

**OPERATIONAL
WASTE MANAGEMENT PLAN**

FOR

**CAIRN HOMES PROPERTIES LTD
45 MESPIL ROAD
DUBLIN 4**

**RELATING TO A PROPOSED
RESIDENTIAL DEVELOPMENT**

AT

**CLONBURRIS SDZ
PHASE T2**

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1.0 INTRODUCTION

This document presents the Operational Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with the proposed residential development at the Clonburris SDZ, Co. Dublin.

The development will consist of the construction of a mixed-use development comprising 594 no. apartments, office floorspace, 4 no. retail units, a creche and urban square in the Clonburris Development Areas CUCS3 & CSW-S3 of the Clonburris SDZ Planning Scheme 2019 as follows:

A 594 no. apartments (255 no. 1 bedroom apartments, 307 no. 2 bedroom apartments and 32 no. 3 bedroom apartments (all apartments to have terrace or balcony; ancillary communal amenity spaces in Block D and Block F for residents) as follows; Block A (4 and 6 storeys with undercroft) comprises 96 no. apartments consisting of 36 no. 1-bedroom apartments, 48 no. 2-bedroom apartments and 12 no. 3-bedroom apartments (with creche c. 609 sq. m at ground and first floor as well as play area; Block B (6 storeys) comprises 77 no. apartments consisting of 44 no. 1-bedroom apartments, 28 no. 2-bedroom apartments and 5 no. 3-bedroom apartments; Block D (5 and 7 storeys) comprises 71 no. apartments consisting of 39 no. 1-bedroom apartments and 32 no. 2-bedroom apartments; Block E (6 storeys) comprises 100 no. apartments consisting of 47 no. 1-bedroom apartments, 48 no. 2-bedroom apartments and 5 no. 3-bedroom apartments; Block F (5 and 7 storeys) comprises 124 no. apartments consisting of 57 no. 1-bedroom apartments, 61 no. 2-bedroom apartments and 6 no. 3-bedroom apartments; Block G (1, 2 and 4 storeys) comprises 65 no. apartments consisting of 16 no. 1-bedroom apartments, 45 no. 2-bedroom apartments and 4 no. 3-bedroom apartments; Block H (4 storeys) comprises 61 no. apartments consisting of 16 no. 1-bedroom apartments and 45 no. 2-bedroom apartments.

B Mixed use development comprising, commercial office development in Block C of 7 no. storeys (c. 4,516 sq.m), 1 no. retail unit at ground floor of Block B (c.147.5 sq. m) and 3 no. retail units at ground floor of Block E as follows (c.106.2 sq.m, c.141.6 sq.m and c.492.2 sq.m respectively) as well as a creche (c. 609 sq. m) at ground floor and first floor of Block A;

C Vehicular access will be from the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 to the east;

D Public Open Space/landscaping of c. 0.5047 hectares (to include urban square) as well as a series of communal open spaces to serve apartments over undercroft level and surface level.

E The development will also provide for all associated works and infrastructure to facilitate the development to include all ancillary site development works including footpaths, landscaping boundary treatments, public, private open space areas, car parking (396 no. spaces in a mixture of undercroft spaces Block A, Block B&D and Block E&F) and bicycle parking (1,232 no. spaces at undercroft and surface levels), single storey ESB substations/bike/bin stores, green roofs, solar panels at roof level of apartments, plant areas within blocks and all ancillary site development/construction works;

F Permission is also sought for connection to water supply, and provision of foul drainage infrastructure.

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 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 in accordance with the current *Eastern-Midlands Region Waste Management Plan* (Note Regional Waste Management Plans are currently under review and future publications shall be integrated into the OWMP).

The OWMP shall be integrated into the design and operation of the development to ensure the following:

- That sufficient waste management infrastructure is included in the design of the development to assist residents minimise the generation of mixed waste streams.
- That the principle of waste segregation at source is the integrated into the development by the provision of 3-bin systems in all residential units.
- 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.
- That the Facilities Management Company will manage communal wastes storage areas and provide annual bulky waste collection services to facilitate all residents of the development.

