



ROYAL ARSENAL RIVERSIDE
THE ROPEYARDS
PLOTS D & K

OPERATIONAL WASTE
MANAGEMENT STRATEGY

To Support a Reserved Matters
Application

MARCH 2024



Operational Waste Management Strategy

Royal Arsenal Riverside, The Ropeyards, Plots D &K

Iceni Projects Limited on behalf of
Berkeley Homes (East Thames) Ltd

March 2024

ICENI PROJECTS LIMITED
ON BEHALF OF BERKELEY
HOMES (EAST THAMES)
LTD

Iceni Projects

London: Da Vinci House, 44 Saffron Hill, London, EC1N 8FH
Birmingham: The Colmore Building, 20 Colmore Circus Queensway, Birmingham, B4 6AT
Edinburgh: 11 Alva Street, Edinburgh, EH2 4PH
Glasgow: 177 West George Street, Glasgow, G2 2LB
Manchester: WeWork, Dalton Place, 29 John Dalton Street, Manchester, M2 6FW

t: 020 3640 8508 | w: iceniprojects.com | e: mail@iceniprojects.com
linkedin: [linkedin.com/company/iceni-projects](https://www.linkedin.com/company/iceni-projects) | twitter: @iceniprojects

Operational Waste Management
Strategy
ROYAL ARSENAL RIVERSIDE, THE ROPEYARDS,
PLOTS D &K

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1. EXECUTIVE SUMMARY

- 1.1 Icen Projects Ltd was commissioned by Berkeley Homes (East Thames) Ltd to produce an Operational Waste Management Strategy to support the Reserved Matters Application (RMA) for Royal Arsenal Riverside, The Ropeyards, Plots D &K.
- 1.2 With reference to the policy requirements, guidance and industry best practice detailed in Section 3, anticipated arisings have been determined on the basis of relevant data and the Proposed Development mix. Waste storage areas and locations are subsequently set out in order to demonstrate compliance with local authority policy requirements and relevant standards.
- 1.3 An Operational Waste Management Strategy utilising traditional wheeled bins is proposed. The Proposed Development is anticipated to produce approximately 190,500 litres of waste from residential uses per week.
- 1.4 Residential waste storage will consist of separate 1,110 litre Eurobins for refuse and dry recyclables, and 500 litre wheeled bins for compostable waste, in accordance with local authority guidance. Waste stores have been located within the curtilage of the residential buildings at ground level to ensure easy access for both residents and waste collection operatives.
- 1.5 The Proposed Development will include flexible commercial/community space. These spaces are anticipated to produce approximately 11,466 litres of refuse and recycling per week. Waste storage for these commercial spaces will consist of 1,100 litre Eurobins and 500 litre wheeled bins to be collected by a contractual arrangement. The waste storage areas will be located within the curtilage of the buildings for ease of use and to ensure accessibility for commercial waste collection operatives.
- 1.6 This Strategy therefore demonstrates that the Proposed Development has been designed to be compliant with the relevant waste management policies that are set out within this report, and will manage and dispose of waste in a sustainable manner.

2. INTRODUCTION

2.1 Icen Projects Ltd was commissioned by Berkeley Homes (East Thames) Ltd to produce an Operational Waste Management Strategy to support the Reserved Matters Application (RMA) for Royal Arsenal Riverside, The Ropeyards, Plots D &K.

Report Objective

2.2 This document details the operational waste management measures adopted by the proposed development of The Ropeyards, Royal Arsenal Riverside and gives an overview of the design proposals that will ensure that operational waste will be stored, collected and disposed of effectively over the lifespan of the scheme, within guidelines set out by the Royal Borough of Greenwich Council.

2.3 The report is structured to meet these guidelines as follows:

- Section 3 discusses the planning context and policies which are relevant to operational waste management;
- Section 4 discusses the development response to the policy drivers for operational waste management; and
- Section 5 summarises the development's design response.

Site and Surroundings

2.4 The Site is located on the western edge of the wider Royal Arsenal Riverside masterplan and is approximately 2.3 ha. The Site currently sits on a temporary park and is bound to the south by the A206, the RAR A & B Blocks to the north (and north east) and RAR Phase 3, the Brass Foundry and The Guard House to the west.

