# Operational Waste Management Strategy

## Acorn House, Kings Cross, London

August 2020

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## Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

| Issue | Date | Prepared by | Checked by | Approved by |
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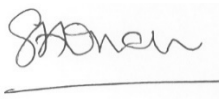

**Comments**

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# 1. Introduction

## 1.1 The Brief

Waterman Infrastructure & Environment Ltd (Waterman) was instructed by Access Self Storage Limited (the Applicant) to prepare an operational waste management strategy (OWMS) for the proposed redevelopment of Acorn House, 314-320 Gray's Inn Road, London, WC1X 8DP. Acorn House lies in the London Borough of Camden (LBC).

## 1.2 The Development

The Applicant proposes the redevelopment of Acorn House as a part 6, part 10 storey building to provide 33no. affordable housing units with affordable office space and a retail unit at ground and basement level together with cycle parking facilities. An external playspace is proposed at level 6 and a community room with kitchenette and landscaped terrace for residents at level 9.

The retail unit is existing and will not be altered by the development. It is 195m$^2$ gross internal area (GIA). An area of 476m$^2$ GIA of office space is proposed.

## 1.3 The Report Scope

This report explains how waste will be stored, managed, and collected once the redevelopment is complete. It outlines the quantities and types of waste that are predicted to arise.

## 1.4 Exclusions and Limitations

This report was undertaken in accordance with a scope of works agreed between Waterman and the Applicant as detailed in Waterman's fee letter (reference WIE17232-100-200407-SO-FeeProp dated 7 April 2020).

The benefit of this report is made to Access Self Storage Limited.

Waterman has endeavoured to assess all information provided to it during this work but makes no guarantees or warranties as to the accuracy or completeness of this information.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at the site.

# 2. Waste Management Standards and Requirements

The following standards and requirements have been considered.

## 2.1 The Building Regulations 2010, Approved Document H: Drainage and Waste Disposal[1]

Approved Document H is a practical guidance document. It sets out the requirements of Schedule 1 and Regulation 7 of the Building Regulations 2010 (SI 2010/2214) for England and Wales.

Requirement H6, *"Solid Waste Storage"*, specifies that:

*"(1) Adequate provision shall be made for storage of solid waste.*

*(2) Adequate means of access shall be provided:*

*(a) for people in the building to the place of storage; and*

*(b) from the place of storage to a collection point …"*

Requirement H6 stipulates that waste storage should be:

- designed and sited so as not to be prejudicial to health or local amenity;
- sized to accommodate the requirements of the waste collection authority in terms of container numbers and types;
- readily accessible by building users and waste collection operatives; and
- sited so that the distance residents are required to carry waste does not exceed 30m (excluding vertical distance).

## 2.2 British Standard 5906:2005, Waste Management in Buildings – Code of Practice[2]

This British Standard is a Code of Practice for methods of storage, collection, segregation for recycling and recovery, and on-site treatment of waste from residential and non-residential buildings and healthcare establishments. It is applicable to new buildings, refurbishments and conversions of residential and non-residential buildings, including but not limited to retail and offices. It expands upon the legal requirements set out in The Building Regulations 2010, Approved Document H, H6 as above.

BS5906:2005 advises that:

*"Designers should consider:*

- *easy and safe access for waste producers, including older persons or persons with disabilities;*
- *easy and safe access for collectors and collection vehicles;*
- *location and space (including avoidance of opportunity to cause nuisance or injury);…*
- *special requirements (e.g. separate storage and collection provisions for healthcare waste and bulky waste)."*

[1] Building Regulations 2010, Drainage and Waste Disposal – H6 Solid Waste Storage – page 53 *"Solid Waste Storage: The Requirement"*.
[2] British Standard BS5906:2005: Waste management in buildings – Code of practice, December 2005 Revision, Committee reference B/508/1.

## 2.3 London Borough of Camden

### 2.3.1 Waste and Recycling Storage and Collection Guidance

LBC provides guidance in two documents

- "CPG Design"[3]; and
- "Waste storage and arrangements for residential and commercial units"[4].

