

Operational Waste and Recycling Management Strategy

B&Q Cricklewood
London Borough of Barnet

Montreaux Cricklewood Developments Ltd

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1. Executive Summary

- 1.1 AECOM Infrastructure and Environment Limited (Ltd) (hereafter referred to as 'AECOM') have been appointed by Montreaux Cricklewood Developments Ltd (hereafter referred to as the 'Applicant') to prepare an Outline Operational Waste and Recycling Management Strategy (hereafter referred to as the 'Strategy') for the outline application of the B&Q Cricklewood scheme (hereafter referred to as the 'Proposed Development') located within the administrative boundary of the London Borough of Barnet (LBB).
- 1.2 The applicant is seeking permission for:
- Outline planning application (including means of access with all other matters reserved) for the demolition of existing buildings and comprehensive redevelopment of the site for a mix of uses including residential C3 and flexible commercial and community floorspace in uses classes A3/B1/D1 and D2; car and cycle parking; landscaping; and associated works.*
- 1.3 The principal aim of this Strategy is to demonstrate how sustainable methods for waste and recycling management have been considered for the operational phase of the Proposed Development.
- 1.4 For the purposes of this outline strategy, an Illustrative Masterplan alongside AECOM assumptions have been used to display the probable residential tenure mix and commercial uses. This has been done to provide LBB with a realistic assessment of the likely waste and recycle management requirements for a development of this nature and scale. It should be noted the final uses and tenure mix will be decided at the Reserved Matters Application (RMA) stages. The assumptions made that underpin this strategy are included within Section 4 of this Strategy.
- 1.5 Furthermore, with regards to the waste and recycle management within the Proposed Development, this Strategy has the following aims:
- To contribute towards achieving current and long-term national, regional (North London Waste Authority (NLWA)) LBB's targets for waste minimisation, recycling and re-use;
 - To comply with all applicable legal requirements for handling operational waste;
 - To achieve high standards of waste management performance, through giving due consideration to the waste generated during operation of the Proposed Development; and
 - To provide a convenient, clean, and efficient waste management strategy that enhances the operation of the Proposed Development and promotes recycling.
- 1.6 Based on the residential tenure mix and commercial uses as provided within the Illustrative Masterplan, it is envisioned that once the Proposed Development is complete and operational it is likely to produce approximately 333,015 L of waste and recycle material from both residential and commercial uses per week. Of this, 317,860 L is anticipated to arise from residential uses and 15,155 L from commercial uses per week. Waste and recycle arisings per week equate to approximately 1,778 tonnes of waste and recycle material per year (considering the following densities: mixed dry recyclables (MDR) – 84 kg/m³, food waste- 667 kg/m³ and residual waste – 81 kg/m³)
- 1.7 It is envisioned that the Proposed Development will provide four Blocks (i.e. Block A, B, C and D) comprising of residential units and commercial spaces. To manage the waste and recycle materials arisings from residential units of the Proposed Development, it is envisioned that separate bin stores would be provided on the Ground Floor Level. These bin stores should be located at a 30 m distance from the residential units they are serving so to comply with the guidance provided in BS 5906:2005 and LBB's guidance document.
- 1.8 It is envisioned each residential core will be provided with designated bin stores therefore, Block A, in line with the Illustrative Masterplan, should provide a total of 4 stores, Block B should provide a total of 3 stores, Block C should provide a total of 3 bins stores, and Block D should provide a total of 2 bin stores. It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the Reserved Matters Application (RMA) stage for each Development Parcel.

- 1.9 To efficiently manage space within the bin stores and to provide a robust solution for the waste and recycle materials arising from the residential units of the Proposed Development, it is envisioned lever arm in-bin compaction units should be installed within most of the bin stores.
- 1.10 The bin stores that wouldn't be housing the compaction units because of the space constraints, should be monitored and managed by the internal management team. Once bins are full within these bin stores, it is envisioned that the internal management team will transfer these bins to the closest compaction units inside of the Block. After compaction, the bins should be returned back to the specific bin store within the Block.
- 1.11 LBB do not collect compacted waste from residential units, therefore it is envisioned that a private waste and recycle collection company to be commissioned for the collection and disposal of waste and recycle arisings for the life of the Proposed Development. These arrangements will be agreed between the Applicant and LBB.
- 1.12 As aforementioned in paragraph 1.9 of this Strategy, most bin stores are envisioned to provide sufficient space to house two in-bin lever arm compactors that would allow the compaction of Mixed Dry Recyclables (MDR) at a 2:1 ratio and Residual waste at 3:1 ratio, whereas Food waste would not be compacted. It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the RMA stage for each Development Parcel
- 1.13 To allow increased flexibility regarding the management of waste and recycle materials arising from the Proposed Development, the option of managing waste and recycle arisings conventionally i.e. without any compactors and allowing collection from LBB has also been tested by the Architects. It should be noted, for the purposes of this Outline Application an in-bin compaction Strategy is considered to be adopted within the Illustrative Masterplan of the Proposed Development.
- 1.14 It is envisioned that the process of waste and recycle disposal within these bin stores should follow a conventional approach i.e. the residents should be allowed access to these bin stores (via lifts) to dispose the waste and recycle materials within the appropriate bins (i.e. MDR, Food and Residual), therefore to provide extra layer of safety, the in-bin compactors should be caged. In addition, these compactors should be operated by trained members of the internal management team.
- 1.15 For the residential bin stores which are within 10 m distance from the Refuse Collection Vehicle (RCV) parking point, the private collection crew are expected to wheel the bins of the required waste and recycle stream directly from the bin store to the RCV for emptying purposes. Once emptied, the private collection crew should return bins back to the residential bin store.
- 1.16 Residential bin stores which exceed the 10 m distance from the parked RCV are envisioned to require the internal management team to wheel the bins to a designated presentation area (i.e. located within 10 m of the RCV parking point) . Bin stores that may exceed 30 m from the presentation area should require the internal management team to use tugs for the transportation of bins to the presentation area. From the designated presentation areas, the private collection crew should transfer bins to the RCV . Once bins are emptied, the private collection crew should return bins to the presentation area. The internal management team should then be responsible for returning bins back to the correct residential bin stores.
- 1.17 Commercial bin stores are envisioned to be provided in Blocks A, B, and D to accommodate the anticipated commercial waste and recycle arisings from the Proposed Development based on the Illustrative Masterplan. The commercial bin stores should provide sufficient space to hold bins for all waste streams (i.e. MDR, Food and Residual waste) based on weekly collection frequency. It is envisioned that daily (or as agreed), the internal management team, or staff, should collect waste and recycle material from all commercial units and dispose of this waste and recycle material into the bin store dependant on waste and recycle stream (i.e. MDR, Food and Residual waste). It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the RMA stage for each Development Parcel.
- 1.18 It is envisioned, prior to the collection time (or as agreed), the internal management team should transfer waste and recycle bins for the waste and recycle stream (i.e. MDR, Food or Residual waste) scheduled to be collected on the day to a designated presentation area (located within 10 m of the RCV parking point). Stores envisioned to exceed 30 m from the presentation area should require the use of tugs for transportation of bins. From the designated presentation areas, the private collection crew should transfer bins to the RCV. Once bins are emptied, the private collection crew should return bins to the presentation

