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OPERATIONAL WASTE MANAGEMENT PLAN

FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT HACKETSTOWN, SKERRIES, CO DUBLIN

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1. INTRODUCTION

This report is an Operational Waste Management Plan (OWMP) for a proposed residential development at Hacketstown, Skerries, Co. Dublin. The development will involve the construction of apartments, duplexes, houses and a crèche as well as the internal roads and associated landscaping works. Once operational the development will give rise to a variety of different waste streams which will require proper management in accordance with the legislation and appropriate guidelines.

The purpose of this OWMP is to ensure that wastes generated within the development will be managed and disposed of in a way that ensures maximum levels of waste recycling and reuse and to minimise the levels of waste diverted to landfill.

This OWMP will also ensure that waste storage and movement within the development will occur in a manner which complies with relevant legislation and has a minimal impact on the occupants of the development and nearby existing commercial and residential areas.

2. WASTE MANAGEMENT IN IRELAND

2.1 Introduction

The subject site is fully situated within the Fingal local authority area and consequently the proposed development must comply with the waste management requirements of Fingal County Council as well as the relevant National and Regional waste management requirements. This section sets out a summary of the principal National, Regional and Local waste management requirements which must be considered for this development.

2.2 National Waste Policy

The Department of the Housing, Planning and Local Government has primary responsibility for waste policy and legislation at a national level in Ireland. A significant proportion of national policy is governed by European Union (EU) initiatives. Such initiatives are usually enacted through European Directives which are then transposed into Irish law through our own legislation.

National waste management policy in Ireland is contained in the following policy documents;

- "Waste Management Changing our Ways" published in 1998
- "Preventing and Recycling Waste: Delivering Change" published in 2002
- "Taking Stock and Moving Forward" published in 2004
- “A Resource Opportunity – Waste Management Policy in Ireland” published in 2012
- “A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020-2025” published in 2020

The current national waste policy, *A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025,* was published in September 2020 and sets out policy measures and actions for each waste management option as well as measures and actions for compliance and enforcement of the waste legislation applicable. The new policy document shifts focus away from waste disposal and onto the production chain. The policy document contains over 200 measures

across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement. The previous national waste policy, *A Resource Opportunity – Waste management policy in Ireland*, drove delivery on national targets under EU legislation, but the Irish and international framework has changed in the intervening years and change was required.

Irish waste policy is grounded on the European Union's concept of a waste management hierarchy. The European Union's waste management hierarchy is a series of waste management options, presented in decreasing order of environmental and economic desirability. The hierarchy states that the preferred option is prevention, followed by re-use, recycling, recovery, with the least desirable option being landfill. The overall intent of these policy statements is to move Irish waste management away from disposal and towards the more favoured options higher up the hierarchy and ultimately to achieve the full transition to a Circular Economy. The overall objectives of the current Action Plan are as follows:

- To shift the focus away from waste disposal and treatment by ensuring that the useful lifetime of materials and products is prolonged;
- To shift the burden of environmental responsibility for disposable goods to the producer;
- To ensure that measures for supporting sustainability are fostered.

The current legislative framework relies on the Waste Management Act 1996 and the Environment (Miscellaneous Provisions) Act 2011 as the principal vehicles through which national waste policy is enacted. The new Policy envisages that a new Waste Management (Circular Economy) Bill will be introduced to provide the legislative underpinning required for new measures required to support the new Waste Policy.

The Waste Management Act divides the responsibility for the regulation of waste in Ireland between the Environmental Protection Agency (EPA) and the Local Authorities, who also have the main responsibility for the collection and disposal of household waste, as well as currently providing much of the landfill facilities.

2.3 Regional Waste Policy

For the purposes of waste management planning, Ireland is now divided into three different regions namely, Eastern-Midlands, Southern and Connacht-Ulster regions. The Eastern-Midlands Region includes the local authorities of Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow.

The subject site is within the jurisdiction of Fingal County Council who have adopted the Eastern-Midlands Region Waste Management Plan 2015-2021. The Plan provides a framework for the prevention and management of waste in a sustainable manner in Fingal and the other local authority areas.