The documents help support local planning policy, including policy CC5 Waste, and apply to:

- new commercial and residential development;
- adaptations to existing buildings that significantly change the amount of floor space and on-site waste; and
- other changes in activities that require planning permission and significantly change the amount of waste generated on-site.

Relevant considerations and requirements include that:

- new residential development must provide storage space for recyclable and non-recyclable waste;
- provision should be made for food waste collections in residential and commercial units;
- residential development of 20 units or more should incorporate storage space for reusable waste[5] and bulky waste such as fridges, freezers, furniture, mattresses, and washing machines;
- commercial waste must be stored and collected separately from residential waste;
- residents should not have to carry waste more than 30m from their front door to the communal store; and
- waste collection crews and caretakers should not have to:
  - carry waste sacks more than 15 metres;
  - carry bins or move wheeled bins (up to 360 litres) more than 10 metres;
  - move wheeled bins larger than 360 litres more than 10 metres;
  - manually navigate flights or steps or steep slopes or marked changes in level, or have to cross a main road, dual road or cycle pathway when transferring waste. ..
- developers should ensure that all storage areas and systems are designed to meet current waste and recycling targets as a minimum, and are sufficiently flexible to meet more ambitious future targets.

LBC guidance includes the following storage capacity requirements:

Table 1: LBC required residential storage capacity requirements

| Property type | Storage capacity requirements per household unit (litres(L)).[6] | | |
|---|---|---|---|
| | Residual waste | Mixed dry recyclable (MDR) waste | Food waste |
| Residential unit | 120 | 140 | 23 |

[3] Camden Planning Guidance, Design, March 2019.
[4] Waste storage and arrangements for residential and commercial units, (Supporting document for planning guidance CPG1 DESIGN Storage and collection of recycling and waste, LBC Environment Service technical guidance for recycling and waste.
[5] For example waste that could be reused, or repurposed.
[6] The collection frequency is weekly (every Friday) for residual waste and MDR. LBC's property search function (footnote 7) does not confirm that food waste is collected. However, LBC's guidance document (and to which we refer to above) indicates food waste is collected. As a pragmatic measure the applicant assumes there will be a food waste collection.

We understand the local collection frequency (for residential waste) is weekly[7]. However, paragraph 2.6 of LBC's guidance (the document cited at footnote 4 above) explains:

- at paragraph 2.6 *"Kerbside general waste collections are fortnightly and the mixed recycling and food waste is weekly"*. and;
- at paragraph 2.8 *"Communal bin serviced dwellings are collected either fortnightly or weekly".*

For the avoidance of doubt this report will assume weekly collection.

#### Internal design

In terms of internal design LBC advises:

- fitted kitchen units should have segregated recycling and refuse bins, with:
  - two compartments:
    - one for mixed recycling;
    - one for general waste,
    - these should be of equal volume and at least 60L;
  - provision for at least 7L for food waste
  - a total minimum capacity of 127L[8].

### 2.3.2 Further Notes on Collection Offered by Camden-Veolia[9]

A bulky waste collection service is offered:

- 2No. free collections a year (for residents aged 65 or more, or in receipt of the maximum Council Tax Reduction);
- otherwise a scale of charges applies.

The bulky waste collection includes for large items that a resident cannot fit into their bin, including:

- beds or mattresses;
- sofas;
- fridges or freezers;
- rubbish - for example garden waste.

LBC also collects separated:

- batteries;
- small electrical items; and
- textiles.

## 2.4 London Borough of Islington

### 2.4.1 Waste and Recycling Storage and Collection Guidance

LBC does not provide guidance on waste storage requirements for non-residential uses. However the London Borough of Islington does. It is a neighbouring borough, and the Applicant reasons it will be pragmatic to take it into account. The Islington guidance[10] is reproduced below.

[7] LBC website: https://environmentservices.camden.gov.uk/property?, accessed 1/6/2020.
[8] For properties with three bedrooms or less.
[9] Note that "Camden-Veolia" is the entity providing the collection for and on behalf of LBC.
[10] Street Environment Services, Recycling and Refuse Storage Requirements, Islington.