area. The internal management team should then be responsible for returning bins back to the correct commercial bin stores.

- 1.19 These provisions will result in waste and recycle material produced during operation of the Proposed Development being managed in accordance with The Waste (England and Wales) Regulations 2011 (as amended). Additionally, all waste infrastructure introduced to the Proposed Development will comply with national, regional (NLWA) and district policy (LBB), British Standard Institute (BSI) 5906:2005 (Waste Management in Buildings Code of Practise) and Part H6 of the Building Regulations.
- 1.20 This Strategy acknowledges that anyone producing, handling and carrying waste on the Proposed Development, and to and from the Proposed Development will do so in accordance with the Duty of Care Code of Practice, 2018 (as amended). In relation to this Strategy, Waste is defined as per the Waste Framework Directive (2008/98/EC) as *“any substance or object which the holder discards or intends or is required to discard”*

2. Introduction

- 2.1 This Outline Operational Waste and Recycling Management Strategy (hereafter referred to as the 'Strategy') has been prepared by AECOM Infrastructure and Environment Limited (Ltd) ('AECOM') on behalf of Montreaux Cricklewood Developments Ltd (hereafter referred to as the 'Applicant') for the development of the B&Q Cricklewood site (hereafter referred to as the 'Proposed Development') located within the administrative boundary of the London Borough of Barnet (LBB).
- 2.2 This Strategy provides a review of the requirements placed upon the Proposed Development under legislation and implemented policy at all levels of government (i.e. national (England), regional (North London Waste Authority (NLWA)) and local (LBB). Consideration has also been given to the requirements included in local standards, local planning policy and guidance documents including: LBB Guidance document – Information for developers and architects, Provision of Household Recycling and Waste Service 2019) (Ref. 1), British Standard Institute (BSI), Waste Management in Buildings, Code of Practise (BS 5906:2005) (Ref. 2), as to comply with relevant objectives and targets.
- 2.3 The methodology used to identify and estimate the volumes of waste and recycle material generated during operation of the Proposed Development is provided in Section 5 (methodology) of this Strategy. Following this, the approach taken towards waste and recycle management within the Proposed Development is discussed. This includes a breakdown of the waste and recycle management process, including waste and recycle handling, outline storage area provision, and collection arrangements based on the Illustrative Masterplan. All waste reduction measures are compliant with BS 5906:2005, the Waste (England and Wales) Regulations, 2011 (as amended) (Ref. 3) and Part H6 of the building Regulations (2010) incorporating all amendments) (Ref. 4) Document.
- 2.4 This Strategy has been written by AECOM, using information provided by EPR Architects (hereafter referred to as the 'Architects') and Entran (hereafter referred to as the 'Transport Consultants')

3. Legislation/Planning Policy

3.1 A summary list of the legislation relevant to the management of operational waste and recycle material is provided in this section:

National Waste Legislation

- The Animal By-Products (England) Regulations 2009 (as amended 2015) (Ref. 5);
- Clean Neighbourhoods and Environment Act 2005 (as amended 2015) (Ref. 6);
- Control of Pollution Act (COPA) 1974 (as amended 1989) (Ref. 7);
- The Controlled Waste (England and Wales) Regulations 2012 (as amended 2012) (Ref. 8);
- The Environment Act 1995 (Ref. 9);
- Environmental Protection Act 1990 (EPA) (Ref. 10);
- The Landfill Tax Regulations 1996 (as amended 2017) (Ref. 11);
- The List of Wastes (England) Regulations (as amended 2005) (Ref. 12);
- The Packaging (Essential Requirements) Regulations 2015 (Ref. 13);
- The Pollution Prevention and Control (Fees) (Miscellaneous Amendments) Regulations 2017 (Ref. 14);
- The Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (as amended 2017) (Ref. 15);
- The Hazardous Waste Regulations 2005 (as amended 2016) (Ref. 16);
- The Waste (England and Wales) Regulations, 2011 (as amended 2014);
- The Waste Batteries and Accumulators Regulations 2009 (as amended 2015) (Ref. 17);
- The Waste Electrical and Electronic Equipment (WEEE) Regulations 2015 (Ref. 18); and
- The Waste Management (England and Wales) Regulations 2006 (as amended 2007) (Ref. 19).

National Planning Policy Framework (2019)

- 3.2 An update to the revised National Planning Policy Framework (NPPF) (Ref. 20) has been published in February 2019 that sets out the Government planning policies for England and how these are expected to be applied. This NPPF supersedes the previous NPPF published in July 2018 and March 2012.
- 3.3 The revised NPPF maintains the presumption in favour of sustainable development which should be delivered in accordance with three main objective areas: economic, social and environmental (Paragraph 8 of the Framework document). The revised NPPF aims to enable local people and their local authorities to produce their own distinctive local and neighbourhood plans, which should be interpreted and applied to meet the needs and priorities of their communities.
- 3.4 The environmental objective refers to the importance of waste management and resource efficiency. The NPPF should be read in conjunction with the National Planning Policy for Waste (2014) (Ref. 21) including the Waste Management Plan for England (2013) (Ref. 22) and Planning Practice Guidance (Ref. 23) which are discussed in the following sections of this Strategy.