The strategic vision of the regional waste plan is to rethink the current approach to managing waste, by viewing waste streams as valuable material resources. It is hoped that making better use of available resources and reducing the leakage of materials as wastes will deliver benefits economically and environmentally to the region.

The plan contains a number of key measures that encourage a positive change in the attitudes and actions of householders, business and industry towards waste prevention. It also seeks to ensure that the Eastern-Midlands Region moves its management of waste from a traditional disposal model to a circular economy model so that waste becomes a future resource.

The Policy actions of the Plan include the following:

- A 1% reduction per annum in the quantity of household waste generated per capita over the six year period of the plan;
- A recycling rate of 50% of managed municipal waste by 2020;
- A reduction to 0% for the direct disposal of unprocessed residual municipal waste to landfill commencing in 2016;
- Deliver communication, awareness and on the ground activities which lead to a lasting change in the people's behaviour towards waste;
- Increase the level of source-segregated kerbside collections in the region, with a strong focus on ensuring that a three bin system becomes commonplace at household and commercial levels;
- Enforcement of the regulations related to household and commercial waste to tackle the problem of unmanaged waste;
- Ensure existing and future waste facilities do not negatively impact environmentally sensitive sites through proper assessments and siting;
- Grow the waste management sector into a prosperous and sustainable industry which creates and maintains healthy employment.

2.4 Local Waste Policy

The Fingal Development Plan 2017 to 2023 sets out the policies and objectives for the development of the County over the Plan period. A number of the Plan objectives and actions for the county are in line with the objectives of the Regional Waste Management Plan. The Fingal County Council Waste Management Strategy is grounded in EU and National policy and can be summarised by the waste hierarchy of prevention, recycling, energy recovery and disposal. The Plan identifies that the primary challenge over the Plan lifetime is to continue to deliver, maintain and expand high quality waste management infrastructure that will adequately cater for a growing resident population and business sector.

Section 7.5 of the Fingal County Development Plan 2017 – 2023 sets out the waste management policies and objectives in order to comply with the Development Management Standards set for the county with the aim to ensure orderly and sustainable development. There are a total of 26 waste management policy objectives set out in the County Development Plan under the headings Statement of Policy, Prevention and Minimisation, Preparing for Reuse, Recycling, Recovery, Disposal, Construction and Demolition Waste, Hazardous Waste and Litter. These objectives support the implementation of the provisions of the Eastern Midlands Region Waste Management Plan 2015 - 2021 or any subsequent Waste Management Plan applicable within the lifetime of the Development Plan. All prospective developments in the County will be expected to take account of

the provisions of the Regional Waste Management Plan and adhere to the requirements of that Plan.

Relevant policies and objectives in the Development Plan will assist in underpinning the objectives of the Regional Waste Management Plan. In particular, the Development Plan will assist in ensuring that the design of new developments accommodate segregated waste collection systems and that during the construction of new developments, waste including demolition waste, is well managed.

Under the terms of the Waste Management Acts 1996 to 2011, the County Development Plan is deemed to include the objectives of the Waste Management Plan for the area. Other relevant Policy Objectives are set out in Chapter 12 Development Management Standards and the principal relevant objectives are set out below.

Objective DMS36: Ensure all new residential schemes include appropriate design measures for refuse storage areas, details of which should be clearly shown at pre-planning and planning application stage. Ensure refuse storage areas are not situated immediately adjacent to the front door or ground floor window, unless adequate screened alcoves or other such mitigation measures are provided.

Objective DMS37: Ensure the maximum distance between the front door to a communal bin area does not exceed 50 metres.

Objective DMS146: Ensure all new large-scale residential and mixed use developments include appropriate facilities for the segregation and storage of waste.

Objective DMS147: Ensure all new developments include well-designed facilities to accommodate the three bin collection system.

Objective DMS148: Ensure that all new developments make provision for bring bank facilities where appropriate.