Table 2: Commercial and industrial waste storage calculations (from Islington's guidance)

| Building Use | Waste Storage Requirements per 1,000 $m^2$ of floor space (gross) | Recycling Storage Requirements |
|---|---|---|
| Offices | 2.6 $m^3$ | 50% of this capacity should be retained for the storage of separated waste for recycling. |
| Retail[1] | 5 $m^3$ | |

Islington's guidance provides notes to the table. In summary, these include that the figure given for retail *"is not a generally applicable minimum requirement. The amount of storage space required for waste varies widely due to the difference in waste output of retail units, which is dependent on factors such as location, market niche, products sold, etc."*

# 3. Operational Waste Management Strategy

## 3.1 Overview

### 3.1.1 Residential waste

Primarily, the following waste streams are anticipated:

- residual;
- MDR;
- food;
- bulky (occasionally).

Other waste streams, such as batteries, garden waste, small electrical items and textiles are also expected to arise in small quantities.

#### Storage

Residential waste will be kept in a dedicated storeroom on the ground floor. The facility includes for:

- residual;
- MDR;
- food; and
- bulky wastes.

Residents can request sacks from LBC should they wish to place small quantities of the following wastes in the store in advance of collection:

- garden (arising from balconies and winter gardens),
- textiles
- batteries; and
- small electrical waste.

The storeroom will be overseen by a caretaker.

Camden-Veolia[11] will collect wastes directly from the storeroom.

The residential waste management strategy is summarised in Figure 1 below. The ground floor layout plan along with a more detailed layout plan of the storeroom taken from the Design and Access Statement are presented in Appendix A.

### 3.1.2 Non-residential waste

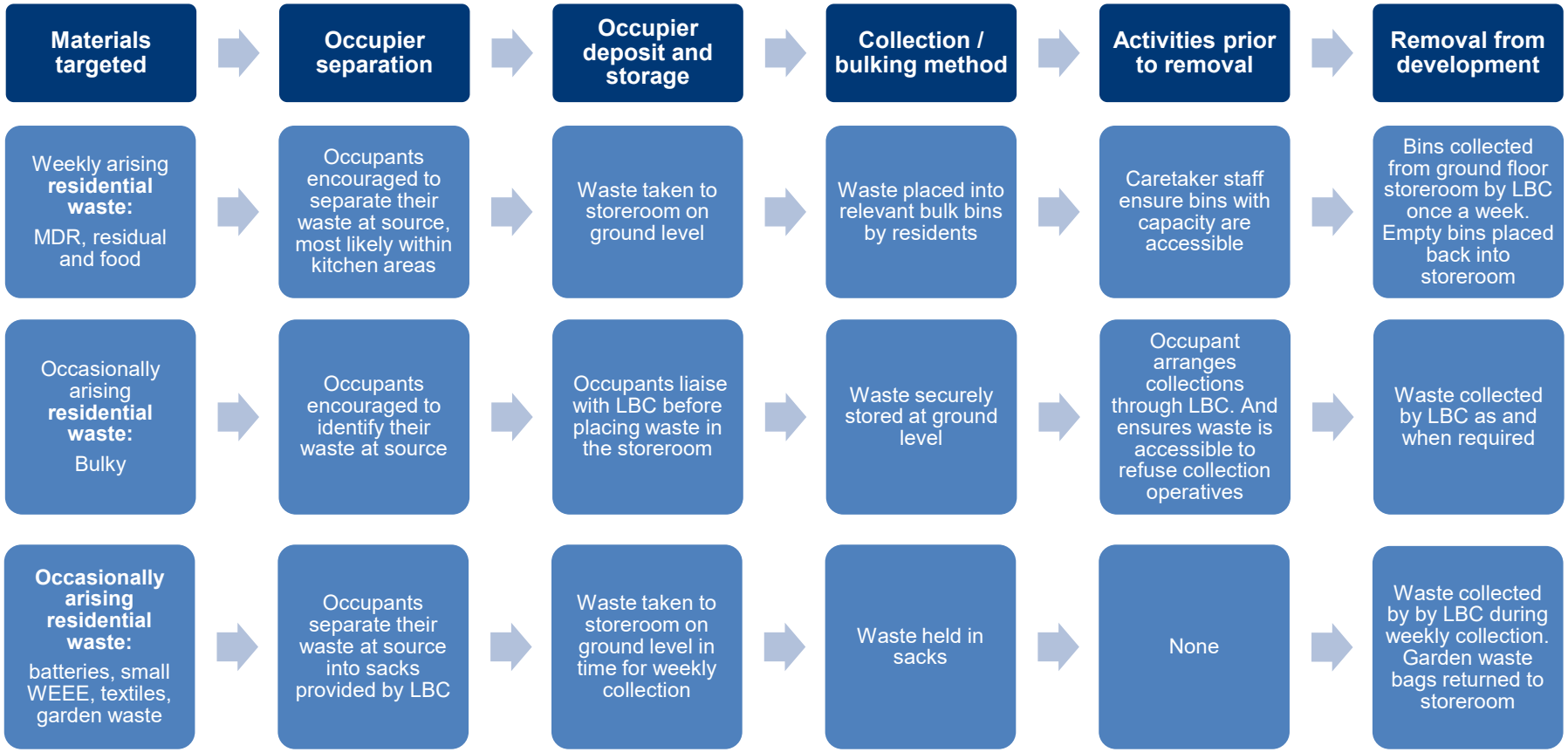
Commercial tenants include office and retail uses. The retail use is existing. The waste storage and collection arrangements for the retail use will remain as existing, and this includes for the on-street collection of waste. Office tenants will be provided with a dedicated storeroom separate from the residential waste storeroom. They will be responsible for segregating, storing, and managing their own waste. Commercial tenants will be expected to appoint a waste management contractor to collect waste at a suitable frequency. This is likely to be once or twice a week depending on the nature and quantity of waste arisings and space available for storage. More detailed arrangements for the storage, management, and collection of non-residential waste will be determined during detailed design.

