regular site inspection audits will determine the effectiveness of the waste management statement and will assist the project manager in determining the best methods for waste minimisation, reduction, re-use, recycling and disposal as the construction phase progresses and waste materials are generated.

4.0 CONSTRUCTION WASTE MANAGEMENT & DISPOSAL

- It is proposed that from the outset of construction activities, a dedicated and secure compound containing bins, and/or skips, and storage areas, into which all waste materials generated by construction site activities, will be established within the active construction phase of the development site.
- Spill kits shall be located within the site compound with clearly labelled instructions on how they shall be used to clean up fuel/oil spills.
- All vehicle and plant oils and liquid construction materials shall be stored in impermeable storage units.
- All diesel powered generators shall be inspected on at least a weekly basis by a delegate of the project manager to ensure it is not leaking diesel or oils.
- All empty containers containing residual quantities of oils, greases and hydrocarbon based liquids shall be stored in a dedicated bunded receptacle.
- In order to ensure that the construction contractor correctly segregate waste materials, it is the responsibility of the site construction manager to ensure all staff are informed by means of clear signage and verbal instruction and made responsible for ensuring site housekeeping and the proper segregation of construction waste materials.
- It will be the responsibility of the Construction Project Manager to ensure that a written record of all quantities and natures of wastes exported off-site are maintained on-site in a Waste File at the Project office.
- It is the responsibility of the Project Manager or his/her delegate that all contracted waste haulage drivers hold an appropriate Waste Collection Permit for the transport of waste loads and that all waste materials are delivered to an appropriately licenced or permitted waste facility in compliance with the following relevant Regulations:

Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)

Waste Management (Collection Permit) Amendment Regulations 2008 (SI No. 87 of 2008)

Waste Management (Facility Permit and Registration) Regulations S.I.821 of 2007 and the Waste Facility Permit under the Waste Management (Facility Permit and Registration) Amendment Regulations S.I.86 of 2008.

- Typical Waste materials that are to be generated or anticipated to be generated by construction works are classified as follows under *Section 17 Construction and Demolition Wastes* of the European Waste Catalogue (EWC) as detailed in Table 1.
- It is proposed that waste materials will be collected and stored in separate clearly labelled skips in a predefined waste storage area in the site compound and that

these materials will be collected by a Permitted Waste Contractor holding an appropriate Waste Collection permit in compliance with *Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007)* and *Waste Management (Collection Permit) Amendment Regulations 2008 (SI No. 87 of 2008)* and that they will be sent for disposal or further processing to appropriately Permitted / Licensed Waste Facilities in compliance with *Waste Management (Facility Permit and Registration) Regulations S.I. No. 821 of 2007* and the *Waste Management (Facility Permit and Registration) Amendment Regulations S.I. No. 86 of 2008*.

- Prior to the commencement of the Project, the Construction / Project Manager shall identify a permitted Waste Contractor who shall be employed to collect and dispose of all inert and hazardous wastes arising from the project works. In addition, the Construction / Project Manager shall identify all waste licensed / permitted facilities that will accept all expected waste exported off-site and will maintain copies of all relevant Waste Permits / Licences as required.
- All waste soils prior to being exported off-site, shall be classified as inert, non-hazardous or hazardous in accordance with the *EPA's Waste Classification Guidance – List of Waste & Determining if Waste is Hazardous or Non-Hazardous* document dated 1st June 2015 to ensure that the waste material is transferred by an appropriately permitted waste collection permit holder and brought to an appropriately permitted or licensed waste facility.