Objective DMS149: Require that construction and demolition waste management plans be submitted as part of any planning application in excess of any of the following thresholds:

- New residential development of 10 units or more;
- New developments other than above, including institutional, educational, health and other public facilities with an aggregate floor area in excess of 1,250sqm.
- Demolition, renovation / refurbishment projects generating in excess of 100m^3 in volume of C&D waste;
- Civil engineering projects in excess of 500m^3 of waste materials sued for development of works on the site.

The Fingal County Council *Segregation, Storage and Presentation of Household and Commercial Waste Bye-Laws* came into effect on the 1st of April 2020. These Bye-Laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the Fingal functional area. Key requirements under these Bye-Laws of relevance to the proposed development include the following:

- Kerbside waste presented for collection shall not be presented for collection earlier than 6.00 pm on the day immediately preceding the designated waste collection day;

- All containers used for the presentation of kerbside waste and any uncollected waste shall be removed from any roadway, footway, footpath or any other public place no later than 9:00am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law 4;
- Documentation, including receipts, is obtained and retained for a period of no less than one year to provide proof that any waste removed from the premises has been managed in a manner that conforms to these bye-laws, to the Waste Management Act and, where such legislation is applicable to that person, to the European Union (Household Food Waste and Bio-Waste) Regulations 2015; and
- Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

2.5 Design Standards for New Apartments

The Department of Housing, Planning and Local Government published the *Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities* in 2015 and were updated in 2018. These Guidelines set out standards for apartment development particularly with regard to design quality safeguards such as internal space standards for 1-,2- and 3-bedroom apartments, internal storage and amenity space.

The guidelines require provision be made for the storage and collection of waste materials in apartment schemes. Refuse facilities should be accessible to each apartment stair/lift-core and designed with regard to the projected level of waste generation and types and quantities of receptacles required. Within apartments, there should be adequate provision for the temporary storage of segregated materials prior to deposition in communal waste storage and in-sink macerators are discouraged as they place a burden on drainage systems.

The guidelines set out the following general design considerations which should be taken into account in the provision of refuse storage facilities:

- Sufficient communal storage area to satisfy the three-bin system for the collection of mixed dry recyclables, organic waste and residual waste;
- In larger apartment schemes, consideration should also be given to the provision of separate collection facilities for other recyclables such as glass and plastics;
- Waste storage areas must be adequately ventilated so as to minimise odours and potential nuisance from vermin/flies and taking account the avoidance of nuisance for habitable rooms nearby;
- Provision in the layout for sufficient access for waste collectors, proximity of, or ease of access to, waste storage areas from individual apartments, including access by disabled people;
- Waste storage areas should not present any safety risks to users and should be well-lit;
- Waste storage areas should not be on the public street, and should not be visible to or accessible by the general public. Appropriate visual screening should be provided, particularly in the vicinity of apartment buildings;
- Waste storage areas in basement car parks should be avoided where possible, but where provided, must ensure adequate manoeuvring space for collection vehicles;
- The capacity for washing down waste storage areas, with wastewater discharging to the sewer.

3. WASTE MANAGEMENT OBLIGATIONS

There are currently no specific guidelines in Ireland for the preparation of OWMPs and consequently this document considers national and regional waste policy, legislation and other relevant guidelines.

The Waste Management Act adopts the "polluter pays" principal, whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect transport of waste produced by the waste producer. Therefore the waste producer is required to ensure that all waste contractors employed by them are legally compliant with respect to waste transport and disposal.

A valid waste permit to transport waste must be held by the relevant waste contractor and a contractor shall not be permitted to receive any waste at their site, unless in possession of a waste permit granted by a local authority under the Waste Management (Permit) Regulations, 1998 or a waste licence granted by the EPA. The permit will specify the types of waste a contractor is licensed to receive, store, sort and recycle on their site.

The Facilities Management Company appointed for the management of the development shall be responsible for the implementation of all aspects of the Operational Waste Management Plan as detailed in this report.

4. OVERVIEW OF PROPOSED PROJECT

The subject lands are located in Hacketstown, immediately south of Skerries town centre and occupy an area of approximately 6.7ha. The proposed development comprises a residential development of 345 residential units and all associated and ancillary infrastructure and open space provision.