National Planning Policy for Waste (2014)

The National Planning Policy for Waste provides the planning framework to enable Local Authorities to put forward, through local waste management plans, strategies that identify sites and areas that are suitable for new or enhanced facilities to meet the waste management needs of their areas. Information is also included concerning non-waste developments, including any development whose end function is not directly related to waste, waste developments include landfills; waste disposal; waste treatment; waste recycling plants; and Household Waste Recycling Centres (HWRCs).

- 3.5 The National Planning Policy for Waste states that when determining planning applications for non-waste developments, Local Authorities should ensure that:
- *“the likely impact of proposed, non-waste related developments on existing waste management facilities, and on-sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the Waste Hierarchy and/or the efficient operation of such facilities”;*
 - *“new, non-waste developments make sufficient provision for waste management and promote good design to secure the integration of waste management facilities with the rest of the development and, in less developed areas, with the local landscape. This includes providing adequate storage facilities at residential premises, for example, by ensuring that there is sufficient and discrete provision for bins, to facilitate a high quality, comprehensive and frequent household collection service”;* and
 - *“the handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal.”*

Waste Management Plan for England (2013)

- 3.6 The Waste Management Plan for England is a high-level document, which outlines the steps required to move towards a zero-waste economy, as part of the transition to a sustainable economy.
- 3.7 The Waste Management Plan fulfils the Waste Framework Directive (WFD) Article 28 mandatory requirements (Ref. 24), and other required content as set out in Schedule 1 to the Waste (England and Wales) Regulations 2011 as amended. The Waste Management Plan provides an analysis of current waste management practices in England and evaluates implementation of the objectives and provisions of the revised WFD.

Planning Practice Guidance (2018)

- 3.8 The Planning Practice Guidance (PPG) comprises a web-based resource in support of the NPPF. The guidance document entitled ‘Waste’ (Ref. 25) outlines the consideration local planning authorities should give towards waste management, both within Local Plans and with regards to the Waste Hierarchy. This includes guidance on considerations to be included within development planning applications:
- The promotion of the *“sound management of waste from any proposed development, such as encouraging internal management of waste where this is appropriate, or including a planning condition to encourage or require the developer to set out how waste arising from the development is to be dealt with”;*
 - *“Ensuring that collections of household and similar waste are organised so as to help towards achieving the higher levels of the Waste Hierarchy”;*
 - *That steps are “taken to ensure effective segregation of wastes at source including, as appropriate, the provision of waste sorting, storage, recovery and recycling facilities”;* and
 - That it will be useful for proposals that are likely to generate significant volumes of waste through the development or operational phases to include a waste audit. *“This audit should demonstrate that in both construction and operational phases of a proposed development, waste will be minimised as far as possible and that such waste as is generated will be managed in an appropriate manner in accordance with the Waste Hierarchy”.*

A Green Future: Our 25-year Plan to Improve the Environment

- 3.9 The government published the 25 Year Plan to Improve the Environment (Ref. 26) in 2018. This plan sets out the government actions to help the natural world regain and retain good health. It aims to deliver cleaner air and water, protect threatened species and provide richer environment. One of the measures set out in this Plan to decrease pressure on the environment in by minimising the generation of waste. This will be done by:
- *“Working towards our ambition of zero avoidable waste by 2050; and*
 - *Meeting all existing waste targets – including those on landfill, reuse and recycling – and developing ambitious future targets and milestones”.*

- *Significantly reducing and where possible preventing all kinds of marine plastic pollution – in particular material that came originally from land*”.
- 3.10 Chapter 4 of this plan outlines the government aim to increase resource efficiency and reduce pollution and waste. This will be done by:
- *“Make sure that resources are used more efficiently and kept in longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing and recycling; and*
 - *Work towards elimination all avoidable waste by 2050 and all avoidable plastic waste by end of 2042”.*

Our Waste, Our Resources: A Strategy for England

3.11 Within the 25 Year Environment Plan, the government pledged to leave the environment in a better condition for the next generation. To meet this commitment, the Strategy for England (2018) (Ref. 27) has been developed. The Strategy for England commits to the following policy instruments, and a provision of dates for their introduction:

3.11.1 Extended Producer Responsibility (EPR)

- EPR is *“a policy approach through which a producer’s responsibility for a product is extended to the post-use stage. This incentivises producers to design their products to make it easier for them to be reused, dismantled and/or recycled at end of life”.*
- It is anticipated that EPR for waste electronic and electrical equipment is to be introduced in 2020, and EPR for packaging will come into force in 2023 (subject to consultation).

3.11.2 Deposit Return Scheme (DRS)

- In a deposit return scheme, a small deposit will be added to the price of a drink’s container bought in a store. Once the container has been used, the consumer will dispose of it in a reverse vending machine and the deposit will be returned to the consumer.
- The government is aiming to roll-out a UK-wide approach to DRS in 2023 (subject to consultation).

3.11.3 Consistent Collections

- Subject to consultation, legislation enforcing the government to *“specify a core set of materials to be collected by all local authorities and waste operators”* will be introduced. It is envisioned that specifying a consistent set of dry recyclable materials to be collected from all households and businesses will improve England’s recycling rate.
- The provisional date for consistent collections to be introduced will be subject to discussions at spending review.

3.12 At the current time these policy instruments are out for consultation and so how they will interact with future operational waste arisings at the time of writing is dependent on the subsequent constitution of these policies. These policies will therefore be considered but no predictions as to waste makeup applied at this stage.

Regional Policy

The London Plan, Spatial Development Strategy for Greater London (Consolidated with Alterations since 2011) (2016)

3.1 The London Plan (Ref. 28) outlines the Mayor's commitment to making better use of waste and its management, in an attempt to reduce London's impact on climate change, such as exploiting opportunities to utilise energy from waste (EfW). The London Plan describes waste as a valuable resource which can be exploited for London's environmental, economic and social benefit. The London Plan contains five policies which are relevant to waste and are outlined in Table 1 of this Strategy.