Figure 1 Waste segregation skips



Figure 2 Spill Kit



Figure 3 Bund for waste oil container storage



Table 1 Typical Construction Waste Types

Description of Waste	Corresponding EWC Code
Concrete, Bricks, Tiles and Ceramics	17 01
Concrete	17 01 01
Bricks	17 01 02
Tiles and Ceramics	17 01 03
Mixture of concrete, bricks tiles & ceramics	17 01 07
Wood, Glass and Plastic	17 02
Wood	17 02 01
Glass	17 02 02
Plastic	17 02 03
Bituminous mixtures, coal tar and products	17 03
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02
Bituminous Mixtures including Coal Tar and Tarred products	17.03
Metals (including their alloys)	17 04
Copper, Bronze, Brass	17 04 01
Aluminium	17 04 02
Lead	17 04 03
Zinc	17 04 04
Iron and Steel	17 04 05
Tin	17 04 06
Mixed Metals	17 04 07
Insulation and Construction Materials	17 06
Gypsum based construction material	17 08
Other Construction and Demolition Waste	17 09
Mixed Construction and Demolition Waste other than those mentioned in 17 09 01, 17 09 02, 17 09 03	17 09 04
Sewage Screenings	19 08 01
Paper and Cardboard	20 01 01
Wood other than that mentioned in 20 01 37	20.01 38
Soil and Stones	20 02 02
Mixed Municipal Waste	20 03 01
Hydraulic oils	13 01 01*
Fuel oils and diesel	13 07 01*

Table 2 Typical Construction Waste Composition

Description of Waste	%
Mixed Construction & Demolition Waste	33
Wood	28
Plasterboard (Gypsum materials)	10
Ferrous Metals	8
Concrete	6
Mixed other wastes	15
<i>Total</i>	<i>100</i>

5.0 ON-SITE CONSTRUCTION WASTE REDUCTION REUSE RECYCLING AND MANAGEMENT

Construction waste material such as damaged or broken concrete slabs, blocks, bricks and tiles generated that is deemed by the Project Engineer to be suitable for reuse on the Project site for ground-fill material will be processed if necessary by on-site mobile crushing plant. This initiative shall provide a positive environmental impact to the construction phase as follows:

- Reduction in the requirement for virgin aggregate materials from quarries
- Reduction in energy required to extract, process and transport virgin aggregates
- Reduced HGV movements associated with the delivery of imported aggregates to the site
- Reduced noise levels associated with reduced HGV movements
- Reduction in the amount of landfill space required to accept C&D waste

Soils

As the subject development site is currently greenfield and in agricultural use with no evidence of historic dumping or industrial use, it is predicted that the top and subsoils will be characterised as being inert in accordance with *Landfill Directive (2003/33/EC)*.

Stripped Top and sub-soils shall be retained on-site in managed stockpiles throughout the development.

It is estimated that up to 55,000m³ of soils shall be stripped to facilitate the development of which c.32,000 tonnes shall be retained for landscaping and c.23,000 tonnes shall be exported off-site to an appropriately permitted waste facility.

The project manager shall inform Meath County Council of the waste facility to which excess soils and the volume shall be exported to.

Top and subsoils shall be re-used on-site for landscaping purposes to minimise the volume of soils to be exported off-site.

Excess soils shall be removed off-site throughout the duration of the construction phase. Prior to being removed off-site the excess soils shall be characterised as being inert, non-hazardous or hazardous in accordance with *Landfill Directive (2003/33/EC)*. The classification of the soils shall be established by WAC testing which shall occur throughout the construction phase.

The records of all WAC tests shall be maintained in the site's Waste File.

Inert Wastes

The waste material generated by site construction works will be mixed Construction & Demolition (C&D) waste, comprising of soil and stone, concrete, tiles, ceramics, and bricks. Material may be processed on site if necessary using an on-site crusher unit, which will process fill material into suitable size classes for the reuse as on-site construction materials. Mixed C&D waste with large non-uniform stone or compacted soils may be passed through a mobile crusher unit which will render the material into a uniform shape and size which will allow for improved backfilling and compaction to required engineering standards.

All wood waste generated by site works shall be segregated as re-useable wood and scrap wood waste and stored in a clearly labelled dedicated skip in the waste storage area.

All plastic waste shall be stored in a dedicated, clearly labelled skip in the waste storage area.

Metals shall be segregated into ferrous and non-ferrous streams and shall be stored in clearly labelled skips in the waste storage area.

Hazardous Wastes

The management of all hazardous waste arisings if they occur, shall be coordinated in liaison with Health and Safety Management.

Hazardous wastes such as waste oils and construction liquids shall be stored in dedicated clearly labelled impermeable containers.