The residential element comprises the following:

84 no. 1-bed units;
104 no. 2-bed units (68 no. 2-bed apartments and 36 no. 2-bed duplexes)
157 no. 3-bed units (118 no. 3-bed duplexes and 39 no. 3 - bed houses

In addition, the proposed development provides a crèche (377sqm) to serve the needs of the proposed development and the wider community.

5. WASTE TYPES

The wastes types that will be generated at the development include the following which will typically be discarded on a daily basis:

- Mixed Dry Recyclables (DryR)-is defined as a collection of solid waste materials that can be stored and collected in one bin or in separate bins to increase recycling value. These materials include cardboard, paper, newspaper, plastic film, plastic bottles, steel and aluminium cans.
- Organic Waste - organic waste is defined as waste that is organic in nature and comprises mainly of food, be it cooked or uncooked, from kitchens and other catering establishments and is generally classified as putrescible.
- Mixed Non Recyclables (NonR) – this is the residual waste that is the remaining waste material after separate diversion of waste components though reduction, reuse, recycling and food waste collections.

- Glass.

In addition to the above categories small quantities of the following wastes will also be generated but on a much lower frequency and volume but will also require appropriate management:

- Waste electrical and electronic equipment (WEEE) such as TVs, mobile phones, printers, radios batteries etc;
- Green Waste – organic materials generated from gardens and landscaping;
- Chemicals - paints, adhesives, detergents, etc;
- Lighting – including light bulbs;
- Metal – fixtures and fittings;
- Furniture and Textiles; and
- Bulky wastes – fridges, freezers, washing machines etc.

6. WASTE QUANTITIES

British Standard 5906:2005 Waste Management in Buildings – Code of Practice sets out typical weekly waste arisings for various types of buildings. The Code of Practice sets out an equation to estimate the weekly waste arisings for domestic or residential buildings as follows:

weekly waste (litres) = number of dwellings x [70 x average number of bedrooms + (30)]

For the purposes of the waste storage calculations the waste will be segregated and stored into three designated waste streams namely mixed dry recyclables, organic food waste, glass waste and residual waste. The glass recycling will be stored in centrally located containers with easy access for all residents of the development.

When using volume as the unit measurement for waste arisings, it is considered that a 60:25:10:5 split between mixed dry recyclables, mixed non recyclables, organic waste and glass waste is a best estimate fit for waste breakdown for the proposed development and typical residential living. The above equation can be used to estimate the waste arisings for each of the different residential types based on the number of bedrooms present in the dwelling unit. Table 6.1 presents the estimated volume of waste that will be generated each week by each of the residential units based on the number of bedrooms per unit.

Waste Stream	Waste Volume (litres/week)		
	1 bedroom unit	2 bedroom unit	3 bedroom unit
DryR (60%)	60	102	144
NonR (25%)	25	43	60
Organic (10%)	10	17	24
Glass (5%)	5	9	12
Total	**100**	**170**	**240**

Table 6.1 Estimated main waste generation volume for each individual residential unit per week

Assuming full occupancy rates for all units the total waste arisings for the entire residential development have been calculated as shown in Table 6.2 below.

Waste Stream	Waste Volume (litres/week)		
	1 bedroom units	2 bedroom units	3 bedroom units
DryR (60%)	5040	9486	24048
NonR (25%)	2100	3953	10020
Organic (10%)	840	1581	4008
Glass (5%)	420	791	2004
Total (100%)	**8,400**	**15,810**	**40,080**

Table 6.2 Estimated main waste generation volume for the residential development per week

The code of Practice was also used to estimate the weekly volume of waste generated by the crèche using a similar methodology but with the equation altered to fit the waste arisings associated with a childcare facility with a total floor area of 378 square meters. The crèche is estimated to generate 945 litres of waste per week.

It is therefore estimated that a total of 65m^3 of the main waste types will be generated by the proposed development on a weekly basis once full occupancy has been reached. The weekly total of waste that will be generated is made up of 39.1m^3 of mixed dry recyclables, 16.3m^3 of mixed non recyclables, 6.5m^3 of organic waste and 3.3m^3 of glass waste.