Table 1. London Plan Waste Policies

Policy	Description
Policy 5.3 Sustainable Design and Construction	States that the highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime. This should be achieved through a number of sustainable design principles, including minimising the generation of waste and maximising re-use and recycling
Policy 5.16 Waste Net Self-sufficiency	States that the Mayor will work with various stakeholders and authorities to manage as much of London's waste within London as practicable, working towards managing the equivalent of 100% of London's waste within London by 2026, whilst also working towards zero biodegradable or recyclable waste sent to landfill. This should be achieved by a number of ways, including minimising waste, encouraging the reuse of materials, exceeding recycling/composting levels in local authority collected waste (LACW) and commercial and industrial waste, improving London's net self-sufficiency, through reducing the proportion of waste exported from the capital over time, and working with neighbouring regional and district authorities to co-ordinate strategic waste management across the greater south east of England.
Policy 5.17 Waste Capacity	States the need to increase the waste processing capacity in London and that all new developments should have suitable waste and recycling storage facilities.
Policy 5.18 Construction, Excavation and Demolition Waste	States that waste should be removed from construction sites, and materials should be brought to the site, by water or rail transport wherever that is practicable.
Policy 5.19 Hazardous Waste	States that there is a capacity gap for dealing with London's hazardous waste and identifies the need for hazardous waste treatment sites.

The Intend to Publish London Plan- Spatial Development Strategy for the Greater London 2019

3.2 The Intend to Publish London Plan – Spatial Development Strategy for Greater London (Ref. 29) was issued for consultation in December 2017 and the public consultation period ended in March 2018. The Intend to Publish London Plan has considered recommendations from the Examination in Public and was therefore released 9 December 2019.

3.3 On 13 March 2020, the Secretary of State for Housing, Rt Hon Robert Jenrick MP, wrote to the Mayor of London on the need for an improved London Plan and provided a number of directions. The majority of the Secretary of State's directions related to housing supply within London and do not impact draft policies related to the Proposed Development.

3.4 Therefore, for the purposes of this Waste & Recycling Strategy, all other policies such as those related to waste management are treated as retained in their Intend to Publish form for adoption. As a result, we have assumed that the policies in the new London Plan will be adopted in their current form and should carry weight when determining the planning application. The weight will increase over time prior to adoption.

3.5 Like the adopted London Plan (2016), the Intend to Publish London Plan details the Mayor’s commitments towards a greener London by tackling climate change and moving towards a zero-carbon city by 2050. The Intend to Publish London Plan contains five policies that are relevant to operational waste and recycling and these are displayed in Table 2 of this Strategy.

Table 2. Intend to Publish London Plan Waste and Recycling Management Policies

Policy	Description
Intend to Publish Policy SI 7 Reducing Waste and Supporting the Circular Economy	<p>This policy states that waste reduction and reduction in the quantity of waste going for disposal from London can be achieved by promoting circular economy i.e.</p> <p>By encouraging the reuse of material and by using fewer resources in the production and distribution of products;</p> <p>By ensuring that zero biodegradable or recyclable waste is sent to landfill by 2026;</p> <p>By meeting the set recycling targets (i.e. 65% for municipal waste by 2030 and 95% for construction and demolition waste); and</p> <p>By designing developments that would provide adequate, flexible and easily accessible storage space to support collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.</p>
Intend to Publish Policy SI 8 Waste Capacity and New Waste Self Sufficiency	<p>This policy indicates the Mayor’s intent of sustainably managing the equivalent of 100% of London’s waste within London by 2026. This can be achieved by identifying techniques/methods to reduce waste, in line with the principles of the Circular Economy and determining ways to manage waste that cannot be reduced. In addition to this, existing waste sites are to be safeguarded and their capacities optimised.</p>
Intend to Publish Policy SI 9 Safeguarded Waste Sites	<p>This policy states that developments should not result in the loss of an existing waste site unless appropriate compensatory capacity is made within London that is at or above the same level of the waste hierarchy, or the waste site will be relocated within London (providing strategic waste management outcomes are achieved).</p>
Intend to Publish Policy D8 Public Realm	<p>This policy states that development plans and development proposals should ensure the provision and future management of free drinking water at appropriate locations in the new or redeveloped public realm.</p>
Intend to Publish Policy T7 Deliveries, Servicing and Construction	<p>This policy states that development proposals must consider the use of rail/water for the transportation of material with increased levels of direct vision on waste.</p> <p>Development plans and development proposals should facilitate sustainable freight movement by rail, waterways and road.</p> <p>At large developments, facilities to enable micro-consolidation should be provided, with management arrangements set out in Delivery and Servicing Plans.</p>

Mayor of London Environmental Strategy (2018)

3.6 The London Environment Strategy (Ref. 30) sets out a framework that identifies the stages to London becoming a zero-waste city. However, this Strategy focuses on the management of bio-degradable or recyclable waste and sets targets for waste sent to landfill and doesn’t provide any specific policies related to the management of construction waste

The Business and Waste Management Strategy (2011)

3.7 In addition to the policies outlined in the London Plan, the Business Waste Management Strategy (Ref. 31) provides further guidance on the management of business waste. It sets out initiatives to help London businesses (including shops, restaurants and offices) save money and reduce harm to the environment, through better waste management practices. The strategy is aimed at encouraging waste reduction and promoting better re-use and recycling from commercial activities. It looks to improve the efficiency of resource management and reduce the financial and environmental impact of waste by managing as much as is practical within London’s boundaries.

The Municipal Waste Management Strategy (2011)

3.8 The Municipal Waste Management Strategy (Ref. 32) provides further guidance on the management of municipal waste, in addition to policies contained within the London Plan. The strategy sets six additional targets, which aim to reduce the amount of municipal waste generated by the capital and significantly increase recycling and composting performance. The strategy goes on to explain that municipal waste, which cannot be re-used or recycled, will be used to produce EfW in the most environmentally sensitive way possible.