2.0 WASTE MANAGEMENT POLICIES AND GUIDANCE

This OWMP has been prepared with regard to waste management objectives and development standards contained in South Dublin County Development Plan 2022-2028 as follows:

Chapter 11 of the South Dublin County Development Plan 2022 - 2028 – includes the following Objectives relating to Domestic Waste Management.

IE7 Objective 2 *To support the implementation of the Eastern Midlands Region Waste Management Plan or as amended by adhering to overarching performance targets, policies and policy actions.*

IE7 Objective 7 *To require the appropriate provision for the sustainable management of waste within all developments ensuring it is sustainably designed into the development including provision of facilities for the storage, separation and collection of such waste.*

Chapter 12 Implementation and Monitoring Development Standards - 12.11.3 (ii) Waste Management – Design and Siting of Refuse Storage, Recycling and Bring Bank Facilities in Developments

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 the 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 guidelines 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;*
- *Access to private waste storage in residential schemes should be restricted to residents only.*

The OWMP has been designed with regard to *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. 2020 which is reproduced below.*

Refuse Storage

- 4.8 Provision shall be made for the storage and collection of waste materials in apartment schemes. Refuse facilities shall 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.
- 4.9 The following general design considerations 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.

This OWMP has been prepared with regard to *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 building.

3.0 KEY ASPECTS TO ACHIEVE WASTE TARGETS

The OWMP is defined by the following stages of waste management with regard to the Circular Economy and the Waste Hierarchy

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

The Key Aspects that are designed into the development are:

- 3-Bin systems to encourage waste segregation at source
- Communal Bin Store to provide for Organic, Recyclable, Mixed Waste, Glass and WEEE waste storage
- Residents to be provided with a Bulky Waste collection service

The Circular Economy

Ireland's national waste policy is 'A Waste Action Plan for A Circular Economy – Ireland's National Waste Policy 2020 – 2025'. The policy, published September 2020, is intended to move Ireland toward a circular economy in which focus is shifted away from waste disposal, favouring circularity and sustainability by identifying and maximising the value of material through improved design, durability, repair and recycling. By extending the time resources are kept within the local economy, both environmental and economic benefits are foreseen.

The OWMP complies with the waste hierarchy whereby waste prevention is the most preferred strategy. Where waste generation is unavoidable, re-use is the most preferred fate, followed by recycling and then energy recovery, with disposal (e.g. to landfill) being the least preferred fate.



4.0 WASTE SEGREGATION AT SOURCE IN RESIDENTIAL UNITS

The design of all dwellings shall include sufficient internal kitchen space for the segregation and storage of up to 10kg of general unrecyclable waste, green recyclable waste and organic waste in a 3-bin system.

Image of typical Domestic kitchen 3 bin systems to segregate waste at source



Image of typical Domestic kitchen 3 bin systems to segregate waste at source



5.0 APARTMENT COMMUNAL WASTE STORAGE AREAS

The apartment blocks shall be served by a communal waste storage area and shall include clearly visible guidelines on the appropriate segregation of different waste types.

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

The communal 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 areas shall be passively / mechanically ventilated.
- 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 by mobility impaired persons.
- The waste storage area shall be no more than 50m from any apartment/duplex unit.
- A dedicated and clearly labelled area shall be provided in which mobility impaired persons may place wastes into receptacles at a lower level which will be subsequently transferred to the bulk storage bins on a weekly basis by the Facilities Management Company.
- The waste storage area shall include ground drainage to sewer 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.
- The communal waste storage area shall contain a brown organic waste bulk bins. Appropriate signage shall be placed on all brown bins informing residents of the exact nature of organic waste that can be placed in the bin. Signage will also state that all organic waste must be placed within biodegradable bags before placing in the bulk bin.
- The communal waste storage area shall contain a biodegradable waste bag dispenser which will facilitate and encourage residents of apartments and duplexes to separately segregate food and organic waste within their apartments in a dedicated bin.