2.5 Beyond the immediate site boundaries, to the north of the site is the River Thames and to the south and south east of the site is Woolwich Town Centre including the main shopping area along Powis Street, General Gordon Square, the Woolwich Arsenal Overground Train Station and the Woolwich DLR Station.

The Proposed Development

2.6 The description of development is as follows:

“Submission of Reserved Matters (Appearance, Landscaping, Layout and Scale) pursuant to Condition 2 of planning permission reference 16/3025/MA, dated

17.03.2017, for residential units and non-residential floorspace within Plots D and K, along with public / private landscaping details, car / cycle parking, refuse / recycling facilities and play provision."

2.7 The following mix of residential dwellings and commercial space will be delivered:

- 35 no. studio apartments;
- 253 no. 1-bedroom 2-person apartments;
- 125 no. 2-bedroom 3-person apartments;
- 180 no. 2-bedroom 4-person apartments;
- 70 no. 3-bedroom 5-person apartments; and
- Up to 983.1 sqm of flexible commercial and community uses.

3. PLANNING AND REGULATORY CONTEXT

3.1 The means of sorting, storing and collecting operational waste are incorporated within policy and regulation as set out below:

Regional

The London Plan (Adopted March 2021)

3.2 The London Plan outlines the Mayor's commitment to creating a low carbon circular economy, in which the greatest possible value is extracted from resources before they become waste, as this is not only socially and environmentally responsible, but will save money and limit the likelihood of environmental threats affecting London's future. The following London Plan policies are relevant to waste:

3.3 **Policy SI7 (Reducing waste and supporting the circular economy)** states that resource conservation, waste reduction, increase in material re-use and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:

- Promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible;
- Encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of goods;
- Ensure that there is zero biodegradable or recyclable waste to landfill by 2026;
- Meet or exceed the municipal waste recycling target of 65 per cent by 2030;
- Meet or exceed the targets for each of the following waste and materials streams:
 - Construction and demolition – 95 per cent reuse/recycling/recovery
 - Excavation – 95 per cent beneficial use
- Design developments with adequate, flexible, and easily accessible storage space and collection systems and that supports the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food waste, as well as residual waste.

- 3.4 **Policy D6 (Housing quality and standards)** states that housing should be designed with adequate and easily accessible storage space that that supports the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food waste, as well as residual waste.

Local

- 3.5 The Royal Arsenal Masterplan development is located in the Royal Borough of Greenwich (RBG) and key RBG guidance and policy requirements are detailed below.

Royal Borough of Greenwich Recycling and Waste Collection

- 3.6 RBG currently collects residual, recycling and food waste from residential developments on a weekly basis. Services for the collection of Waste Electrical and Electronic Equipment (WEEE) and textiles are also available for flatted developments.
- 3.7 Waste from commercial properties can be collected by RBG, with a range of container options and collection frequencies to suit all types of premises. Collections can be arranged with RBG via email (business-recycling@royalgreenwich.gov.uk) or telephone (020 8921 4661). Commercial properties may also arrange collections via an alternative fully licensed private waste collection firm, as long as they are licensed by the Environment Agency.

Royal Greenwich Local Plan 2014 – 2028 (2014)

- 3.8 **Policy IM2 Waste Apportionment:** details waste management cooperations. The Royal Borough will contribute to the sustainable management of waste in Royal Greenwich by working with the other south east London Boroughs, pooling the Boroughs' waste allocations and identifying sites within the sub-region that will meet the combined London Plan waste apportionment figure. All existing waste transfer and management sites will be safeguarded for waste management use, unless appropriate compensatory provision is made in appropriate locations.
- 3.9 **Policy H5 Housing Design:** New residential development, redevelopment, refurbishment or conversions will be expected to achieve a high quality of housing design and an integrated environment including:
- xi. Adequate provision for waste recycling.
- 3.10 **Policy DH1 Design:** All developments are required to be of a high quality of design and to demonstrate that they positively contribute to the improvement of both the built and natural environments:
- x. demonstrate on-site waste management including evidence of waste reduction, use of recycled materials and dedicated recyclable waste storage space.