District Policy and Guidance

North London Waste Authority (NLWA) - North London Waste Plan (Regulation 19) – Proposed Submission (2019)

3.9 The seven North London Boroughs of Banet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest are working together to produce the North London Waste Plan (NLWP) (Ref. 33). The NLWP has two main purposes:

- *“To ensure there will be adequate provision of suitable land to accommodate waste management facilities of the right type, in the tight place and at the right time up to 2035 to manage waste generated in North London; and*
- *To provide policies against which planning applications for waste developments will be assessed, alongside other relevant planning policies/guidance”.*

3.10 Table 3 of this Strategy sets out the strategic objectives relevant to the management of waste.

Table 3. North London Waste Authority (NLWA) Strategic Objectives

Strategic Objective (SO)	Description
Draft SO 1	States that <i>“to support the movement of North London’s waste as far up the waste hierarchy as practicable, to ensure environmental and economic benefits are maximised by utilising waste as a resource”.</i>

North London Waste Authority (NLWA) Joint Waste Strategy (2009)

3.11 In addition to the NLWP, the North London Joint Waste Strategy (NLJWS) (Ref. 34) provides the strategic framework for municipal waste management in North London from 2004 to 2020. The NLJWS sets out the targets for reducing, reusing and recovering a greater proportion of municipal waste generated within the NLWA and it also sets out the targets aimed at reducing the amount of waste sent to landfill for disposal. The NLJWS states its objectives as being:

- *“To minimise the amount of municipal wastes arising;*
- *To maximise recycling and composting rates;*
- *To reduce greenhouse gases by disposing of less organic waste in landfill sites;*
- *To co-ordinate and continuously improve municipal wastes minimisation and management policies in North London;*
- *To manage municipal wastes in the most environmentally benign and economically efficient ways possible through the provision and co-ordination of appropriate wastes management facilities and services; and*
- *To ensure that services and information are fully accessible to all members of the community”.*

Local Policy and Guidance

London Borough of Barnet – Local Plan (Core Strategy) 2012

- 3.12 LBB's Core Strategy Development Plan Document (Ref. 35) identifies that the borough "...need[s] to find better ways of dealing with our waste and taking more responsibility for dealing with it within London rather than burying it in landfill..." and that the Borough's recycling rates "...are above average..."
- 3.13 LBB's Local Plan also details Core Strategy Policy CS14 in relation to waste through which the Borough "...will encourage sustainable waste management by:
- *promoting waste prevention, re-use, recycling, composting and resource efficiency over landfill;*
 - *requiring developments to provide waste and recycling facilities which fit current and future collection practices and targets;*
 - *designating sites through the NLWP to meet an aggregated apportionment target across the seven North London boroughs. These sites will be the principle locations considered suitable for waste facilities; and*
 - *safeguarding all existing waste facilities in Barnet including a Waste Management Facility in the Brent Cross - Cricklewood Regeneration Area".*

London Borough of Barnet – Local Plan, Supplementary Planning Document: Sustainable Design and Construction (2016)

- 3.14 Paragraph 2.12.2 of the Supplementary Planning Document (SPD): Sustainable Design and Construction (Ref. 36) outlines the importance of reducing waste and encouraging recycling during the occupation of the development.
- 3.15 The following set of design principles are outlined that will be considered:
- Waste generated through building occupation – Identify measures to help occupants to recycle waste. People will generally recycle more when it is easy and convenient for them to do so. This requires consideration as to how a building's occupants will be able to participate in recycling initiatives and services. Key considerations include:
 - *"Ensuring that sufficient space is dedicated in appropriate places, including within and without residential properties, for the temporary storage of material to be recycled. For example, space should be provided within kitchens in new properties to accommodate extra bins which are required for separately storing items such as paper, bottles, cans and food waste for recycling.*
 - *Ensuring that people can easily transfer material for recycling from their own premises, such as a residential unit, a shop or an office, to a location from which the material can be collected. Waste from shops or offices would be considered trade waste, so any movement of this waste would need to be undertaken by an appropriate, licensed waste carrier and taken to a permitted waste management site. An exemption or permit may be required from the Environment Agency for storage of waste at a collection point.*
 - *Communal refuse and recycling containers, communal bin enclosures and refuse and recycling stores should be easily accessible to all residents including children and wheelchair users, and located on a hard, level surface. Refuse and recycling stores within buildings should be located to limit the nuisance caused by noise and smells and maintained to a high hygiene standard.*
 - *Storage facilities for waste and recycling containers should be provided in accordance with local authority requirements and meeting at least British Standard BS5906:2005 Code of Practice for waste management in Buildings".*

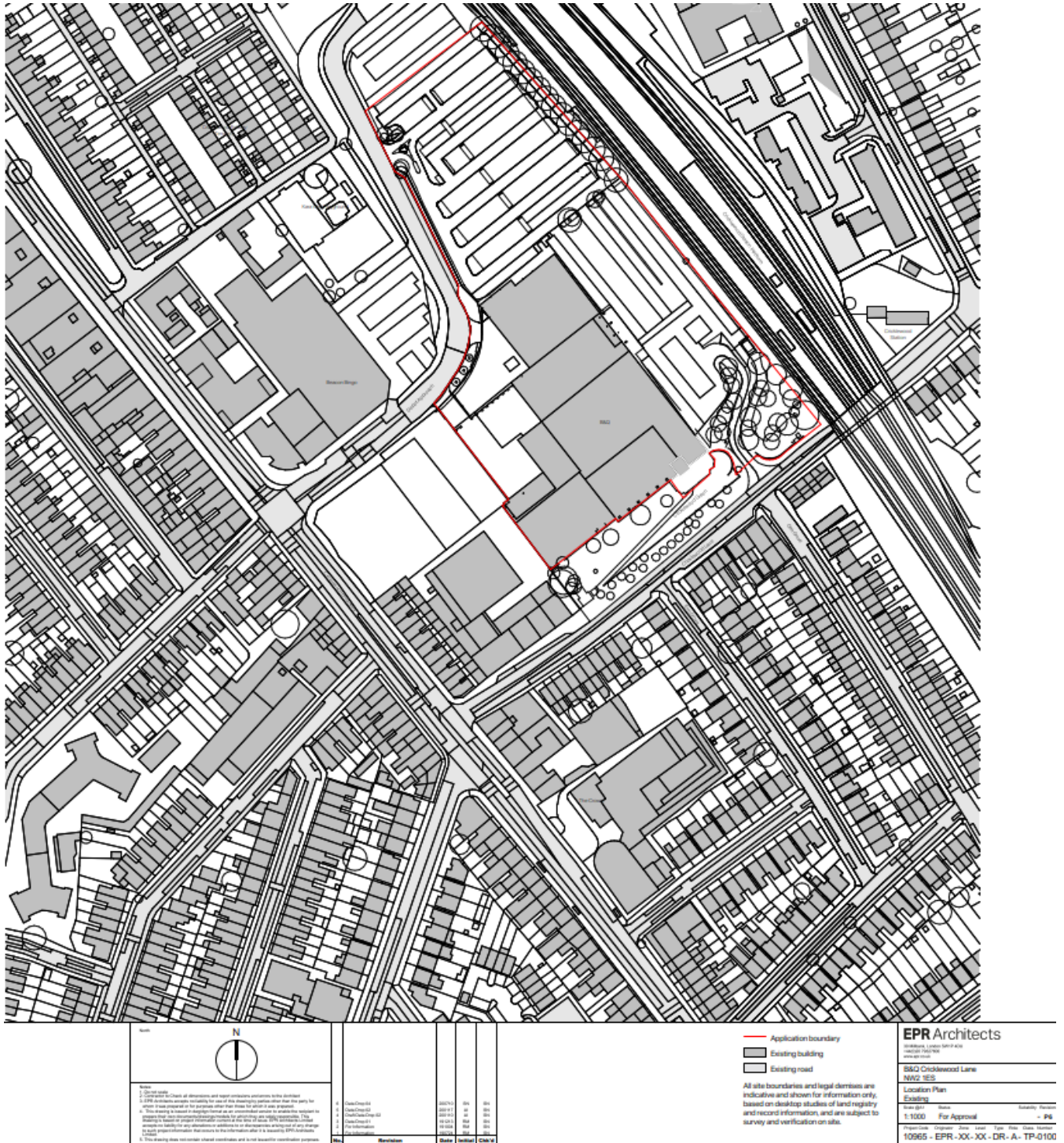
London Borough of Barnet – Municipal Recycling and Waste Strategy and Future Delivery for Barnet (2016-2030)