The non-residential waste management strategy is summarised in Figure 2 below.

[11] https://www.veolia.co.uk/london/camden

### 3.1.3 OWMS process flow diagram[12]

Figure 1: OWMS process flow diagram – residential waste




[12] Diagram headings adapted from the London Waste and Recycling Board (2015) template recycling and waste management strategy for new build flats.

Figure 2: OWMS process flow diagram – non-residdential waste

## 3.2 Residential waste

### 3.2.1 Estimated storage requirements

Given a weekly collection each household should be provided with the following storage:

- 120L for residual waste
- 140L for mixed dry recyclable (MDR) waste
- 23L for food waste.

The Applicant notes LBC also collects from households separated: garden waste; textiles; small electrical items and batteries. In communal settings, LBC requires space to be allocated for bulky wastes (e.g. mattresses, sofas, large household appliances).

Table 3: Residential waste storage requirements

| Waste Stream | Volume per week, or note as to frequency | Container volume and type, or note | Number of containers |
|---|---|---|---|
| Residual | 3,960 | 1,280 L bulk bin | 4No. |
| MDR | 4,620 | 1,280 L bulk bin | 4No. |
| Food | 759 | 240 L wheelie bin | 4No. |
| Garden | Limited to balconies and winter gardens | Residents can request reusable hessian sacks from LBC | |
| Textiles<br>Batteries<br>Small waste electricals | Occasional | Residents can request sacks from LBC | |

### 3.2.2 Refuse storeroom

There will be a single communal storeroom for waste on the ground floor. It will hold the bulk bins and wheelie bins as set out in Table 3 above. It will also have space for bulky waste. The storeroom will be overseen by a caretaker service to ensure there is always adequate bin capacity. And that occasionally arising waste is stored appropriately.

### 3.2.3 Collection

LBC refuse collection operatives will have direct access to the storeroom to collect the bins for servicing. Bins will be returned when empty. To enable easier collection of bulky waste and bin servicing, there will be a concertina door that can be opened onto the street. As shown on the plan in Appendix A.