7. WASTE MANAGEMENT FACILITIES

7.1 Introduction

It is proposed that each residential unit will have its own private bin stores that will house three separate bins to provide full segregation for maximum recycling. The bin stores will comprise a galvanised metal frame and will be formed using timber composite panels. Each unit will be lockable and will have a hinge lid and a pair of front doors for full access. All bins will be securely stored in the locked unit and will be wheeled to kerbside on bin collection day and returned to the locked unit after waste collection.

The private bin store detail proposed for each of the residential units is shown in Figure 7.1 below.

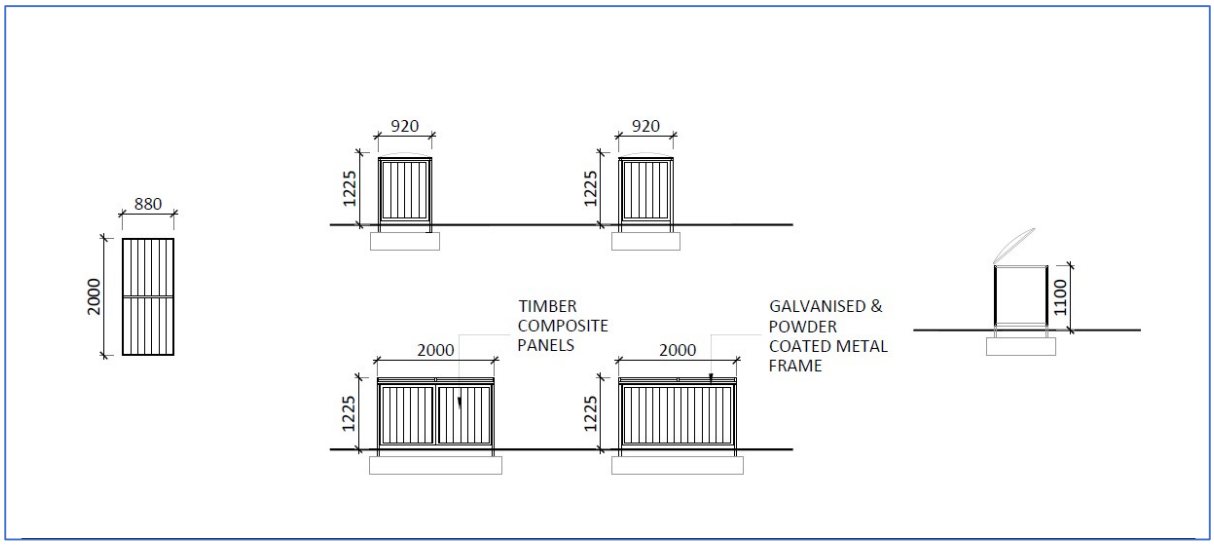

Figure 7.1 Private bin store detail

Access issues have been identified for certain residential units in four of the residential blocks when using the private bin stores for waste management. It is therefore proposed to provide communal waste storage for these residential units. The impacted residential units are the following:

- the lower ground level units in in Block A1 comprising of 13 no 2-bedroom apartments;
- the lower ground level units in in Block A2 comprising of 11 no 2-bedroom apartments;
- the Block E units which are entered via the courtyard comprising of 24 no 1-bedroom duplexes and 1 no 3-bedroom duplexes; and
- the Block F units which are entered via the courtyard comprising of 16 no 1-bedroom duplexes and 11 no 2-bedroom duplexes.

In total there will be four separate common waste storage areas which will manage all the waste generated by the residential units where private bins stores are not practical. The communal bin store detail proposed for each of the residential units is shown in Figure 7.2 below.