Royal Borough of Greenwich New Developments: Guidance Notes for the storage and collection of waste and recycling materials

3.11 The Royal Borough of Greenwich New Developments: Guidance Notes for the storage and collection of waste and recycling materials document provides guidelines for architects and developers of new residential, commercial and mixed-use units in the Royal Borough of Greenwich, to ensure that the arrangements for storing, collecting and managing waste are appropriate.

3.12 The guidance states that the following waste storage capacity should be provided per dwelling for residual, recycling, and organic waste:

Table 3.1 Royal Borough of Greenwich Waste Storage Requirements

Number of properties using bin store	1,100 litre Recycling Bins	1,100 litre Residual Bins	500 litre Organic Bins
Up to 8	1	1	1
9 – 16	2	2	1
17 – 24	3	3	1
25 – 32	4	4	1
33 – 40	5	5	1
41 – 48	6	6	1
49 – 56	7	7	1
57 – 64	8	8	1
65 – 72	9	9	1
73 – 80	10	10	1
81 – 88	11	11	1
89 – 96	12	12	1
97 – 104	13	13	1

3.13 Communal bin storage areas must be accessible and convenient to all households, so that waste disposal and recycling does not become an effort for residents. They should be within close walking distance to each residential building (no more than 30m horizontal travel from flat to bin), which should be accessed enroute to or from the development’s car park or main pedestrian exit. If the chamber is attached to the building, then developers should ensure that an internal door is provided for residents to access the bin store from within the building, without having to go outside.

3.14 The guidance also outlines the following design features that should be integrated within the communal bin storage areas:

- Storage space should be designed with sufficient space to accommodate euro bins “side by side” and not “end to end”, facilitating access to the front edge of the lid for easy opening and access to the recycling aperture. The ceiling height of any enclosure should take into account

opening of the full opening of the lid. Residents should be able to access all containers within a store without having to move them.

- Any doors through which bins are manoeuvred need to be of a durable and hard-wearing construction as they may potentially be knocked during collection activities. Doors will need to double, and open outwards rather than into the chamber to allow maximum access and manoeuvring space. The storage chamber should have a water supply for cleaning, drainage, impermeable floor and adequate lighting for use at nighttime by residents. Ventilation should be provided where possible.
- When moving containers from the bin store to the collection vehicle, operatives should not be required to manoeuvre bins through more than one set of double doors.
- The Council supports bin store design which shows consideration to future flexibility in waste collection across the expected life of the building. Changes in the use and function of the waste storage areas may occur throughout the lifespan of the building due to changing waste disposal trends, changes in legislation or changes in the council collection regime.

3.15 With respect to the collection of waste, the following guidance is provided:

- Waste storage areas accessible from the street must be fitted with a lockable door with either a key, fob or entry code pad to reduce the risk of antisocial behaviour and maintain security of the building.
- Access for waste collection should be maintained between the hours of 06:00 and 21:00.

Other Considerations

British Standard 5906:2005

3.16 The Standard provides a code of practice for the storage, collection, segregation for recycling and recovery, and on-site treatment of waste. It applies to new buildings, refurbishments and conversions of residential and non-residential buildings. The Standard also presents typical weekly waste airings and subsequent storage requirements for a variety of building types, as shown below:

Table 3.2 Waste volume calculations for relevant non-domestic uses proposed for the Site

Building Type	Equation for weekly waste arisings (litres)
Industrial	Volume per m ² of floor area [5 l] x floor area
Retail	Volume per m ² of sales area [10 l] x sales area
Leisure	Volume per m ² of floor area [5 l] x floor area
Restaurant	Volume per number of covers [75 l]

4. OPERATIONAL WASTE MANAGEMENT

- 4.1 The operational waste management strategy for the Proposed Development has been assessed using the waste hierarchy methodology. This approach is consistent with that required by the Council, requiring new development to demonstrate how the scheme addresses waste separation, storage and collection.
- 4.2 For the Proposed Development, it is intended that a strategy utilising traditional wheeled bins will be adopted. The adoption of this waste management strategy will aid in maximising the area of landscaped open space provided as part of the Proposed Development, whilst also maximising pedestrian and cycle permeability through the Site.
- 4.3 The waste management strategy for the Proposed Development is outlined below, with residential and non-domestic uses addressed separately.