- 3.16 LBB's Municipal Recycling and Waste Strategy and Future Delivery for Barnet (Ref. 37) outline its vision to protect environment at Barnet by reducing waste and giving materials another chance through reuse and recycling. The strategy also outlines LBB's aims, that will enable LBB to achieve a higher level of household recycling rate.
- *“Provide services that help our rapidly growing community to manage its environmental impacts;*
 - *Manage the rising cost of waste collection and disposal by designing services that promote recycling and reuse and are integrated, intuitive and efficient;*
 - *Encourage all Barnet's residents, business and visitors to take responsibility for the waste that they produce, but using enforcement where necessary; and*
 - *Embrace new technologies and ways of working that help us deliver services that respond better to the needs of our community”.*

4. The Proposed Development

- 4.1 The Proposed Development will be located within the administrative jurisdiction of the LBB, adjacent to Cricklewood railway station (postcode NW2 1ES, National Grid Reference TQ 23857 85892). The Site is bound by Kara Way and Campion Terrace to the north, national railway lines and Cricklewood railway station to the east, Cricklewood Lane to the south and Cricklewood Broadway (A5) to the west. The Site area is approximately 2.88 ha.
- 4.2 The Site is currently occupied by a range of retail outlets, including a large B&Q DIY Store, Pound Stretcher and Tile Depot. These large warehouse buildings are situated in the south-western aspect of the Site. The northern and eastern aspects of the Site mainly consist of car parking associated with the previously identified retail outlets, as well as soft landscaping adjacent to the railway lines, and the southern entrance to the Site. Additional retail properties are situated adjacent to the south-western boundary, including a large Co-op supermarket, as well as numerous local business such as pharmacies, food take-aways, international supermarkets, barbers and other general stores. Towards the north-eastern boundary of the Site, a Travel Lodge, Cricklewood Timber and Building Supplies, Beacon Bingo, Jewson building materials supplier and a Tesco Direct. Residential properties are situated on the eastern boundary of the railway lines, southern boundary of Cricklewood Lane, western boundary of Cricklewood Broadway and to the north of the Travelodge, all within approximately 150 m of the Site boundary.
- 4.3 Figure 1 of this Strategy shows the currently occupied site whereas Figure 2 of this Strategy shows the site aspirations. The red line boundary for the Proposed Development is provided in Figure 3 of this Strategy.

Figure 1. Currently Occupied Site



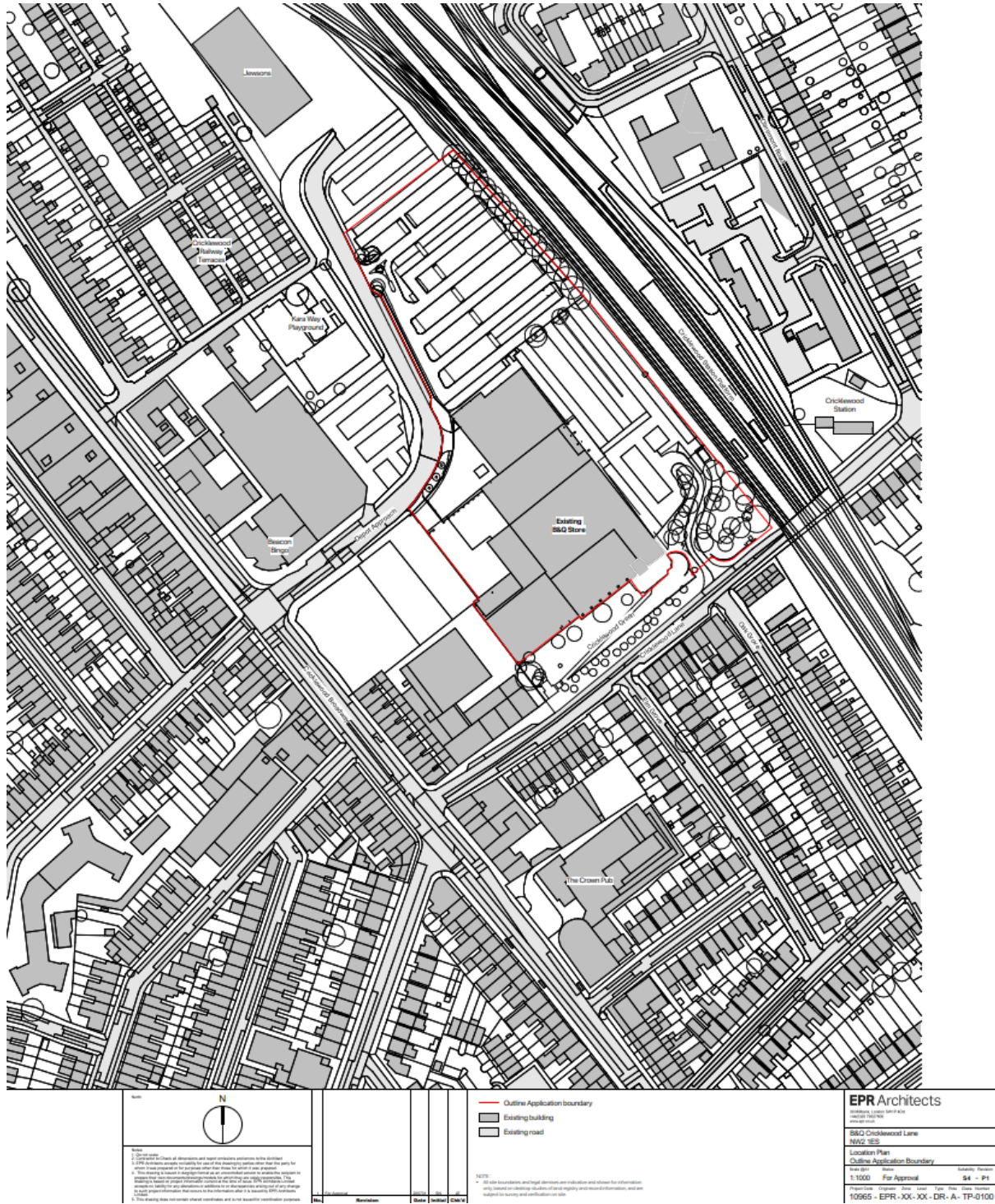
Please note, this figure is not to scale.