## 3.3 Non-residential waste

LBC guidance does not include waste storage requirements / estimations for non-residential waste. Two methods have been used to calculate provisions for the office waste as set out in the table below.

Table 4: Non-residential waste storage

| Use | Gross internal area (GIA) ($m^2$) | Estimation method | Subsequent storage requirements |
|---|---|---|---|
| Office | 476 | British Standard 5906:2005 – volume arising per employee [50 L] x number of employees | 3No. 1,100 L bulk bins |
| Office | 476 | London Borough Islington**Error! Bookmark not defined.** - 2,600 L per 1,000 $m^2$ GIA for assumed weekly collection | 2No. 1,100 L bulk bins |

Notes:
- office estimations assume an employment density of 10$m^2$ per employee; and
- it is assumed a specialist maintenance contractor will remove green waste from: living roof; communal terrace and office courtyard as part of their work. And therefore commercial green waste storage is not required.

The existing retail unit will be unchanged by the development. The waste collection frequency will be unchanged by the proposed redevelopment.

With regard to the office use the Applicant proposes to adopt the capacity requirements advocated by London Borough of Islington, including because it is a neighbouring borough. The Applicant therefore proposes the commercial waste store should accommodate 2No. 1,100 L bulk bins: one for residual and one for MDR waste. The collection frequency will be weekly. Although should more frequent collection be necessary when the development is occupied, the tenant will be able to make arrangements with its commercial waste collection contractor.

The office tenant's preferred waste management contractor will have direct access to the office storeroom. Bins will be removed for emptying and replaced afterwards.

# APPENDICES

## A. Plans and Drawings

“Refuse and Recycling” extract from Design and Access Statement (AHMM)

Acorn House Proposed Plan Ground Floor 18102 A (00)_100 P1 (AHMM)

DRAFT

## 11.2 Refuse & Recycling

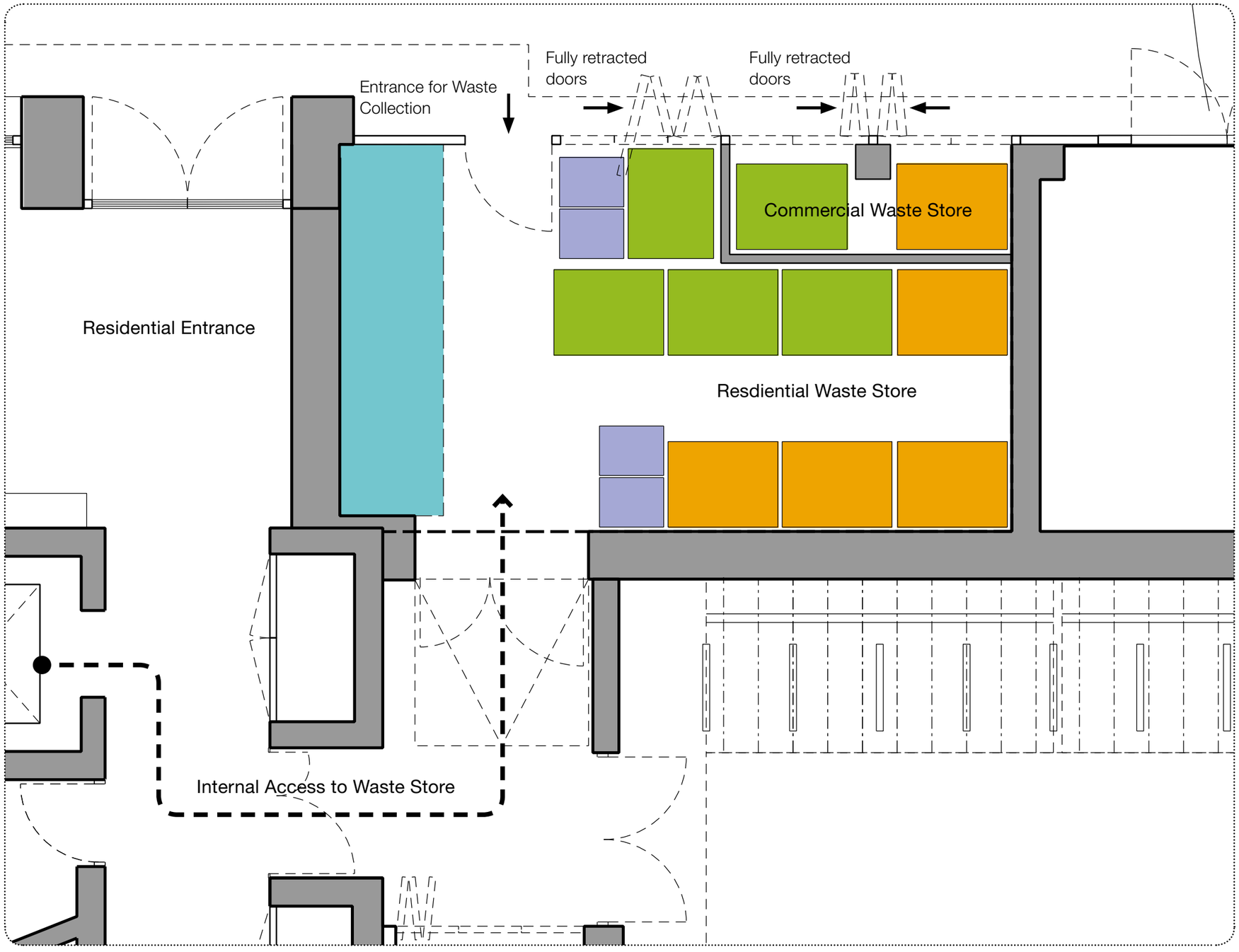
Residents will have access to a waste storage area including bins for general waste, mixed dry recyclables and bulky waste storage. Hessian sacks will be provided for garden waste and textiles waste. Direct access to Swinton Street is provided for waste collection.