Image of a typical communal waste storage area



A battery box and a WEEE Bin shall also be provided in the communal waste storage areas, an example of which is shown in the following image. This shall be managed by a specialist waste contractor who will be responsible for its routine collection.

WEEE RECYCLING CAGE

Available **FREE** for small weee collections

Portable and mobile unit

Can be secured in-doors

FREE collection when full

wEEE ireland

RECYCLE FOR GOOD

Lo-call 1890 253 252,
email operations@weeireland.ie
or visit www.weeireland.ie

The communal waste storage area shall also contain glass recycling bins. This will allow glass to be diverted away from general waste.



6.0 APARTMENT COMMUNAL WASTE STORAGE AREA DESIGN

The Apartment Blocks shall have communal bin storage areas which shall be of sufficient size to house the required number of 1100 litre bulk bins as detailed in Table 2 below.

The area of a standard 1100 litre bulk bin is 1.8m².
The area of a standard 240 litre glass bin is 0.43m².

To allow free access to the bins and provide sufficient space for their movement and to provide contingency capacity, the required bin store area = bin floor area x 1.5.

Table 2 Communal Residential Bin Store Minimum Area Requirements

Apartment Block	Minimum Bin Storage Area (m ²)
A	50
B	29
D	28
E	29
F	40
G+H	98

The communal bin stores as designed exceed the minimum area requirement thus contingency space is available.

7.0 CRECHE WASTE MANAGEMENT

Waste generated by the creche shall be managed by the operators of the creche who shall engage a commercial waste contractor to collect waste generated.

Waste shall be stored within a dedicated, separate and lockable commercial waste area at ground level and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste. Glass bins and WEEE cages shall also be provided in the bin store.

8.0 RETAIL WASTE MANAGEMENT

Waste generated by the retail units shall be managed by the operators of each unit who shall engage a commercial waste contractor to collect waste generated.

Waste shall be stored within a dedicated, separate and lockable commercial waste area at ground level. Compactors may be utilised to reduce the volume of waste materials including paper/cardboard and plastics and to reduce the frequency of collection vehicle trips.

9.0 OFFICE/EMPLOYMENT WASTE MANAGEMENT

Waste generated by the office units shall be managed by the operators of each unit who shall engage a commercial waste contractor to collect waste generated.

Waste generated from these units shall be stored within a dedicated, separate and lockable commercial waste area at ground level and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste. Glass bins and WEEE cages shall also be provided in the bin store.

9.1 Methods of waste reduction in Offices

The principal types of waste generated in an office environment are:

- Paper & Cardboard
- Ink and Toner Cartridges
- WEEE
- Bulky Waste (e.g., Furniture)
- Plastic packaging

In order to reduce the generation of office waste and to maximise the opportunities to recycle office waste, the following Best Practices shall be adopted by the Tenants of the Office Spaces:

- Remove individual desk bins, consolidating collection in common areas with labelled waste containers using example pictures and colour coding.
- Single use cups, plates and tableware including plastic water cups shall not be permitted as part of Tenant lease agreement.
- Company branded promotional materials can be a significant source of waste. Consider reducing or eliminating paper brochures and leaflets, plastic pens, and other single use or non-recyclable items.
- Avoid unnecessary printing
- Avoid unnecessary colour printing
- Print on both sides of the page
- Reduce font size to reduce paper
- Implement a Green Purchasing Policy

Image of a Typical Office waste segregation bin system



Table 3 Non Domestic Bin Store Minimum Area Requirements

Block	Minimum Bin Storage Area (m²)
A Creche	25
B Retail	26
C Office/Retail	25
D Retail	30
E Retail / Creche	120

10.0 RESIDENTIAL AMENITY AREAS WASTE MANAGEMENT

Waste generated in the internal and external residential amenity areas and spaces shall be managed by the Facilities Management Company who shall ensure there are sufficient 3-bin systems located in each area for easy and clear segregation by residents, an example of which is shown below.