Figure 2 Proposed Development Site Aspirations (Ground Floor Parameter Plans)



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Figure 3 Site Red Line Boundary



Please note that this Figure is not drawn to scale

4.4 An Illustrative Masterplan has been developed by the Architects to inform the planning application strategies and assessment, with regards to this, once the Proposed Development is complete, it should comprise of four blocks, providing 1,100 residential units (based on the Illustrative Mix). Table 4. Indicative Residential Unit Breakdown of this Strategy shows the indicative residential breakdown of the Proposed Development in relation to bedroom size.

Table 4. Indicative Residential Unit Breakdown

Block	One beds	Two beds	Three beds
A	196	152	29
B	51	84	35
C	171	140	18
D	143	58	23
Total	561	434	105
Overall Total	1,100		

Please note, an Illustrative mix has been developed by the Architects to inform the planning application strategies and assessments, this includes providing the Indicative Residential Unit Breakdown as shown in the above table.

4.5 Based on the Illustrative Masterplan, it is noted that the Proposed Development is also anticipated to provide up to 1,200 metres squared (m²) of Gross Internal Area (GIA) or 1,004 m² Net Internal Area (NIA) of flexible commercial land uses (A3/B1/D1/D2).

4.6 For the purposes of this Strategy, a realistic worst-case breakdown of flexible commercial land use will be adopted to calculate waste and recycle arisings for the Proposed Development. Whilst AECOM understand 1,004 m² NIA of A3 land use would provide a worst-case scenario, this would result in unrealistic quantities of waste and recycle material. It is also unlikely that this will be adopted within the detailed stages of the Proposed Development. Therefore, the NIA breakdown for the Proposed Development is considered on a 50 : 25 : 25 splits between A3, D2 and B1 Land uses. Table 5 of this Strategy provides the illustrative commercial breakdown within the Proposed Development in relation to land use.

Table 5. Illustrative Commercial Unit Breakdown

Land Use	NIA (m ²)
A3 (Restaurant)	502 m ²
B1 (Services)	251 m ²
D2 (Community)	251 m ²
Total	1,004 m²

Please note, commercial unit breakdown may include D1 land use once built out however, for the purposes of creating a realistic worst case of waste arisings deriving from the Proposed Development, and land use mix of A3/D2/B1 has been used.

5. Methodology

Residential Waste

- 5.1 Waste and recycle arisings for the Illustrative Masterplan have been calculated based on the methodology provided within LBB's 'Information for developers and architects, Provision of Household Recycling and Waste Services' document. Table 6 of this Strategy shows the methodology for weekly waste and recycle arisings as provided by LBB's Recycling and Waste guidance.

Table 6. Residential Waste and Recyclate Arisings based on Weekly Collection Frequency

Unit Type	Total Waste Provision	Waste Stream Split
One Bed	200 Litres (L)	MDR : Residual 50 : 50
Two Bed	340 L	MDR : Residual 50 : 50
Three Bed	480 L	MDR : Residual 50 : 50

- 5.2 Due to emerging policy (Our waste, our resources: A strategy for England 2018) separate food waste collection is due to be rolled out in the near future. When this is introduced, it is envisioned that a proportion (i.e. approximately 23 Litres (L) per residential unit) is likely to be taken out of the residual waste stream, in place for food waste. However, to future proof the Proposed Development for the future collection of food waste, an additional 7 L of food waste per unit has been included within the methodology. This has been communicated and agreed with LBB. Appendix A of this Strategy demonstrates the communication held between AECOM and LBB to agree upon a food waste provision for the Proposed Development.

Commercial Waste

- 5.3 LBB does not provide guidance for the calculation and storage of commercial waste and recycle arisings, therefore reference to BS 5906:2005 has been made in order to calculate waste and recycle arisings and storage requirements Table 7 of this Strategy provides the methodology used for determining the commercial storage requirements based on weekly waste and recycle calculations.
- 5.4 As mentioned in paragraph 4.6 of this Strategy, a realistic land use split will be used to calculate bin storage requirements for the Proposed Development. This will consist of land uses Restaurant (A3), Office (B1) and Community (D2) as shown in Table 7 of this Strategy.

Table 7. BS 5906:2005 Weekly Waste and Recyclate Arising Methodology

Land Use	Methodology	Waste Storage Requirements	Waste Stream Ratio
A3 (Restaurant)	BS 5906 : 2005	75 L per Cover per Week. With 1 Cover calculated as 1 per 3 m ² of NIA.	MDR : Food : Residual 50 : 30 : 20
B1 (Services)	BS 5906 : 2005	50 L per employee. With one employee calculated as 1 per 10 m ² .	MDR : Residual 50 : 50
D2 (Community)	BS 5906 : 2005	5 L of waste per m ² of NIA.	MDR : Residual 50 : 50

Please note, B1 land use is considered to be a 5-day working week, whereas A3 and D1 uses are considered as a seven-day working week.

