

**OPERATIONAL WASTE
MANAGEMENT PLAN FOR A
PROPOSED RESIDENTIAL
DEVELOPMENT**

**NEW ROAD, DONABATE, CO.
DUBLIN.**

The Tecpro Building,
Clonshaugh Business & Technology Park,
Dublin 17, Ireland.

T: + 353 1 847 4220
F: + 353 1 847 4257
E: info@awnconsulting.com
W: www.awnconsulting.com

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Report Prepared By

Chonail Bradley, Principal Environmental
Consultant

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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) on behalf of Fingal County Council. The proposed development will principally comprise the construction of 175 No. residential dwellings (123 No. houses and 52 No. apartments) and a single-storey crèche of 365 sq m (with outdoor play area and external stores). The 123 No. houses are all 2-storey and include 30 No. 2-bed units, 82 No. 3-bed units and 11 No. 4-bed units. The 52 No. apartments include 26 No. 1-bed units, 20 No. 2-bed units and 6 No. 3-bed units and are contained in a single block ranging in height from 1 No. to 4 No. storeys, at New Road, Donabate, Co. Dublin.

This OWMP has been prepared to ensure that the management of waste during the operational phase of the proposed residential development is undertaken in accordance with current legal and industry standards including, the *Waste Management Act 1996 – 2011* as amended and associated Regulations ¹, *Protection of the Environment Act 2003* as amended ², *Litter Pollution Act 2003* as amended ³, the National Waste Management Plan for a Circular Economy 2024 – 2030 (NWMPC) (2024) ⁴ and the Fingal County Council *Segregation Storage, Presentation and of Household and Commercial Waste (2020)* ⁵. In particular, this OWMP aims to provide a robust strategy for storing, handling, collection and transport of the wastes generated at site.

This OWMP aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. The OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). The plan estimates the type and quantity of waste to be generated from the proposed Development during the operational phase and provides a strategy for managing the different waste streams.

At present, there are no specific national guidelines in Ireland for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given to the requirements of national and regional waste policy, legislation and other guidelines.

2.0 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998 titled as '*Changing Our Ways*' ⁶ which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill and finding alternative methods for managing waste. Amongst other things, *Changing Our Ways* stated a target of at least 35% recycling of municipal (i.e. household, commercial and non-process industrial) waste.

A further policy document '*Preventing and Recycling Waste – Delivering Change*' was published in 2002 ⁷. This document proposed a number of programmes to increase recycling of waste and allow diversion from landfill. The need for waste minimisation at source was considered a priority.

This view was also supported by a review of sustainable development policy in Ireland and achievements to date, which was conducted in 2002, entitled '*Making Ireland's Development Sustainable – Review, Assessment and Future Action*' ⁸. This document also stressed the need to break the link between economic growth and waste generation, again through waste minimisation and reuse of discarded material.

In order to establish the progress of the Government policy document *Changing Our Ways*, a review document was published in April 2004 entitled '*Taking Stock and Moving Forward*'⁹. Covering the period 1998 – 2003, the aim of this document was to assess progress to date with regard to waste management in Ireland, to consider developments since the policy framework and the local authority waste management plans were put in place, and to identify measures that could be undertaken to further support progress towards the objectives outlined in *Changing Our Ways*.

In particular, *Taking Stock and Moving Forward* noted a significant increase in the amount of waste being brought to local authority landfills. The report noted that one of the significant challenges in the coming years was the extension of the dry recyclable collection services.

In September 2020, the Irish Government published a new policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan 'A Waste Action Plan for a Circular Economy'¹⁰ (WAPCE), was prepared in response to the 'European Green Deal' which sets a roadmap for a transition to a new economy, where climate and environmental challenges are turned into opportunities, replacing the previous national waste management plan "A Resource Opportunity" (2012).

The WAPCE sets the direction for waste planning and management in Ireland up to 2025. This reorientates policy from a focus on managing waste to a much greater focus on creating circular patterns of production and consumption. Other policy statements of a number of public bodies already acknowledge the circular economy as a national policy priority.

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.

One of the first actions to be taken was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021)¹¹ to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. It is anticipated that the Strategy will be updated in full every 18 months to 2 years.

The *Circular Economy and Miscellaneous Provisions Act 2022*¹² was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will work to significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste, streamlines the national processes for End-of-Waste and By-Products decisions, tackling the delays which can be encountered by industry, and supporting the availability of recycled secondary raw materials in the Irish market, and tackles illegal fly-tipping and littering.