Residential Operational Waste Management Strategy

- 4.4 In order to facilitate easy sorting of waste streams for residents, each dwelling will be fitted with a three-compartment waste bin, with each compartment corresponding to the relevant waste stream to be collected by the Council. This will maximise the potential for residents to correctly sort waste within their home. Guidance for waste stream sorting and collection will be provided in the home user manual.
- 4.5 The anticipated arisings from the residential component of the Proposed Development are shown in the table below, based on the Council's waste capacity guidelines detailed in Section 3.

Table 4.1 Domestic weekly waste arisings

Building	Number of homes	Weekly arisings (litres)		
		Refuse	Dry recyclables	Compostable (without garden waste)
D1	83	12,100	12,100	500
D2	48	6,600	6,600	500
D3	136	18,700	18,700	500
D4	120	16,500	16,500	500
D5	101	14,300	14,300	500
K3 K4	90	13,200	13,200	500
K5	85	12,100	12,100	500
Total	663	93,500	93,500	3,500

4.6 When internal bins are full, residents will transfer their waste to a dedicated storage area, located within the curtilage of their building on the ground floor. In accordance with the Council's waste collection requirements, waste storage bins are defined by the waste stream as follows:

- Refuse: 1,100 litre Eurobins
- Dry recyclables: 1,100 litre Eurobins
- Compostable (without garden waste): 500 litre wheeled bins

4.7 Table 4.2 below details the dimensions of the bin type proposed for use in the residential element of the scheme.

Table 4.2 Domestic waste storage dimensions

	1,100 litre Eurobin	500 litre wheeled bin
Height (mm)	1,410	1,090
Width (mm)	1,265	1,270
Depth (mm)	1,000	720

4.8 The table below shows the number of Eurobins required in each location, and the associated minimum area required for the bin store, excluding circulation space. The below assumes both residual and recycling waste streams will be collected by the Council on a weekly basis.

Table 4.3 Domestic waste storage requirements

Location	Storing refuse for buildings	No. of dwellings	No. of 1,100 litre residual Eurobins	No. of 1,100 litre recycling Eurobins	No. of 500 litre wheeled bins	Min. area of store (m ² ; excluding circulation space)
Building D1	Building D1	83	11	11	1	37.03
Building D2	Building D2	48	6	6	1	20.76
Building D3	Building D3	136	18	18	1	59.82
Building D4	Building D4	120	14	14	1	46.80
Building D5	Building D5	101	13	13	1	43.54
Central Waste Store	Buildings A1 to A6	768	105	105	10	236.3
Building K3 K4	Building K3 K4	90	12	12	1	40.29
Building K5	Building K5	85	11	11	1	37.03

4.9 Locations of the bin storage areas, where all bins will be stored, are shown in Appendix A2. A total of nine waste storage locations will be provided, with weekly waste arisings to be collected by the

Council’s waste operatives from all nine of these locations on a weekly basis, accounting for a weekly transfer of waste from Buildings A1 to A6 to the central waste storage area provided between Buildings D2 and D3 (Central Waste Store) by the estate management team, in line with the strategy set out under the original planning permission (ref. 16/3025/MA, with further details provided under planning application ref. 21/0720/SD). It should be noted that the number of waste containers located within the Central Waste Store is equal to approximately half the total number of waste containers to be provided for Buildings A1 to A6, as the waste containers located within Buildings A1 to A6 will be transferred to the Central Waste Store once per week to enable the collection of the waste by the Council. The bins containing the separate waste streams will be transferred in line with the nominated collections days, such that only half of the number of bins required to serve Buildings A1 to A6 will need to be located within the Central Waste Store at any one time.