Image of amenity areas waste segregation recycling bin system



11.0 WASTE MANAGEMENT DUTIES OF THE FACILITY MANAGEMENT COMPANY

Waste Management & Record Keeping

The Facilities Management Company shall maintain a weekly register detailing the quantities and breakdown of general mixed domestic waste, recyclable waste and organic waste wastes removed from the apartment aspect of 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 and future targets.

The Facilities Management Company shall prepare an annual information report for all apartment residents 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.

Annual Bulky Waste Collections

The Facilities Management Company shall provide a bulky waste collection and transport service to all residents of the development 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 illegal waste collections and fly-tipping in the local area.

12.0 GENERATED WASTE QUANTITIES

British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice states that 70 litres of waste are generated per bedroom per week.

As the subject apartment development includes 965 no bedrooms, the calculated waste generated per week will be 67,550 litres or 67.55m³.

13.0 WASTE COLLECTION STRATEGY

All bulk waste bins shall be brought from the communal bin storage areas to the designated demarcated bin collection areas within the development at road-level by the Facilities Management staff.

Emptied bins shall be returned to the bin storage areas immediately following collection. Appendix I presents the waste collection vehicle dimensions and turning dimensions.

Table 4 Domestic Bin Collection Point Minimum Area Requirements

Block	Minimum Bin Collection Area (m²)
A	9
B	5
D	5
E	9
F	11
G	5
H	5

Image of bin transport from bin stores to collection point



14.0 CONCLUSIONS

The proposed residential development at Clonburris SDZ Phase T2 shall be designed and managed to provide residents and commercial tenants with the required waste management infrastructure to minimise the generation of un-segregated domestic waste and maximise the potential for segregating and recycling domestic waste fractions.

The **Objective** of this Waste Management Plan is to maximise the quantity of waste recycled by residents 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 and future targets in subsequent Regional Waste Management Plans.

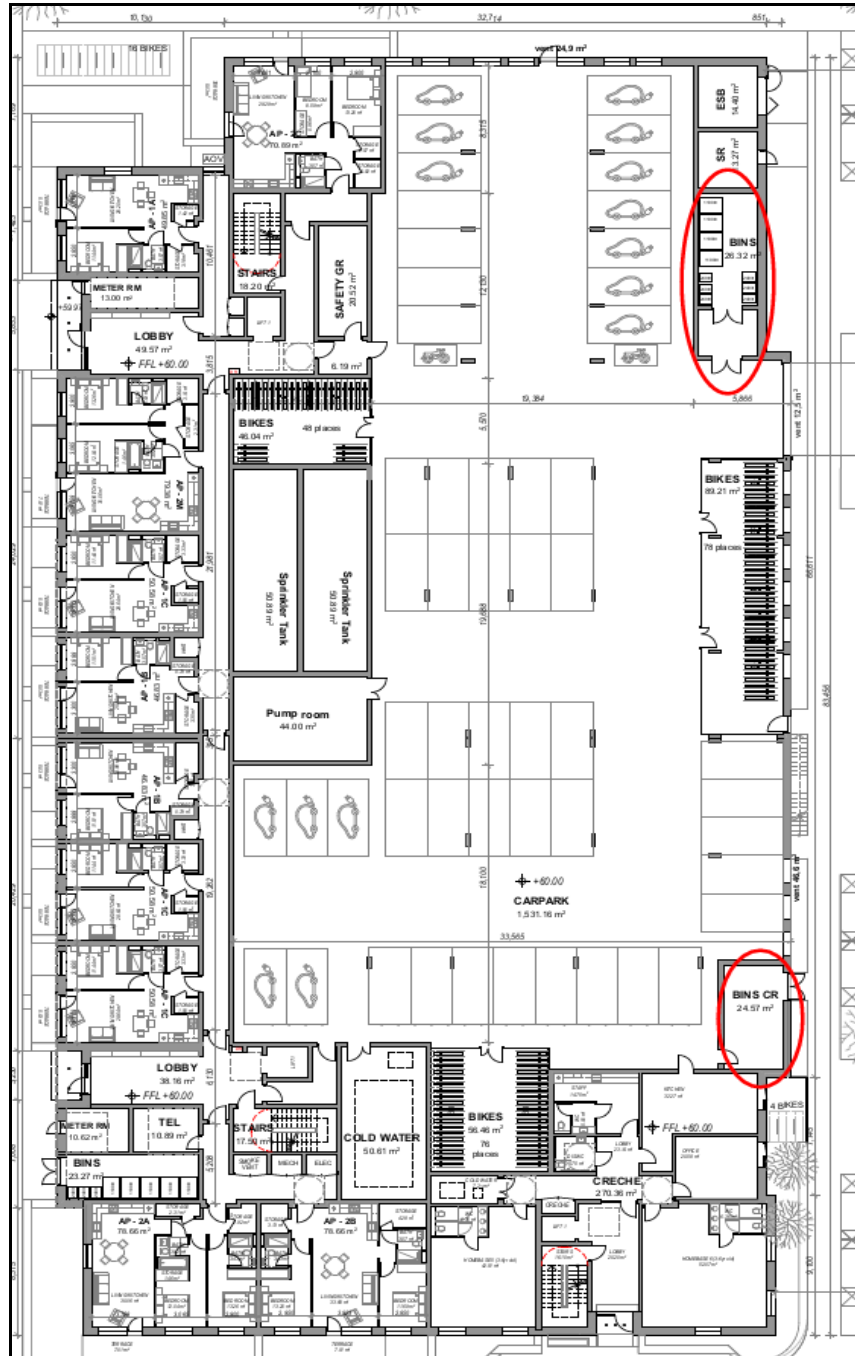
Residents of apartments will be provided with waste recycling and waste disposal information by the site's Facility Management Company who will be responsible for providing clean, safe and mobility impaired accessible communal waste storage areas.