Since 1998, the Environmental Protection Agency (EPA) has produced periodic '*National Waste (Database) Reports*' which as of 2023 have been renamed *Circular Economy and Waste Statistics Highlight Reports*¹³ detailing, among other things, estimates for household and commercial (municipal) waste generation in Ireland and the level of recycling, recovery and disposal of these materials. The 2021 National Circular Economy and Waste Statistics web resource, which is the most recent study published, along with the national waste statistics web resource (November 2023) reported the following key statistics for 2020:

- **Generated** – Ireland produced 3,170,000 t of municipal waste in 2021. This is a 1% decrease since 2020. This means that the average person living in Ireland generated 630 kg of municipal waste in 2021.
- **Managed** – Waste collected and treated by the waste industry. In 2020, a total of 3,137,000 t of municipal waste was managed and treated.
- **Unmanaged** – An estimated 33,000 tonnes of this was unmanaged waste i.e., not disposed of in the correct manner in 2021.
- **Recovered** – The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In Ireland 42% of Municipal waste was treated by energy recovery through incineration in 2021.
- **Recycled** – Just over 1.3 million tonnes of municipal waste generated in Ireland was recycled in 2021, resulting in a recycling rate of 41 per cent. The recycling rate remains unchanged from 2020 and indicates that we face significant challenges to meet the upcoming EU recycling targets of 55% by 2025 and 65% by 2035.
- **Disposed** – The proportion of municipal waste sent to landfill also remains unchanged at 16% the same as 2020.
- **Reuse** – 54,800 tonnes of second-hand products we estimated by the EPA to have been reused in Ireland in 2021. The average annual Reuse rate per person in Ireland is 10.6 kg per person.

2.2 Regional Level

The proposed development is located in the Local Authority area of Fingal County Council (FCC).

The Eastern Midlands Region (EMR) Waste Management Plan 2015 – 2021 has been superseded as of March 2024 by the NWMPCE 2024 - 2030.

The NWMPCE does not dissolve the three regional waste areas. The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector.

This Plan seeks to influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation.

The national plan sets out the following strategic targets for waste management in the country that are relevant to the development:

National Targets

1A. (Residual Municipal Waste) 6% Reduction in Residual Municipal Waste per person by 2030

2A. (Contamination of Materials) 90% of Material in Compliance in the Dry Recycling Bin

2B. (Material Compliance Residual) 10% per annum increase in Material Compliance in the residual bin. (90% by the end of 2030)

3A. (Reuse of Materials) 20kg Per person / year – Reuse of materials like cloths or furniture to prevent waste. Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €140-160 per tonne of waste, which includes a €85 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2015.

The *Fingal Development Plan 2023 – 2029*¹⁴ (2023) sets out a number of policies and objectives for the Fingal region in line with the objectives of the regional waste management plan, including the following:

- Objective **IUO34** – Waste Management in New Developments - Require the provision of appropriate, well designed, accessible space to support the storage, separation and collection of as many waste and recycling streams as possible in all new commercial and residential developments within the County.
- Objective **DMSO234** – Provision of Public Bring Banks - Ensure the provision of public bring banks in all large retail developments, unless there are existing facilities within a 1 km radius. Bring bank facilities will generally be required at appropriate locations in the following development types:
 - In conjunction with significant new commercial developments, or extensions to existing developments.
 - In conjunction with new waste infrastructure facilities, proposals should include bring facilities for the acceptance of non-hazardous and hazardous wastes from members of the public and small businesses.
 - In conjunction with medium and large scale residential and mixed-use developments providing in excess of 10 residential units, proposals should provide recycling and bring bank facilities to serve residents and in some appropriate locations, the wider community.
 - In conjunction with all large retail developments provide space for reverse vending machines to promote the circular economy.
- Objective **DMSO235** – Communal Refuse Storage Provision - In the case of communal refuse storage provision, the collection point for refuse should be accessible both to the external collector and to the resident and be secured against illegal dumping by non-residents. In the case of individual houses, the applicant shall clearly show within a planning application the proposed location and design of bin storage to serve each dwelling, and having regard to the number of individual bins required to serve each dwelling at the time of the application and any possible future requirements for refuse storage/collection. The following criteria will be considered in the assessment of the design and siting of waste facilities and bring facilities:
 - The location and design of any refuse storage or recycling facility should ensure that it is easily accessible both for residents and/or public and for bin collection, be insect and vermin proofed, will not present an odour problem, and will not significantly detract from the residential amenities of adjacent property or future occupants.
 - Provision for the storage and collection of waste materials shall be in accordance with the guidelines for waste storage facilities in the relevant Regional Waste Management Plan and the design considerations contained in Section 4.8 and 4.9 of the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, DHLGH (2020).
 - Refuse storage for houses should be externally located, concealed / covered and adequate to cater for the size and number of bins normally allocated to a household. For terraced houses, the most appropriate area for bins to be stored is to the front of the house, which should be located in well-designed enclosures that do not detract from visual amenity.
 - All applications shall clearly identify the waste storage and collection points and detail the anticipated waste collection schedule having regard to the impact on road users both within the development and the surrounding area.
 - Access to private waste storage in residential schemes should be restricted to residents only.