Contaminated Soil

Where contaminated soils/materials are discovered or occur as a result of accidental spillages of oils or fuels during the construction phase, these areas of ground will be isolated and tested in accordance with the *2002 Landfill Directive (2003/33/EC)* for contamination, and pending the results of laboratory WAC testing, will be excavated and exported off-site by an appropriately Permitted Waste Contractor holding an appropriate Waste Collection permit and that this hazardous material will be sent for appropriate treatment / disposal to an appropriately Permitted / Licenced Waste Facility.

6.0 WASTE RECORD KEEPING

It is the responsibility of the Project Manager or his/her delegate that a written record of all quantities and natures of all wastes reused / recycled and exported off-site during the project are maintained in a Waste File at the Project office.

The following information shall be recorded for each load of waste exported off-site:

- Waste Type EWC Code and description
- Volume of waste collected
- Waste collection contractor's Waste Collection Permit Number and collection receipt including vehicle registration number
- Destination of waste load including Waste Permit / Licence number of facility
- Description of how waste at facility shall be treated : disposal / recovery / export

The waste records shall be issued to Meath County Council as required / requested.

7.0 WASTE MANAGEMENT AUDITING

In order to ensure that construction wastes generated during the course of the development are being effectively managed and recorded, a waste management audit shall be conducted on a routine basis by an independent waste management consultant to determine compliance with the Construction Phase Waste Management Plan.

OPERATIONAL PHASE WASTE MANAGEMENT PLAN

8.0 OPERATIONAL PHASE WASTE MANAGEMENT

The Operational Phase of the Waste Management Plan has been prepared in accordance with regard to *The Eastern-Midlands Region Waste Management Plan 2015-2021* defines the following Waste Targets:

- 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan.
- Achieve a recycling rate of 50% of managed municipal waste by 2020
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill

Wastes generated from Apartments and Duplex apartments shall be stored in dedicated communal waste storage areas. The development's Facility Management Company shall manage all communal waste storage areas.

Wastes generated from individual houses shall be stored within the curtilage of the houses. Individual houses shall engage waste collection companies for private waste collection services.

The development's Facility Management Company shall appoint a dedicated Waste Services Manager to ensure that waste is correctly and efficiently managed in the communal waste storage areas and at the aluminium can and glass bottle bank.

The Operational Phase of the Waste Management Plan is defined by the following stages of waste management for both the residential and commercial aspects of the development:

Stage 1	Occupier Source Segregation
Stage 2	Occupier Deposit and Storage
Stage 3	Bulk Storage and On-Site Management
Stage 4	On-site treatment and Off-Site Removal
Stage 5	End Destination of wastes

8.1 Residential Units Domestic Waste Management

Houses

It is proposed that individual houses shall have a single grey mixed municipal waste 110 litre bin, a green 110 litre recyclable waste bin and a brown 110 litre organic waste bin, which shall be stored within the curtilage of each house. Residential houses shall be served by private waste collection contractor.

Each residential house shall include a 3 bin system which will facilitate waste segregation at source.

All private residential accommodation units shall be provided with a Waste Management Plan document on an annual basis, prepared by the Facilities Management Company, which shall clearly state the methods of source waste segregation, storage, and recycling initiatives that shall apply to the Management of the development.

Duplex apartments / Apartments

The design of residential apartments and duplex units shall provide sufficient internal space for the storage of up to 10kg of general domestic waste, green recyclable waste and organic waste. Each apartment / duplex apartment shall include a 3 bin system which will facilitate waste segregation at source and shall be of such a size that will allow their easy manual handling to be brought to the communal waste storage areas.

It shall be the responsibility of the Facilities Management Company to ensure that appropriate signage is provided in each apartment lobby/entrance hall notifying apartment residents of their obligations to recycle domestic waste items into 3 separate streams,

- 1 Organic compostable
- 2 Green recyclable
- 3 Mixed domestic non-recyclable

It shall be the responsibility of the Facilities Management Company to ensure that the appointed waste collection company shall provide a 3 waste stream collection service.

Communal Waste Storage Areas

The residential apartment blocks shall be served by common waste storage areas and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage to inform residents indicating the location of the local Civic Amenity Centres (Thorntons Recycling Centre, Dunboyne, Co. Meath) and the nature of waste materials that can be deposited there shall also be installed in the communal waste storage areas.

Signage to inform residents of their obligations to reduce waste, segregate waste and dispose of waste in the correct bin will be clearly posted within the waste storage area.