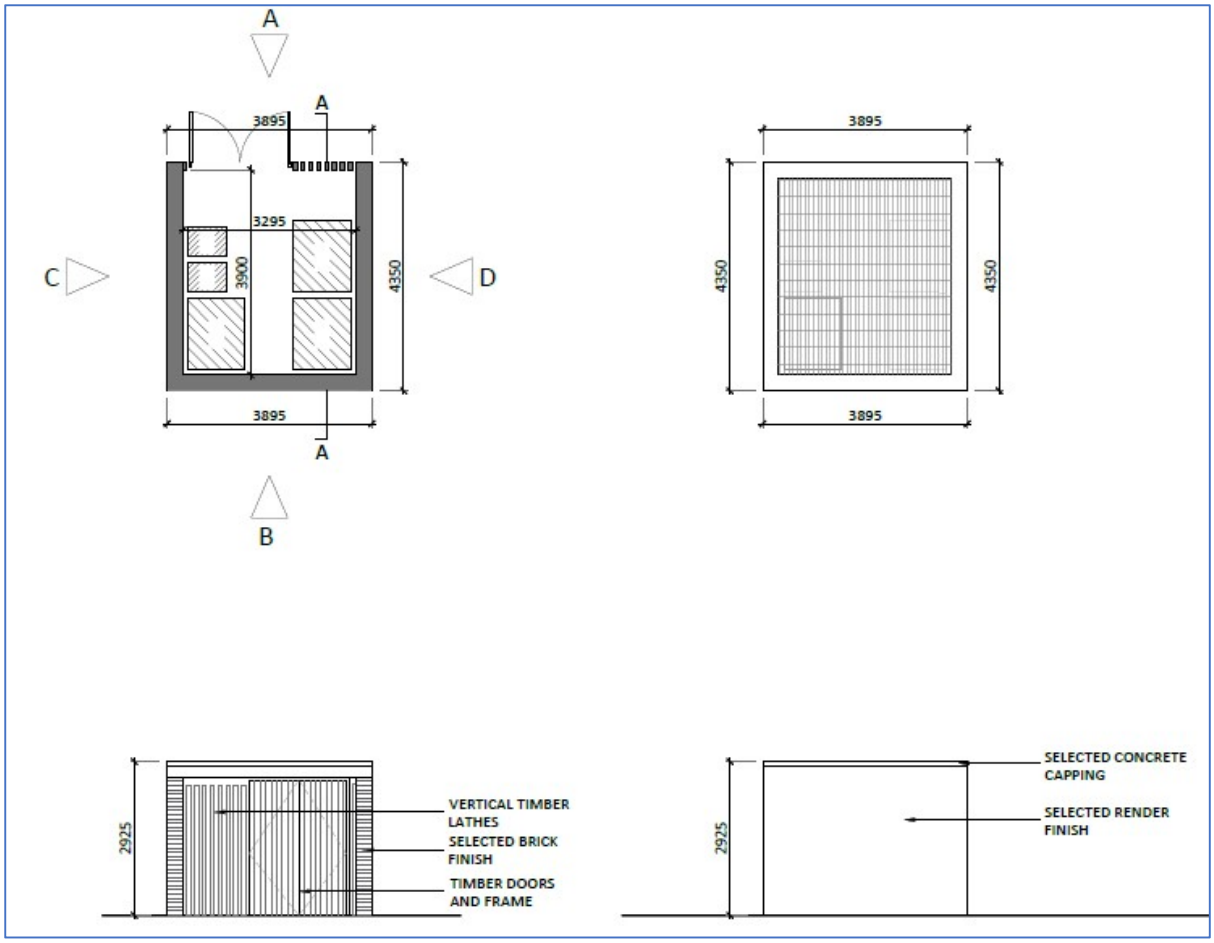

Figure 7.2 Communal bin store detail for selected residents of Blocks A1, A2, E and F

Waste glass will be stored in centrally located containers with easy access for all residents of the development. The development will generate approximately 3.3m^3 of glass waste per week and will be stored in 3 no 1,100L bins which will be colour coded to facilitate segregation according to glass colour of clear, green and brown.

The nominated Facilities Management Company shall be responsible for waste management at the proposed development. All residential units shall be provided with an information brochure outlining the waste management strategy for the development which will show as a minimum the methods of waste segregation, waste storage within the accommodation units and at the centrally located bin stores, recycling initiatives that shall apply to the development and any other waste related matters concerning occupants of the residential units.