The Facility Management Company shall maintain a register of all waste volumes and types collected from the apartment development each year including a break-down of recyclable waste and where necessary, shall introduce initiatives to further encourage residents to maximise waste segregation at source and recycling. They shall also provide an annual bulky waste collection service for all residents.

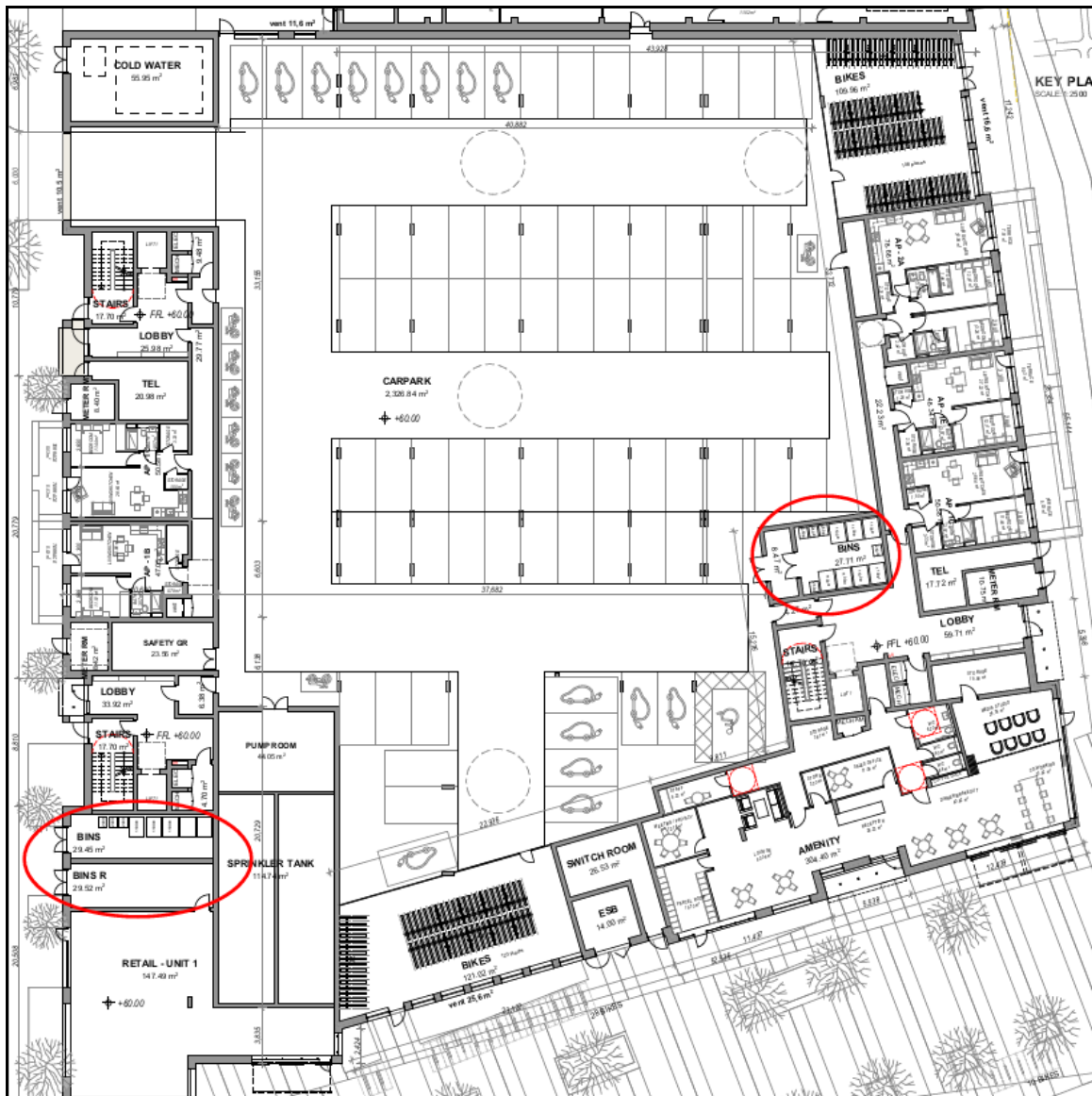
The development shall be designed to provide segregation at source bin systems in each dwelling. This will promote the appropriate segregation at source of domestic generated waste from all residential units at the development.