A separate commercial bin store is also located on Swinton Street. This smaller space is accessed from the street only.

It's proposed that retail waste will be collected directly off the street.

Refuse vehicles will be able to stop within the loading bay on the southern side of Swinton Street when collecting material from the store. This is the closest available collection point, however it's noted that this is greater than the 10m travel distance recommended.

Further details about the waste strategy plan can be found in a separate Waste Management Strategy report submitted with this application.



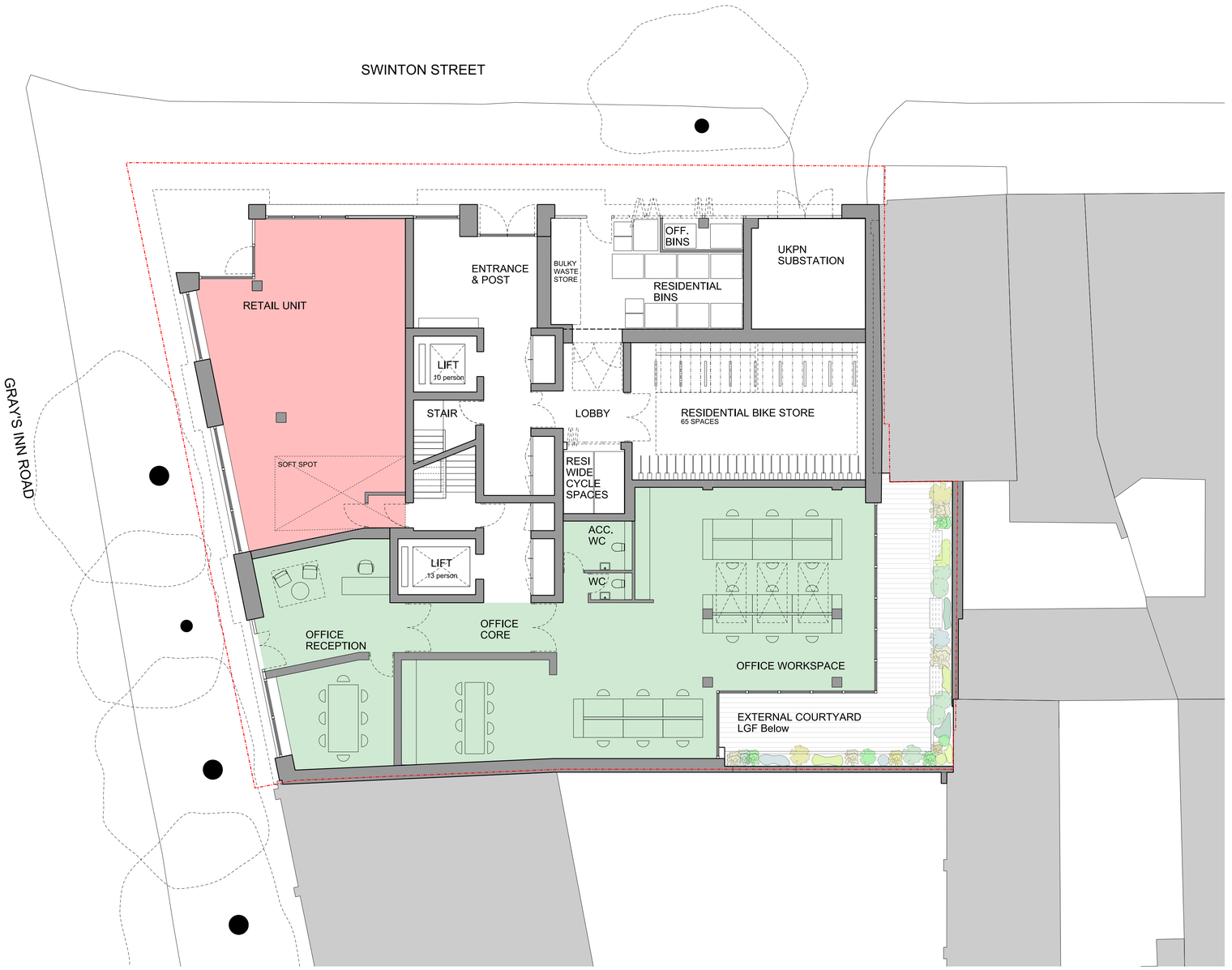

Ground Floor: Waste Storge Area

Bulky Storage

Mixed Dry Recyclables
Resi =1280L / Office = 1100L

General Waste
Resi =1280L / Office = 1100L

Food Waste Bin 240L

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01 PLAN: PROPOSED GROUND FLOOR

KEY

Site Boundary

0 1m 2m 5m 10m

NOTE:
These drawings have been prepared using topographic information from Greenhatch, Lane & Frankham CAD files LF1025 of the existing Acorn House building & OS map data & Z map data. All topographical and building dimensions are to be confirmed with a measured survey

| REV | DATE |
|---|---|
| P1 | 27/07/20 PLANNING SUBMISSION |

| | |
|---|---|
| CONSULTANTS | NAME |
| CLIENT: | ACCESS STORAGE |
| STRUCTURAL ENGINEER: | AKT II |
| MECHANICAL ENGINEER: | ATELIER TEN |
| COST CONSULTANT: | CAST CONSULTANCY |
| PROJECT MANAGER: | RPM |
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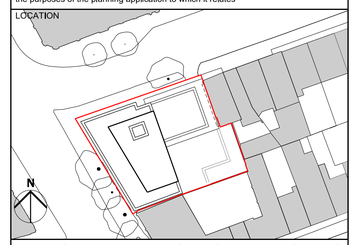


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job title
ACORN HOUSE

drawing title / location
PROPOSED PLAN
GROUND FLOOR

| drawn by | checked | scale | status |
|---|---|---|---|
| AW | SS | 1:100@A1; 1:200@A3 | PLANNING |

| project | zone | source | classification | drawing no. | revision |
|---|---|---|---|---|---|
| 18102 | | A | (00)_100 | | P1 |

# UK and Ireland Office Locations