- Objective **DMSO236** – Segregation and Collection of Waste - Ensure all new large-scale residential and mixed-use developments include appropriate facilities for source segregation and collection of waste.
- Objective **DMSO237** – Distance from Front Door to Communal Bin Area - 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 **DMSO239** – Refuse storage areas - 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 or other such mitigation measures are provided.
- Objective **DMSO240** – Distance to Communal Bin Areas - Ensure the maximum distance between the front door to a communal bin area does not exceed 50 metres.

2.3 Legislative Requirements

The primary legislative instruments that govern waste management in Ireland and applicable to the proposed Development are:

- Waste Management Act 1996 as amended;
- Environmental Protection Agency Act 1992 as amended;
- Litter Pollution Act 1997 as amended;
- Planning and Development Act 2000 as amended ¹⁵;
- Circular Economy and Miscellaneous Provisions Act 2022.

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996 - 2011* and subsequent Irish legislation, is the principle of “*Duty of Care*”. This implies that the waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.) As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final disposal area, waste contractors will be employed to physically transport waste to the final waste disposal site.

It is therefore imperative that the residents, tenants and proposed facilities management company undertake on-site management of waste in accordance with all legal requirements and employ suitably permitted/licenced contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or waste permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended or a waste or IED (Industrial Emissions Directive) licence granted by the EPA. The COR/permit/licence

held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

2.3.1 Fingal County Council Waste Bye-Laws

The FCC “Fingal County Council (Segregation Storage, Presentation and of Household and Commercial Waste) Bye-Laws (2020)” came into use on the 1st of April 2020. These bye-laws repeal the previous ‘Fingal County Council *Bye-Laws for the Storage, Presentation and Collection of Household Waste (2006)*’. The Bye-Laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the FCC 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.

The full text of the Waste Bye-Laws is available from the FCC website.

2.4 **Regional Waste Management Service Providers and Facilities**

Various contractors offer waste collection services for the residential sector in the FCC region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and are all operated by the private sector. There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second facility in Poolbeg in Dublin.

The closest civic amenity centre can be found at the Estuary Recycling Centre c. 8.2km away to the south west, the recycling centre can be used for the disposal of other household wastes as outlines in section 5.6. The closest bottle and textile bank is located c. 750m to the northwest in the SuperValu Donabate carpark

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all waste/IE licenses issued are available from the EPA.

3.0 DESCRIPTION OF THE PROJECT

3.1 Location, Size and Scale of the Development

The development is proposed at a site of 4.72 hectares at New Road, Donabate, Co. Dublin. The site is generally bound by: a site which is currently being developed to the north; Lanestown View residential development to the east; New Road and existing residential dwellings fronting same to the south; and Saint Patrick's Park residential development to the west. The site includes: part of New Road for road junction, cycle track, footpath and water service connection works; and part of the site to the north for water service connection works.

The proposed development will principally comprise the construction of 175 No. residential dwellings (123 No. houses and 52 No. apartments) and a single-storey crèche of 365 sq m (with outdoor play area and external stores). The 123 No. houses, which are part-1-/part-2-storey and 2-storey in height, include 30 No. 2-bed units, 82 No. 3-bed units and 11 No. 4-bed units. The 52 No. apartments include 26 No. 1-bed units, 20 No. 2-bed units and 6 No. 3-bed units and are contained in a single block ranging in height from 1 No. to 4 No. storeys.

The development will also include the following: 2 No. new multi-modal entrances/exits at New Road; 2 No. multi-modal connections to existing and under construction residential developments to the east and north respectively; cycle track and footpath along New Road; 139 No. car parking spaces; 4 No. set down bays; 6 No. motorcycle parking spaces; cycle parking; hard and soft landscaping, including public open space, communal amenity space and private amenity spaces (which include gardens, balconies and terraces facing all directions); boundary treatments; 1 No. sub-station; bin stores; lighting; PV panels atop houses; green roofs, PV panels, lift overruns and plant atop the apartment block; green roofs and PV panels atop the crèche building; and all associated works above and below ground.