- 4.10 As required by the Council, the bin storage areas are within 30m walking distance of the front door of the buildings. Collection vehicles will have clear access to any bin. Waste operatives will not be required to manoeuvre the bins more than 10m from the external door of the storage areas to the refuse collection vehicle. As noted above, in order to ensure the Council’s waste operatives are not required to manoeuvre Eurobins in excess of 10m, it is intended that waste collected in Buildings A1 to A6 will be transferred to a Central Waste Store between Buildings D2 and D3 on a weekly basis by the estate management team where it will be collected by the Council’s waste operatives on a weekly basis.
- 4.11 The turning circle for the vehicle is quoted as 16.1 metres and in-roads are able to accommodate this. The area where the vehicle will be stationed for collections will be appropriately surfaced to withstand the weight of the collection vehicle. Details of the collection vehicle are provided in Appendix A3. It is highlighted that all refuse collections for the proposed development will be made within the site, away from public highways.
- 4.12 Bulky waste will be accommodated within the dedicated bulky waste storage areas on the ground floor. These spaces are to be communal, and co-located with a waste storage area, and will also house waste receptacles for the collection of Waste Electrical and Electronic Equipment (WEEE) and textiles, in line with the guidance set out by the Royal Borough of Greenwich. The locations of the bulky waste storage areas are shown in the drawings provided in Appendix A2, and the areas to be provided for each building are summarised below.

Table 4.4 Bulky waste storage provision

Building	Number of dwellings	Min. area of bulky waste store (m ²)
D1	83	16.30
D2	48	
D3	136	
D4	120	

Building	Number of dwellings	Min. area of bulky waste store (m ²)
D5	101	
K3 K4	90	17.00
K5	85	

- 4.13 It is expected that, through the provision of spaces for the dedicated storage of bulky waste items, the potential for the fly tipping of waste within the proposed development will be mitigated. The provision of bulky waste storage areas will enable the storage of large items, such as tables and chairs, prior to their collection for disposal by the Council.

Non-Domestic Operational Waste Management Strategy

- 4.14 Approximately 983.1 sqm of flexible space for commercial uses (Class E) is to be delivered as part of the Proposed Development. At this stage, the end users of the proposed flexible spaces are not known. Based on the information provided in BS 5906:2005 and through the application of indicative uses, the waste arisings from the non-residential elements are provided in the table below. Full details of the calculations are provided in Appendix A4.

Table 4.5 Non-domestic weekly waste arising

Location	Use	GIA (m ²)	Type	Weekly waste volume (litres)	Proportion of waste stream		
					Residual	Recycling	Food
Building D3	Flexible	305	Gym / Café*	7,625	20%	50%	30%
Building D5	Flexible	408	Industrial**	2,040	50%	50%	
Building K3	Flexible	158.8	Retail***	1,059	50%	50%	
Building K5	Flexible	111.3	Retail***	742	50%	50%	

* For the purposes of this Operational Waste Management Strategy, it has been assumed that the total space provided within the flexible commercial space will be occupied by café uses, to demonstrate the worst-case scenario. It is understood that this flexible commercial space will be occupied by a gym with a café, therefore whilst the actual volume of waste arising from this combination of uses is likely to be less than that reported in the table above, the waste management principles set out here will continue to be applicable.

** It is noted that no traditional industrial spaces will be provided as part of the development, but that flexible commercial / community spaces will be delivered. The volumes of waste noted above have been calculated in line with those presented in Table 3.2 above, where "industrial" uses are considered to most appropriately represent the flexible uses to be brought forward as part of the development.

*** The flexible commercial spaces within Buildings K3 and K5 are envisaged to be occupied by either office or retail uses. For the purposes of this Operational Waste Management Strategy, it has been assumed that these spaces will be occupied by retail uses, as this demonstrates the worst-case scenario. Whilst the actual volume of waste arising were the spaces to be occupied by office uses instead would likely to be less than that reported in the table above, the waste management principles set out here will continue to be applicable.

4.15 It should be noted that, whilst the nature and end users of the flexible spaces to be provided as part of the proposed development have not yet been confirmed, the waste arisings are expected to include refuse and recycling waste, with food waste also potentially arising. The strategy outlined here will ensure that the waste arisings will be stored in bins proportionate to the volume of waste produced, and will be applicable to any use falling with the flexible commercial/community uses class that may come forward. The proposed provision of 1,100 litre Eurobins and 500 litre wheeled bins as part of the non-domestic waste strategy will ensure all potential uses within these spaces will be catered for with respect to operational waste management.