7.2 Common Waste Storage Areas (Bin Stores)

The common waste storage areas or bin stores have been designed as covered buildings to ensure safe access for all users in a brightly lit area, spacious enough for easy manoeuvrability, good ventilation and ready access for the control of vermin if required. The bin store also provides for sufficient access and egress to enable the bins to be easily moved from the stores to an appropriate collection point nearby. The bin stores all comply with the following requirements:

- A well-defined pedestrian route shall be marked from the relevant residential units to the nearest waste storage area.
- A non-slip surface shall be provided within the waste storage area.
- Adequate ventilation to avoid the creation of stagnant air or foul odours.
- Sensor controlled lighting.
- Appropriate wastewater drainage to allow for cleaning and disinfection.
- Provision of appropriate signage to inform residents of their obligation to reduce waste, segregate waste and to use the correct bins for each waste.
- The waste storage area shall be designed to provide safe access from the apartment units by mobility impaired persons.
- All waste storage bins shall be clearly labelled with exactly what type of waste materials may be deposited within them. Provision shall be made for sufficient segregated storage of mixed dry recyclables, mixed non-recyclables, organic waste and glass at each bin store.

The specific bin allocation for each of the communal bin stores is presented in Table 7.2. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by each of the four communal groups when operating at full capacity. Table 7.1 assumes a weekly emptying of the bin stores.

Communal Bin Store Location	Bins required for weekly storage		
	DryR	NonR	Organic
Block A1	2 x 1100 L	1 x 1100 L	1 X 240 L
Block A2	1 x 1100 L	1 x 1100 L	1 X 240 L
Block E	2 x 1100 L	1 x 1100 L	2 X 240 L
Block F	2 x 1100 L	1 x 1100 L	2 X 240 L

Table 7.1 Weekly bin requirement for each communal bin stores

7.3 Apartments

Each apartment unit shall provide sufficient internal storage space for the storage of mixed dry recyclables, mixed non-recyclables, organic waste and glass. Each apartment unit shall include waste storage bins which will be of such a size that will allow easy manual handling of them to be brought to the private bin stores.

Residents will be required to take their segregated waste materials to their designated bin store and to dispose of their segregated waste into the appropriate bins. Each bin in the bin store will be clearly labelled and colour coded to avoid cross-contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which waste types can be placed in each bin.

The specific bin allocation for each of the apartment units bin stores is presented in Table 7.2. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by each apartment when operating at full capacity. Each private bin store has capacity to store 3 no. 240L bins if required however it is proposed to fit each store with the proposed bin sizes to facilitate maximum recycling. Table 7.2 assumes a weekly emptying of the bin stores.

Bin Store Location	Bins required for weekly storage		
	DryR	NonR	Organic
1-bed apartments	1 x 80 L	1 x 80 L	1 X 25 L
2-bed apartments	1 x 120 L	1 x 80 L	1 X 25 L

Table 7.2 Weekly bin requirement for each apartment type private bin stores

Other waste materials such as waste electrical and electronic equipment, chemicals, lighting, furniture and textiles may be generated infrequently by the residents. Residents will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them accordingly.

It shall be the responsibility of the Facilities Management Company to ensure that all waste generated by apartment residents is managed to ensure correct storage prior to collection by an appropriately permitted waste collection company on a weekly basis.

7.4 Duplexes

The waste management requirements for the duplexes will follow the same methodology as the apartment blocks. Residents will be required to take their segregated waste materials to their private bins stores and to dispose of their segregated waste into the appropriate bins.

The specific bin allocation for each of the duplex units bin stores is presented in Table 7.3. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by each duplex when operating at full capacity. Each private bin store has capacity to store 3 no. 240L bins if required however it is proposed to fit each store with the proposed bin sizes to facilitate maximum recycling. Table 7.3 assumes a weekly emptying of the bin stores.