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the proposed development will include the following:

- Dry Mixed Recyclables (DMR) - includes wastepaper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste generated from internal plants/flowers;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

In addition to the typical waste materials that will be generated at the development on a daily basis, there will be some additional waste types generated in small quantities which will need to be managed separately including:

- Green/garden waste may be generated from internal plants or external landscaping;
- Batteries (both hazardous and non-hazardous);
- Waste electrical and electronic equipment (WEEE) (both hazardous and non-hazardous);
- Printer cartridges/toners;
- Chemicals (paints, adhesives, resins, detergents, etc.) ;
- Lightbulbs;
- Textiles (rags);

- Waste cooking oil (if any generated by the residents or creche tenants);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

Wastes should be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling and recovery of waste with diversion from landfill wherever possible.

3.3 List of Waste Codes

In 1994, the *European Waste Catalogue*¹⁷ and *Hazardous Waste List*¹⁸ were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List*¹⁹, which was a condensed version of the original two documents and their subsequent amendments. This document has recently been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*'²⁰ 2018. This waste classification system applies across the EU and is the basis for all national and international waste reporting, such as those associated with waste collection permits, COR's, permits and licences and EPA National Waste Database.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code for typical waste materials expected to be generated during the operation of the proposed development are provided in Table 3.1 below.

Waste Material	LoW/EWC Code
Paper and Cardboard	20 01 01
Plastics	20 01 39
Metals	20 01 40
Mixed Non-Recyclable Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats	20 01 25
Textiles	20 01 11
Batteries and Accumulators*	20 01 33* - 34
Printer Toner/Cartridges*	20 01 27* - 28
Green Waste	20 02 01
WEEE*	20 01 35*-36
Chemicals (solvents, pesticides, paints & adhesives, detergents, etc.) *	20 01 13*/19*/27*/28/29*30
Fluorescent tubes and other mercury containing waste*	20 01 21*
Bulky Wastes	20 03 07

* Individual waste type may contain hazardous materials.

Table 3.1 Typical Waste Types Generated and LoW Codes

4.0 ESTIMATED WASTE ARISING

A waste generation model (WGM) developed by AWN, has been used to predict waste types, weights and volumes arising from operations within the proposed development. The WGM incorporates building area and use and combines these with other data including Irish and US EPA waste generation rates.

The estimated quantum/volume of waste that will be generated from the residential units and houses has been determined based on the predicted occupancy of the units. While the waste estimates for the creche unit is based on area use per m².

Waste generated in the communal amenities/spaces has been incorporated into the waste figures for the residential apartment unit block.

The estimated waste generation for the development for the main waste types is presented in Table 4.1.

Waste type	Waste Volume (m ³ /week)				
	Residential Apartment Block (Combined)	Residential House (2 bed) (Individual)	Residential House (3 bed) (Individual)	Residential House (4 bed) (Individual)	Creche unit
Organic Waste	0.76	0.02	0.02	0.02	0.04
DMR	5.37	0.11	0.13	0.18	1.50
Glass	0.15	0.01	0.01	0.01	0.01
MNR	2.82	0.07	0.08	0.09	0.82
Total	9.10	0.21	0.24	0.30	2.37

Table 4.1 Estimated waste generation for the proposed development for the main waste types.

The BS5906:2005 Waste Management in Buildings – Code of Practice ²¹ was considered in the estimations of the waste arising. It has been assumed that waste will be generated by the residents over a 7-day period, while the creche facilities will operate over a 5-day period. It is anticipated that the conservative estimation of waste quantities from the residential units will be sufficient to cover the small quantities likely to be generated in the communal areas on a weekly basis. Waste for the amenity areas is included within the residential waste, with waste from residential amenities being taken to the closest residential WSA for storage.

5.0 WASTE STORAGE AND COLLECTION

This section provides information on how waste generated within the development will be stored and how the waste will be collected from the development. This has been prepared with due consideration of the proposed site layout as well as best practice standards, local and national waste management requirements including those of FCC. In particular, consideration has been given to the following documents:

- BS 5906:2005 Waste Management in Buildings – Code of Practice;
- *The NWMPCE 2024 – 2030 (2024)*;
- DoHLGH, *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (section 4.8-4.9) (2023)* ²²;
- *Fingal Development Plan 2023 – 2029 (2023)*; and
- Fingal County Council *Segregation Storage, Presentation and of Household and Commercial Waste (2020)*

Waste Storage Areas

Apartment Block

2 no. shared communal Waste Storage Areas (WSAs) have been allocated within the development design for the residential Apartment Blocks in external locations.

Creche Unit

1 no. WSA has been allocated in the development design for use by the creche tenant in an external location to the rear of their unit.

Individual House

Each house with external access to their rear yards will store bins within this area, while any house without external access to their rear yard will be allocated a shielded bin store at the front of their unit that can accommodate 3 no. 240L bins.