4.16 The bins will be located within specific stores within the curtilage of the flexible commercial/community spaces, as shown in the proposed ground floor plan included at Appendix A2, and will be accessible to waste collection operatives. The dimensions of 1,100 litre Eurobins bins are provided below:

Table 4.6 Non-domestic waste storage dimensions

	1,100 litre Eurobin	500 litre wheeled bin
Height (mm)	1,410	1,090
Width (mm)	1,265	1,270
Depth (mm)	1,000	720

4.17 The resulting non-domestic waste storage requirements are provided below. For the purposes of this waste management strategy, a weekly collection rate has been assumed. The exception to this is the commercial space to be delivered within Building D3, which for the purposes of this waste management strategy has been assumed to be in use as a café, and a twice-per-week collection rate has therefore been assumed.

Table 4.7 Non-domestic waste storage requirements

Location	Uses Served	Number of			Min. area of store (m ²)
		1,100 litre Eurobins	1,100 litre Recycling	500 litre Food	
Building D3	Flexible	2	1	3	8.59
Building D5	Flexible	1	1		3.25
Building K3	Flexible	1	1		3.25
Building K5	Flexible	1	1		3.25

4.18 In accordance with BS 5906:2005, all waste containers will need to be stored under cover in a specially designed waste storage room, or store. The walls and roofs of this store will be formed of non-combustible, robust, secure and impervious material, and have a fire resistance of one hour when tested in accordance with BS 476-21 – Fire tests on building materials and structures: Part 21 (Ref. 40), whilst the door of the store will be made of steel, or have a fire resistance of 30 minutes when tested in accordance with BS 476-22 – Fire tests on buildings materials and structure: Part 22 (Ref 41).

4.19 Further to these requirements, BS 5906:2005 outlines the measures which have been included in the design of the waste stores. Compliance with these requirements, the most applicable of which are outlined below, will help maintain a compliant waste strategy for the operation of the Proposed Development.

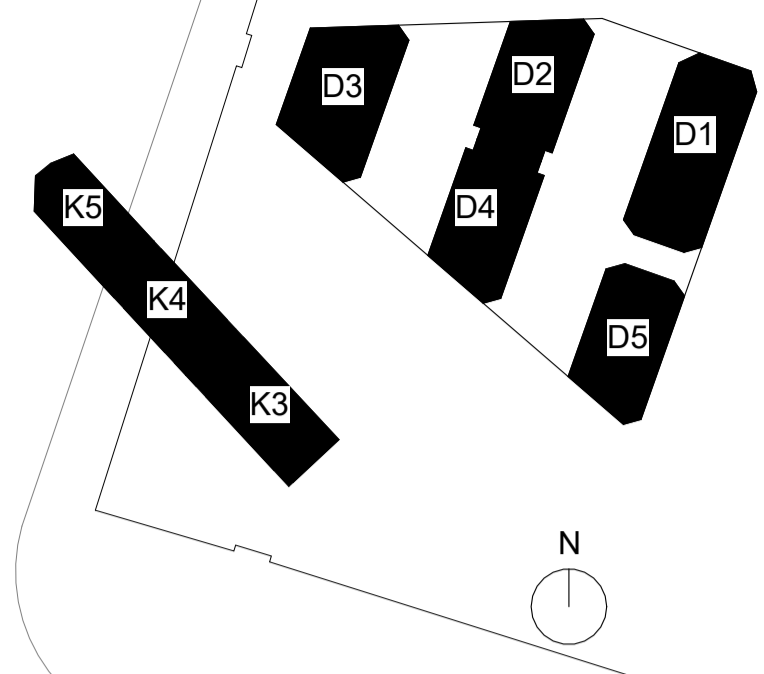
- All containers for waste, including recyclable material, are easily accessible to both the occupier and waste collector;
- Collectors will not have to manoeuvre waste storage containers from the storage areas to the collecting vehicles for a distance of more than 10m (four wheeled bins) or 15m (two wheeled bins);
- Paths between storage areas and collecting vehicles are free from steps, kerbs or inclines with a gradient of more than 1:12, be non-slip and a minimum of 2m wide. They will have foundations and a hardwearing surface that will withstand the loading imposed by wheeled containers;
- Waste stores have been designed and located in such a way as to limit potential noise disturbance to residents;
- Storage areas for waste and recycling will be clearly designated for this use only, by a suitable door or wall sign and, where appropriate, with floor markings;
- Waste storage sites will include areas for instructional signage detailing correct use of the facilities;
- The entrance of the waste storage room will be free from steps and projections;
- Adequate ventilation will be provided, with permanent ventilators giving a total ventilation area of no less than 0.2m²;
- Electrical lighting will include sealed bulkhead fittings (housings rated to IP65 in BS EN 60529:1992 (Ref. 43)) for the purpose of cleaning down with hoses and inevitable splashing. Luminaires will be low energy light fittings or low energy lamp bulbs, controlled by proximity detection or a time delay button to prevent lights being left on; and