Bin Store Location	Bins required for weekly storage		
	DryR	NonR	Organic
2-bed duplexes	1 x 120 L	1 x 80 L	1 X 25 L
3-bed duplexes	1 x 240 L	1 x 80 L	1 x 80 L

Table 7.3 Weekly bin requirement for each duplex type private bin stores

7.5 Houses

Each house shall be required to segregate their waste into mixed dry recyclables, mixed non-recyclables, organic waste and glass. All house residents will have a private bin store as described above. The specific bin allocation for each of the houses bin stores is presented in Table 7.4. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by each house when operating at full capacity. Each private bin store has capacity to store 3 no. 240L bins if required however it is proposed to fit each store with the proposed bin sizes to facilitate maximum recycling. Table 7.4 assumes a weekly emptying of the bin stores.

Bin Store Location	Bins required for weekly storage		
	DryR	NonR	Organic
Houses	1 x 240 L	1 x 80 L	1 x 80 L

Table 7.4 Weekly bin requirement for each house type private bin stores

Other waste materials such as waste electrical and electronic equipment, chemicals, lighting, furniture and textiles may be generated infrequently by the house residents. Residents will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them accordingly.

7.6 Creche

The crèche facility shall be required to segregate their waste into mixed dry recyclables, mixed non-recyclables, organic waste and glass. The specific bin allocation for the crèche is presented in Table 7.5. This table shows the correct allocation of bin storage to accommodate all the waste that will be generated by the crèche when operating at full capacity. Table 7.5 assumes a weekly emptying of the bin stores.

Bin Store Location	Bins required for weekly storage		
	DryR	NonR	Organic
Creche	1 x 1100 L	1 X 240 L	1 X 120 L

Table 7.5 Weekly bin requirement for the crèche bin stores

The crèche is provided with its own external bin store located at ground level. Waste will be stored in the crèche in indoor bins which will be regularly emptied into the bins in the bin store. Each bin in the bin store will be clearly labelled and colour coded to avoid cross-contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which waste types can be placed in each bin. Access to the relevant crèche bin store will be restricted to authorised crèche personnel, facilities management and waste contractors.

Other waste materials such as waste electrical and electronic equipment, chemicals, lighting, furniture and textiles may be generated infrequently by the crèche. Creche management will be required to identify suitable temporary storage areas for these waste items within the facility and arrange for collection by an appropriately licensed waste contractor.

7.7 Local Facilities

Fingal County Council operates two civic amenity centres, one at Estuary Road in Swords and one at Coolmine in Blanchardstown. The closest civic amenity centre is the centre located in Swords which is approximately 11km southwest of the proposed development site while the centre in Coolmine is approximately 26km southwest of the proposed development site. These centres accept household waste only and among the items accepted free of charge include paper, glass bottles / jars, car and household batteries and WEEE. There are a number of bring banks throughout the County, catering for bottles, cans and textiles.

There is a bring bank located at the Skerries SuperValu car park which is located 1km north of the proposed entrance to the residential development. There is also a bring bank located at the Hills Cricket Club which is located just over 2kms from the proposed development. These facilities can also be used for glass recycling generated by the housing units at the development if required.

There are two PowerCity facilities located in Swords, approximately 15km from the proposed site that provide WEEE recycling facilities.

The nearest lightbulb drop-off point is located at the EEC Arro hardware facility in Balbriggan which is located approximately 6km from the site.

8. CONCLUSIONS

This OWMP has been prepared to show that the proposed residential development at Hacketstown, Skerries, shall be designed and managed to provide residents with waste management infrastructure that will minimise the generation of residual waste and maximise the opportunities for segregating and recycling waste generated by the development. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source and managed to ensure effective diversion from landfill wherever possible.

The waste management strategy presented in this report provides for sufficient waste storage capacity for the segregated waste types that will be generated at the residential development. Sufficient provision of appropriate waste storage capacity is provided for based on the estimated waste generation levels for the development when at full capacity.

In conclusion, this report presents a waste strategy that fully complies with all relevant waste legislation, waste policies and best practice guidelines and will ensure effective waste management at the proposed development site.