The waste receptacles from the shared and creche WSAs will be collected by facilities management, staff or the waste contractor depending on the agreement, immediately prior to collection and brought to where the bins will be staged temporarily awaiting collection. The staging area is such that it will not obstruct traffic or pedestrians (allowing a footway path of at least 1.8m, the space needed for two wheelchairs to pass each other) as is recommended in the *Design Manual for Urban Roads and Streets* (2019)²³. All WSAs have been strategically located on the ground floor level, in close proximity to cores and can be viewed in Appendix A of this report.

Using the estimated waste generation volumes in Table 4.1 the waste receptacle requirements for MNR, DMR, organic waste, and glass have been established for the WSAs. These are presented in Table 5.1.

Area/Use	Bins Required			
	MNR*	DMR**	Organic	Glass
Residential Apartment Block (Combined)	3 x 1100L	5 x 1100L	4 x 240L	2 x 240L
Creche Unit	1 x 1100L	2 x 1100L	1 x 120L	1 x 120L or Glass Bag
Residential House (Individual)	1 x 240L	1 x 240L	1 x 240L	Bottle bank or Glass Bag

Note: * = Mixed Non-Recyclables
** = Dry Mixed Recyclables

Table 5.1 Waste storage requirements for the proposed development

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimate into the holding capacity of each receptacle type.

Waste storage receptacles as per Table 5.1 above (or similar appropriate approved containers) will be provided by the facilities management company in the shared residential WSAs. Residents in houses will be responsible for providing their own bins.

The types of bins used will vary in size, design and colour dependent on the appointed waste contractor. However, examples of typical receptacles to be provided in the WSAs are shown in Figure 5.1. All waste receptacles used will comply with the SIST EN 840-1:2020 and SIST EN 840-2:2020 as the standards for performance requirements of mobile waste containers, where appropriate.



Figure 5.1 Typical waste receptacles of varying size (240L and 1100L)

Receptacles for organic, DMR, glass and MNR waste will be provided in the WSAs prior to first occupation of the development i.e. prior to the first residential or creche unit being occupied.

This Plan will be provided to each resident and creche tenant from first occupation of the development i.e. once the first residential or creche unit is occupied. This Plan will be supplemented, as required, by the property management company with any new information on waste segregation, storage, reuse and recycling initiatives that are subsequently introduced.

5.1 Waste Storage – Residential Units

Residents in both apartment units and houses will be required to segregate waste into the following main waste streams:

- DMR;
- Organic waste;
- Glass; and
- MNR.

Residents in the apartment block will be required to take their segregated waste materials to their designated shared residential WSA and dispose of their segregated waste into the appropriate bins.

Residents in houses will also be required to segregate their waste and take the DMR, MNR and organic waste to their own individual bins. Glass from houses will be required to be taken to the nearest bottle bank or bring centre.

Provision will be made in all residential units to accommodate 3 no. bin types to facilitate waste segregation at source. An example of a potential 3 bin storage system is provided in Figure 5.2 below.



Figure 5.2 Example three bin storage system to be provided within the unit design.

Each bin/container in the WSAs 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 shared WSAs will be restricted to authorised residents, facilities management and waste contractors by means of a key or electronic fob access.

Based on the recommended bin requirements in Table 5.1, DMR, MNR, organic waste and glass will be collected on a weekly basis for the apartment block.

Based on the recommended bin requirements in Table 5.1, DMR, MNR and organic waste will be collected on a fortnightly basis for residential houses. Residents in houses will be required to avail to a glass collection service or take bins to the nearest bottle bank or bring centre.

Other waste materials such as textiles, batteries, printer toner/cartridges and WEEE 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 appropriately. Further details on additional waste types can be found in Section 5.4.

5.2 Waste Storage – Creche Unit

Staff will be required to segregate their waste into the following waste categories within their own units:

- DMR;
- Organic waste;
- Glass; and
- MNR.

As required, the staff will need to bring segregated DMR, MNR, glass and organic waste to their WSA located at the rear of the building in an external location.

Each bin/container in the WSAs 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 WSA will be restricted to authorised childcare facility staff and building management by means of a key or electronic fob access.

Based on the recommended bin requirements in Table 5.1, DMR, MNR and organic waste will be required to be collected weekly and glass will be collected as required.

Other waste materials such as batteries, WEEE and printer toner/cartridges will be generated less frequently. The tenant will be required to store these waste types within their own unit and arrange collection with an appropriately licensed waste contractor. Facilities management may arrange collection depending on the agreement. Further details on additional waste types can be found in Section 5.5.

5.3 Waste Collection

There are numerous private contractors that provide waste collection services in the Fingal County area. All waste contractors servicing the proposed development must hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered/permited/licensed facilities only.