- Gullies for wash down facilities will be positioned so as not to be in the track of container trolley wheels.

5. SUMMARY

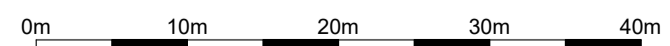
- 5.1 With reference to the policy requirements, guidance and industry best practice detailed in Section 3, a comprehensive Operational Waste Management Strategy has been defined for the Proposed Development.
- 5.2 The Proposed Development has been designed with high standards of waste management performance. This strategy describes the consideration that has been given to waste generated by the Proposed Development during its operation, including how it will be sorted, stored and collected, therefore contributing towards the Council's targets for waste minimisation, recycling and reuse. This strategy demonstrates that circular economy principles have been embedded in the design of the Proposed Development with respect to the management of operational waste. The proposed collection of separate waste streams will encourage future residents to prioritise the recycling of materials over their disposal, in line with the waste hierarchy and the principles of circular economy, which aims to minimise the disposal of materials by maintaining their highest value where practicable.
- 5.3 The strategy has been prepared to demonstrate that tenants and occupiers of the Proposed Development will be provided with convenient and effective waste management systems that will promote high levels of recycling and ease of collection by the Council.
- 5.4 An Operational Waste Management Strategy utilising traditional wheeled bins is proposed. The Proposed Development is anticipated to produce approximately 190,500 litres of waste from residential uses per week.
- 5.5 Residential waste storage will consist of separate 1,110 litre Eurobins for refuse and dry recyclables, and 500 litre wheeled bins for compostable waste, in accordance with local authority guidance. Waste stores have been located within the curtilage of the residential buildings at ground level to ensure easy access for both residents and waste collection operatives.
- 5.6 The Proposed Development will include flexible commercial/community space. These spaces are anticipated to produce approximately 11,466 litres of refuse and recycling per week. Waste storage for these commercial spaces will consist of 1,100 litre Eurobins and 500 litre wheeled bins to be collected by a contractual arrangement. The waste storage areas will be located within the curtilage of the buildings for ease of use and to ensure accessibility for commercial waste collection operatives.
- 5.7 This Strategy therefore demonstrates that the Proposed Development has also been designed to be compliant with all relevant waste management policy, and will manage and dispose of waste in a sustainable manner.

A1. SITE PLAN



— Site Boundary

- - - Waterfront Masterplan Boundary



CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Site levels, topography and setting out based on surveys, information and reports listed:
 Ordnance survey dated 2022 Licence no. 100022432
 Plowman Craven survey No. 47440-PCL-TO-XX-DR-Y-00002 REV P02 dated July 2022

Lines shown within plots are indicative only.
 Lift motor rooms, plant, plan acoustics surrounds and flue extracts will not exceed three meters in height above indicated AOD.
 Top parapet levels will not exceed 2m above indicated AOD with a construction tolerance of +/- one meter

Rev	Date	Description
P00	2024-03	Issued for Planning

Dwn	Ckd
GG	CF

Drawn	AV
Checked	CF
Date	2023-09-29
Scale @ A1	1 : 500

BA10030 RAR D&K Blocks
 Proposed Site Plan

Z429- PRP01- STW- ZZ- DR- A-880-003
 REV P00
 FOR PLANNING



A2. GROUND FLOOR PLAN

A3. REFUSE COLLECTION VEHICLE SPECIFICATIONS

The Council requires that the walking distance for refuse operatives from the container storage area to the refuse collection vehicle is no more than 15 metres. The vehicle stopping point should be clearly indicated on submitted drawings.