All waste storage bins shall be clearly labelled with exactly what type of waste materials may be deposited within them.

The common waste storage area shall be designed to include the following aspects:

- A defined pedestrian route shall be marked from the apartment buildings to the waste storage area.
- A non-slip surface shall be provided within the waste storage area.
- The waste storage shall be ventilated mechanically or passively.
- The waste storage area shall be fitted with sensor lighting.

- The waste storage area shall be fitted with CCTV cameras and associated signage.
- The waste storage area shall be designed to provide safe access from the apartment units and student accommodation units by mobility impaired persons.
- The waste storage area shall include ground drainage to allow for its regular cleaning and disinfection.
- The Facilities Management Company shall engage a mobile bin cleaning service provider to clean waste bins as required.
- Sufficient domestic waste storage areas shall be provided throughout the development.

The Facilities Management Company shall conduct daily inspections of the waste storage areas and shall sign a daily check list which shall be displayed within the area.

It shall be the responsibility of the Facilities Management Company to maintain and ensure the cleanliness of all waste storage areas to prevent odours and the attraction of vermin.

The Facilities Management Company shall engage a specialist cleaning contractor on a quarterly basis to clean and sterilise all communal waste storage areas.

It is expected that a single Waste Collection contractor shall be engaged to remove all mixed domestic waste, organic and recyclable wastes from the communal waste storage areas on a weekly basis. The name of the waste collection contractor(s) once appointed shall be forwarded to the Environment Department of Meath County Council.

Waste Management & Record Keeping

The Waste Facilities Company shall maintain a weekly register detailing the quantities and breakdown of wastes removed from the development. Supporting documentation shall be provided by the Waste Collection Contractor on a monthly basis. This will allow for waste recycling targets to be tracked to achieve the 50% recycling target.

The Waste Facilities Company shall prepare an annual information report for all residential units detailing the quantities and waste types generated by the development for the previous year. The report shall include reminder information on the correct segregation at source procedures and the correct placement of wastes in the waste storage area. Other aspects of ongoing waste management continuous improvement shall also be stated. This annual report shall also be submitted to Meath County Council Environment Department.

Annual Bulky Waste & WEEE Collections

The Facilities Management Company shall provide a bulky waste and WEEE collection and transport service on an annual basis which will allow residents to have bulky items such as appliances and furniture removed from their houses and apartments and transported to a licenced facility. This initiative will also reduce the potential for fly-tipping in the local area.

Bottle & Aluminium can Bring Bank

It is proposed that a green, clear and brown glass bottle and aluminium can recycling bring bank shall be located within the development to encourage the recycling of glass and to reduce the quantity of glass and cans in domestic waste bins.

The bring bank area will be located in an accessible location for collection trucks and will include appropriate signage informing residents that all bags and cardboard boxes shall not be left at the bring bank.

The bring bank will be served by at least 2 No. car-parking bays to allow ease of access to the facility.

The Facilities Management Company shall be responsible for ensuring that the bring banks are emptied on a regular basis, not allowed to overflow and that the areas around the bring bank is kept litter free at all times. Appropriate signage shall be installed requesting that users do not leave bags and boxes at the bring bank.

The Bring Bank will be comprised of 3 glass bins and 1 aluminium can bins. The bring bank shall be located set back from an internal roadway on a concrete plinth to allow for collection vehicles to safely empty the bins.

A standard 2,500 litre glass/can recycling bin dimensions are:

L	1400mm
W	1200mm
H	1750mm
Bin Footprint Area	1.7m ²
4 Bin Footprint Area	6.8m ²

Glass and Aluminium can Bring Bank



Domestic kitchen 3 bin system**Domestic kitchen 4-bin system****Communal waste storage area**

8.2 Retail & Commercial Units

The retail and commercial units, the childcare facility and the community centre shall have designated commercial waste bins for both general and recyclable waste which shall be stored within the curtilage of these buildings. Wastes shall be collected in accordance with the terms of the commercial waste collection contractor appointed by the management of these units.

9.0 WASTE COLLECTION STRATEGY

All communal waste bins shall be brought from the communal bin areas to the designated bin collection areas at road side locations throughout the development by the Facilities Management staff. Emptied bins shall be returned to the bin stores.