At the designated collection times, bins will be brought by personnel nominated by the facilities management company from the shared WSAs directly to the designated staging/collection point at the closest road. Residents in houses will be responsible for taking their bins to and from the curb in line with the FCC waste byelaws.

All creche waste, requiring collection by the appointed waste contractor will be transferred from the WSAs by personnel nominated by the creche or facilities management company to the staging/collection point.

All shared waste stores can be viewed in Appendix A of this report, while a road tracking exercise for the waste vehicle can be found in appendix B.

It is recommended that bin collection times/days are staggered to reduce the number of bins required to be emptied at once and the time the waste vehicle is onsite. This will be determined during the process of appointment of a suitable waste contractor.

5.4 Additional Waste Materials

In addition to the typical waste materials that are generated on a daily basis, there will be some additional waste types generated from time to time that will need to be managed separately. A non-exhaustive list is presented below.

Green Waste

Green waste may be generated from gardens, external landscaping and internal plants / flowers. Green waste generated from landscaping of external areas will be removed by external landscape contractors. Green waste generated from gardens internal plants / flowers can be placed in the organic waste bins.

Batteries

A take-back service for waste batteries and accumulators (e.g. rechargeable batteries) is in place in order to comply with the S.I. No. 283/2014 - European Union (Batteries and Accumulators) Regulations 2014, as amended. In accordance with these regulations, consumers are able to bring their waste batteries to their local civic amenity centre or can return them free of charge to retailers which supply the equivalent type of battery, regardless of whether or not the batteries were purchased at the retail outlet and regardless of whether or not the person depositing the waste battery purchases any product or products from the retail outlet.

The creche tenant cannot use the civic amenity centre. They must segregate their waste batteries and either avail of the take-back service provided by retailers or arrange for recycling / recovery of their waste batteries by a suitably permitted / licenced contractor. Facilities management may arrange collection, depending on the agreement.

Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive (Directive 2002/96/EC) and associated Waste Management (WEEE) Regulations have been enacted to ensure a high level of recycling of electronic and electrical equipment. In accordance with the regulations, consumers can bring their waste electrical and electronic equipment to their local recycling centre. In addition, consumers can bring back WEEE within 15 days to retailers when they purchase new equipment on a like for like basis. Retailers are also obliged to collect WEEE within 15 days of delivery of a new item, provided the item is disconnected from all mains, does not pose a health and safety risk and is readily available for collection.

As noted above, the creche tenant cannot use the civic amenity centre. They must segregate their WEEE and either avail of the take-back / collection service provided by retailers or arrange for recycling / recovery of their WEEE by a suitably permitted / licenced contractor. Facilities management may arrange collection, depending on the agreement.

Printer Cartridge / Toners

It is recommended that a printer cartridge / toner bin is provided in the creche unit, where appropriate. The creche tenant will be required to store this waste within their unit and arrange for return to retailers or collection by an authorised waste contractor, as required.

Waste printer cartridge / toners generated by residents can usually be returned to the supplier free of charge or can be brought to a civic amenity centre.

Chemicals

Chemicals (such as solvents, paints, adhesives, resins, detergents, etc) are largely generated from building maintenance works. Such works are usually completed by external contractors who are responsible for the off-site removal and appropriate recovery / recycling / disposal of any waste materials generated.

Any waste cleaning products or waste packaging from cleaning products generated in the creche unit that is classed as hazardous (if they arise) will be appropriately stored within the tenants' own space. Facilities management may arrange collection, depending on the agreement.

Any waste cleaning products or waste packaging from cleaning products that are classed as hazardous (if they arise) generated by the residents should be brought to a civic amenity centre.

Light Bulbs

Waste light bulbs (fluorescent, incandescent and LED) may be generated by lighting at the creche unit. It is anticipated that creche tenant will be responsible for the off-site removal and appropriate recovery / disposal of these wastes. Facilities management may arrange collection, depending on the agreement.

Light bulbs generated by residents should be taken to the nearest civic amenity centre for appropriate storage and recovery / disposal.

Textiles

Where possible, waste textiles should be recycled or donated to a charity organisation for reuse. Creche and residential tenants will be responsible for disposing of waste textiles appropriately.

Waste Cooking Oil

If the creche tenant use cooking oil, waste cooking oil will need to be stored within the unit on a bunded area or spill pallet and regular collections by a dedicated waste contractor will need to be organised as required. Under sink grease traps will be installed in any cooking space.

If the residents generate waste cooking oil, this can be brought to a civic amenity centre.

Furniture & Other Bulky Waste Items

Furniture and other bulky waste items (such as carpet, etc.) may occasionally be generated by the creche tenant. The collection of bulky waste will be arranged, as required by the tenant. If residents wish to dispose of furniture, this can be brought a civic amenity centre.