A safe collection area for operatives, such as a lay-by, is required if access to the chambers is on a dual carriageway, main fast flowing or busy road.

Dropped kerbs or crossovers are required to move the containers from the chamber to the refuse collection vehicle.

Access to the storage chambers must be at ground floor level and they should be sited in locations which do not require refuse operatives to wheel containers up/down steps or an incline greater than 1:12.

If access to the chambers is within a car park area or via internal estate roads, the size of the refuse collection vehicles and their manoeuvrability and turning characteristics need to be taken into account.

Refuse collection vehicle dimensions:

- Height: 3.80 metres
- Length: 10.50 metres
- Width: 2.90 metres
- Wall-to-wall turning circle: 16.10 metres

Vehicle tracking or swept path analysis drawings will be required to be submitted with the planning application if the vehicle is required to manoeuvre around a development to ensure safe manoeuvring of refuse vehicles.

Surfaces must be designed to withstand use by a 26 tonne gross vehicle weight vehicle.

Roads should be laid out to ensure reasonable convenience for the collection vehicle and should be a minimum of 5.5m wide. The collection vehicle should be able to proceed in a forward direction around the development, developers must not plan for refuse vehicles to reverse in a public area and the vehicle should not be expected to reverse for more than two vehicle lengths (20m). Adequate space for turning **must** be provided and demonstrated in vehicle tracking drawings.

In all instances, the road should be designed so that vehicles do not encroach onto the footway when manoeuvring.

Where roads are likely to be parked with cars, the developer must ensure that access for the collection vehicle is still maintained.

A4. NON-DOMESTIC WASTE CALCULATIONS

Location	Use	Area (GIA; sqm)	Class	BS5906 metric	Equation	Volume (l)	Residual proportion	Recycling proportion	Food proportion	Residual 1,100 litre Eurobins	Recycling 1,100 litre Eurobins	Food 500 litre wheeled bins	Footprint (m ²)
Building D3	Flexible	305	Café*	Floor area	Volume per number of covers [75 l]	7,625	20%	50%	30%	2	1	3	8.59
Building D5	Flexible	408	Industrial**	No. covers	Volume per m ² of floor area [5 l] × floor area	2,040	20%	50%	30%	1	1		3.25
Building K3	Flexible	158.8	Retail***	Floor area	Volume per m ² of sales area [10 l] × sales area	1,059	50%	50%		1	1		3.25
Building K5	Flexible	111.3	Retail***	Floor area	Volume per m ² of sales area [10 l] × sales area	742	50%	50%		1	1		3.25

* For the purposes of this Operational Waste Management Strategy, this space has been modelled as being in use as a café, and a twice-per-week collection rate has been assumed.

** It is noted that no traditional industrial spaces will be provided as part of the development, but that flexible commercial / community spaces will be delivered. The volumes of waste noted above have been calculated in line with those presented in Table 3.1 above, where “industrial” uses are considered to most appropriately represent the flexible uses to be brought forward as part of the development.

*** For the purposes of this Operational Waste Management Strategy, these spaces have been modelled as being in retail use.

A5. GENERAL NOTES

- A5.1 The report is based on information available at the time of the writing and discussions with the client during any project meetings. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by Icen Projects Ltd for inaccuracies in the data supplied by any other party.
- A5.2 The review of planning policy and other requirements does not constitute a detailed review. Its purpose is as a guide to provide the context for the development and to determine the likely requirements of the Local Authority.
- A5.3 No site visits have been carried out, unless otherwise specified.
- A5.4 This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in guidance may necessitate a re-interpretation of the report in whole or in part after its original submission.
- A5.5 The copyright in the written materials shall remain the property of Icen Projects Ltd but with a royalty-free perpetual licence to the client deemed to be granted on payment in full to Icen Projects Ltd by the client of the outstanding amounts.
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