All houses shall be served by privately engaged waste contractors and bins shall be left on the pavement outside all houses prior to collection.

10.0 COMMUNAL WASTE STORAGE AREA DESIGN

The apartment blocks shall be served by dedicated communal bin storage areas which shall be of sufficient size to house 1100 litre wheelie bins.

Grey non-recyclable bins
Green recyclable bins
Brown organic bins

The dimensions of standard 1100 litre bins are:

Width (mm)	1250
Depth (mm)	980
Height (mm)	1370
Floor Area per bin (mm ²)	2230

In order to ensure that there is sufficient space within the bin store to allow the free access and movement and separation of grey, green and brown waste bins, the minimum recommended Floor Area of Communal Bin Store shall be the required bin footprint area x 1.5.

Block A

Bins required	10 (4 grey, 3 green, 3 brown)
Minimum Floor Area for 10 No. Bins	23m ²
Communal Bin Store floor area required	35m ²

Block B

Bins required	7 (3 grey, 2 green, 2 brown)
Minimum Floor Area for 10 No. Bins	16m ²
Communal Bin Store floor area required	24m ²

Block C1

Bins required	4, (2 grey, 1 green, 1 brown)
Minimum Floor Area for 10 No. Bins	9m ²
Communal Bin Store floor area required	14m ²

Block C2

Bins required	5 (2 grey, 2 green, 1 brown)
Minimum Floor Area for 10 No. Bins	12m ²
Communal Bin Store floor area required	18m ²

11.0 WASTE QUANTITIES GENERATED

The 2014 EPA Publication, *National Waste Prevention Programme, 2013 Annual Report*, states,

“The household waste per person in Ireland has been decreasing over the period 2006 to 2012 from 470 kg/person in 2006 to 344 kg/person in 2012. This indicates success in national campaigns and awareness as regards waste minimisation – though effects of reduced consumption are also likely to have contributed. In addition, it suggests an economy and society that are improving the efficiency of consumption patterns with respect to waste generation.”

A value of 0.942Kg of waste generated per person per day has been therefore assumed for the purposes of this report to estimate the volume of waste to be generated at the residential development.

The total weekly domestic waste generated by the fully operational development is calculated to be 27 tonnes or 166m³/week.

12.0 CONCLUSIONS

The proposed strategic housing development at Dunshaughlin shall be constructed and developed to minimise the generation of construction waste. During the Construction Phase, construction waste shall be stored and segregated in dedicated waste storage areas which shall optimise the potential for off-site reuse and recycling. All construction waste materials shall be exported off-site by an appropriately permitted waste contractor.

The **Objective** of this Waste Management Plan is to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information services to the residents of the development.

The **Goal** of this Waste Management Plan is to achieve a residential recycling rate of 50% of managed municipal waste by 2020.

Residents will be provided with waste recycling and proper waste disposal information by the site's Facility Management Company who will be responsible for providing clean, safe and mobility impaired accessible communal waste storage areas.

The Facility Management Company shall maintain a register of all waste volumes collected including a break-down of green recyclable waste and where necessary shall introduce initiatives to further encourage residents to maximise recycling. They shall also provide an annual bulky waste and WEEE collection service for all residents.

The development shall be designed to provide adequate domestic waste storage areas for common residential areas (apartments and duplex units) and for individual houses. This will promote the appropriate segregation at source of domestic generated waste from all residential units at the development.

Communal waste bin storage areas shall include appropriate signage for residents detailing the correct waste disposal and recycling methods.

A glass and an aluminium can bring bank shall be established within the development to encourage residents to recycle glass and cans and divert waste glass from domestic waste bins.

The childcare facility, the community facility and the office and retail units shall have designated commercial waste bins for both general and recyclable waste which shall be stored within the boundaries of the building areas.

All wastes shall be collected on a weekly basis by an appropriately permitted waste collection contractor.

The Facility Management Company shall prepare an annual report for the Local Authority and residents of the development on the quantities of waste generated within the development to demonstrate how waste reduction and recycling targets are being achieved with regard to the targets defined in *The Eastern-Midlands Region Waste Management Plan 2015-2021*.