Abandoned Bicycles

Bicycle parking areas are planned for the development. As happens in other developments, residents sometimes abandon faulty or unused bicycles, and it can be difficult to determine their ownership. Abandoned bicycles should be donated to charity if they arise or Facilities management will arrange collection by a licensed waste contractor.

5.5 Waste Storage Area Design

The shared WSAs should be designed and fitted-out to meet the requirements of relevant design Standards, including:

- Be fitted with a non-slip floor surface;
- Provide ventilation to reduce the potential for generation of odours with a recommended 6-10 air changes per hour for a mechanical system for internal WSAs;
- Provide suitable lighting – a minimum Lux rating of 400 is recommended;
- Be easily accessible for people with limited mobility;
- Be restricted to access by nominated personnel only;
- Be supplied with hot or cold water for disinfection and washing of bins;
- Be fitted with suitable power supply for power washers;
- Have a sloped floor to a central foul drain for bins washing run-off;
- Have appropriate signage placed above and on bins indicating correct use;
- Have access for potential control of vermin, if required; and
- Be fitted with CCTV for monitoring.

The building management company, tenants and residents will be required to maintain the resident bins and storage areas in good condition as required by the FCC Waste Bye-Laws.

5.6 Facility Management Responsibilities

It shall be the responsibility of the Facilities Management Company to ensure that all waste generated by apartment residents and the crèche tenant is managed to ensure correct storage prior to collection by an appropriately permitted waste management company.

Facilities Management or the waste contractor (depending on the agreement) will be required to provide the following items

- Provision of a Waste Management Plan document, prepared by the Facilities Management Company / waste company to all apartment residential units and the creche tenant, which shall clearly state the methods of source waste segregation, storage, reuse and recycling initiatives that shall apply to the management of the development;
- Provision and maintenance of appropriate graphical signage to inform residents of their obligation to reduce waste, segregate waste and in the correct bin;
- Preparation of an annual waste management report for all apartment and creche units;
- Designation of access routes to common waste storage areas to ensure safe access from the apartment units by mobility impaired persons;
- Provision of an appropriately qualified and experienced staff member, who will be responsible for all aspects of waste management at the development;
- Inspection of waste storage areas and signing of a check list, which shall be displayed within the area; and
- Maintenance of a register, detailing the quantities and breakdown of wastes collected from the development and provision of supporting documentation by the waste collector to allow tracking of waste recycling rates.

6.0 CONCLUSIONS

In summary, this OWMP presents a waste strategy that complies with all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of 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 to reduce

waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in *the NWMPCE*.