APPENDIX I Communal Bin Store Locations

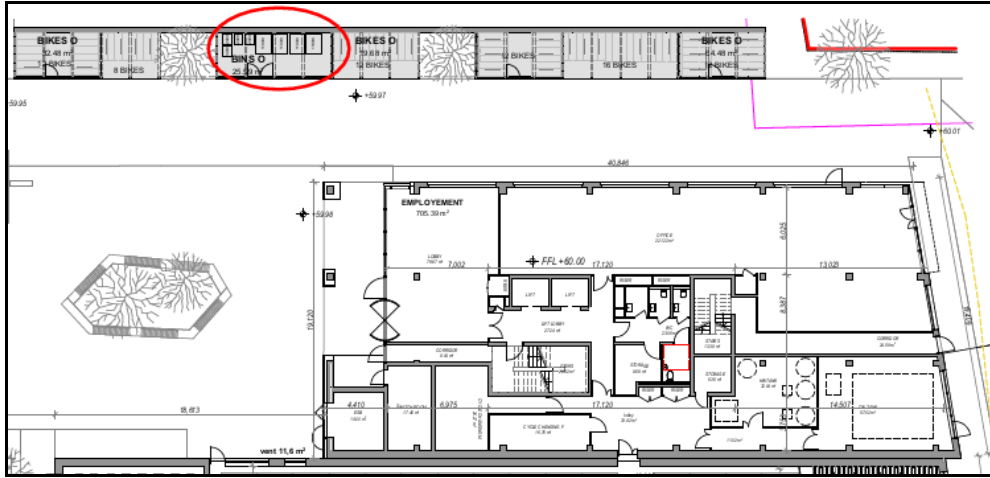
Block A



Blocks B & D



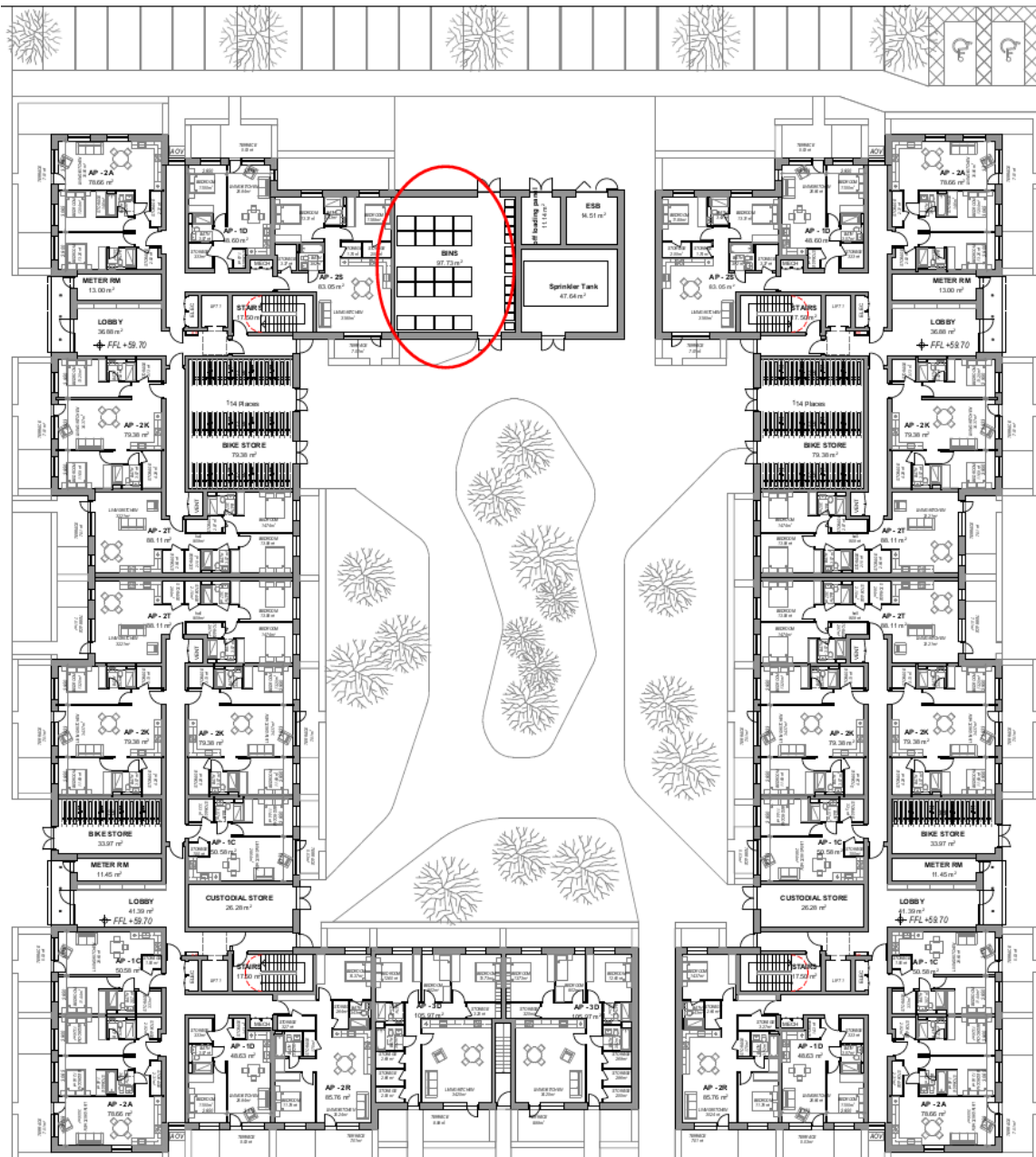
Block C



Blocks E & F



Blocks G&H



APPENDIX II

Bin Collection Vehicle dimensions and minimum turning requirements