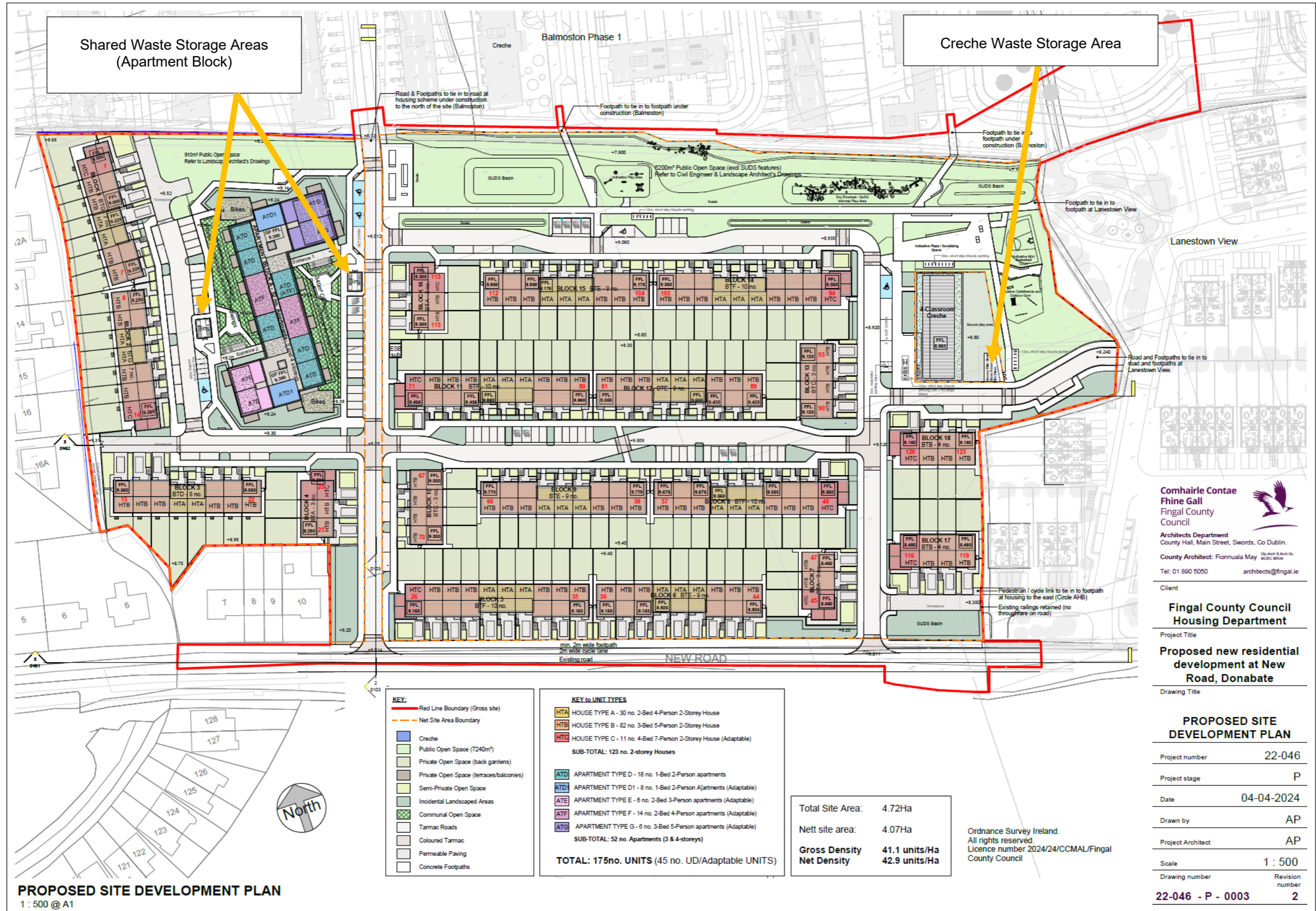
Adherence to this plan will also ensure that waste management at the development is carried out in accordance with the requirements of the *FCC Waste Bye-Laws*.

The waste strategy presented in this document will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated area for waste storage will provide sufficient room for the required receptacles in accordance with the details of this strategy.

7.0 REFERENCES

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APPENDIX A – WASTE STORAGE LOCATION



Shared Waste Storage Areas (Apartment Block)

Creche Waste Storage Area

KEY:

- Red Line Boundary (Gross site)
- - - Net Site Area Boundary
- Creche
- Public Open Space (7240m²)
- Private Open Space (back gardens)
- Private Open Space (terraces/balconies)
- Semi-Private Open Space
- Incidental Landscaped Areas
- Communal Open Space
- Tarmac Roads
- Coloured Tarmac
- Permeable Paving
- Concrete Footpaths

KEY to UNIT TYPES

- HTA HOUSE TYPE A - 30 no. 2-Bed 4-Person 2-Storey House
- HTB HOUSE TYPE B - 82 no. 3-Bed 5-Person 2-Storey House
- HTC HOUSE TYPE C - 11 no. 4-Bed 7-Person 2-Storey House (Adaptable)

SUB-TOTAL: 123 no. 2-storey Houses

- ATD APARTMENT TYPE D - 18 no. 1-Bed 2-Person apartments
- ATD1 APARTMENT TYPE D1 - 8 no. 1-Bed 2-Person Apartments (Adaptable)
- ATE APARTMENT TYPE E - 6 no. 2-Bed 3-Person apartments (Adaptable)
- ATF APARTMENT TYPE F - 14 no. 2-Bed 4-Person apartments (Adaptable)
- ATG APARTMENT TYPE G - 6 no. 3-Bed 5-Person apartments (Adaptable)

SUB-TOTAL: 52 no. Apartments (3 & 4-storeys)

TOTAL: 175no. UNITS (45 no. UD/Adaptable UNITS)

Total Site Area:	4.72Ha
Nett site area:	4.07Ha
Gross Density	41.1 units/Ha
Net Density	42.9 units/Ha

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County Council

Comhairle Contae Fhine Gall
Fingal County Council
Architects Department
County Hall, Main Street, Swords, Co. Dublin.
County Architect: Fionnuala May
Tel: 01 890 5050 architects@fingal.ie

Client
Fingal County Council Housing Department

Project Title
Proposed new residential development at New Road, Donabate

PROPOSED SITE DEVELOPMENT PLAN

Project number	22-046
Project stage	P
Date	04-04-2024
Drawn by	AP
Project Architect	AP
Scale	1 : 500
Drawing number	22-046 - P - 0003
Revision number	2

APPENDIX B – WASTE VEHICLE TRACKING EXERCISE