Please also note, commercial unit breakdown may include D1 land use once built out however, for the purposes of creating a realistic worst case of waste arisings deriving from the Proposed Development, and land use mix of A3/D2/B1 has been used.

Growth Rates

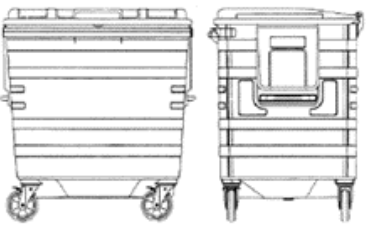
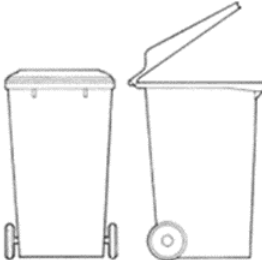
- 5.5 Estimates of future waste generation rates vary widely, therefore inflationary waste growth predictions have not been applied to the waste calculation estimates for the Proposed Development. Department for Environment, Food and Rural Affairs (Defra) data for the years from 2011 to 2016 show that household waste arisings in England have fluctuated, with periods of slight increase and decline, but have remained relatively stable at around 22,000-23,000 kilo tonnes per year (Ref. 38) Although the total waste collected has increased by 94 kilo tonnes from 2010 to 2015, this is to be expected in line with population growth. In fact, waste per person has decreased from 425 kg to 407 kg per person from 2010 to 2015 respectively.
- 5.6 Whilst volumes of household waste generation have fluctuated over recent years, the data supports longer term results and projections of Defra figures, which suggest that waste growth has stabilised and may actually be declining at a rate of 0.5% per year (Ref. 39, Ref. 40). It is likely that the latter situation is most appropriate to the Proposed Development. This is because the long-term population of the Proposed Development is unlikely to change significantly, and widespread initiatives to reduce waste and improve materials reuse and recycling are likely to reduce long-term production of waste from the Proposed Development. Improvements in data centre security and storage and increasing reliance on information technology is also likely to lead to a reduction in paper usage in the long-term. Therefore, it is likely that the current waste production and storage requirements will represent a reasonable worst-case scenario and should therefore form the basis for long-term waste management provisions.
- 5.7 In addition to paragraphs 5.5 and 5.6 of this Strategy, recent changes and uncertainties (due to COVID-19) may see a change in waste and recycle composition from households and businesses in the future. It is likely workforces will continue to work from home, adopting a paperless working culture resulting in less waste and recycle materials arising from commercial premises. However, in addition to this an increase in household waste and recycle materials may arise due to increased time spent at home. Adoption of innovative technologies such as Deposit Return Schemes, and policies such as Extended Producer Responsibility (as driven by policy in Our waste, our resources: A strategy for England), may see a decrease in waste and recycle materials collected from kerbside. Operational Waste and Recycling Management Strategy.

6. Operational Waste and Recycling Management Strategy

Storage Requirements

- 6.1 The storage requirements for waste and recycle arisings from the operational phase of the Proposed Development (based on the Illustrative Masterplan) is based on guidance provided by LBB in their document 'Information for developers and architects, Provision of Household Recycling and Waste Service'. The standard bin types as required by LBB are shown within Table 8 of this Strategy.
- Usage of 1,100 L Euro Bins for MDR;
 - Usage of 240 L Wheeled bins for Food Waste; and
 - Usage of 1,100 L Wheeled bins for Residual Waste.

Table 8. LBB Bin Dimensions

1,100 L	
	Capacity (L): 1,100
	Width (mm): 1,250*
	Height (mm): 1,370*
	Depth (mm): 980*
240 L	
	Capacity (L): 240
	Width (mm): 580*
	Height (mm): 1100*
	Depth (mm): 740*

**Please note, dimensions may vary between manufactures.*


Residential Waste and Recycling Management Strategy

- 6.2 For the purposes of this Strategy, the Illustrative Masterplan has been tested to show the potential bin store locations. Exact store locations and numbers should be designated at the Reserved Matters Application stage for each Development Parcel.
- 6.3 For the purposes of this Outline Planning Application, the option for using lever arm in-bin compactors is envisioned to be adopted within the Proposed Development. LBB do not collect compacted waste and recycle materials from the residential units, therefore it is envisioned that a private waste and recycle collection company should be commissioned to collect and dispose of waste and recycle arisings for the life of the Proposed Development. These arrangements should be agreed between the Applicant and LBB.
- 6.4 To allow increased flexibility regarding the management of waste and recycle materials arising from the Proposed Development, the option of managing waste and recycle arisings conventionally i.e. without any compactors and allowing collection from LBB, has also been tested by the Architects (this is demonstrated in paragraphs 6.15 to 6.20 of this Strategy). It should be noted, for the purposes of this Outline Application an in-bin compaction Strategy is envisioned to be adopted within the Proposed Development.
- 6.5 It is envisioned that if a conventional arrangement (i.e. not using compaction) is to be adopted within the operational stages of the Proposed Development, an updated Strategy would need to be submitted within the RMA stage of the Planning Application. The adoption of this option would allow the Proposed Development to be eligible for collection and disposal of waste from LBB.

Residential Waste and Recyclate Management – In Bin Compaction

- 6.6 The majority of bin stores are envisioned to provide sufficient space to house two lever arm in-bin compactors that should allow for the compaction of MDR waste at a ratio of 2:1 and Residual waste at a ratio of 3:1 (example in-bin compaction unit provided in Table 9 of this Strategy), Food waste will not be compacted.

Table 9. Example In-Bin Lever Arm Compactor

Tony Team TT1100E Bin Compactors	
	Height (m): 2.15
	Width (m): 1.66
	Depth (m): 1.54
	Pressing Force: 2.3 tonnes
	Cycle Time: 31 seconds

Please note that this is to be used for reference purpose only

- 6.7 Considering the compaction ratios shown in paragraph 6.6 of this Strategy and the methodology as stated in Table 6 of this Strategy, Table 10 of this Strategy highlights the overall storage requirements for the separate residential blocks of the Proposed Development based on a compacted, weekly collection frequency. Detailed weekly waste and recyclate arisings can be seen in Appendix B of this Strategy.

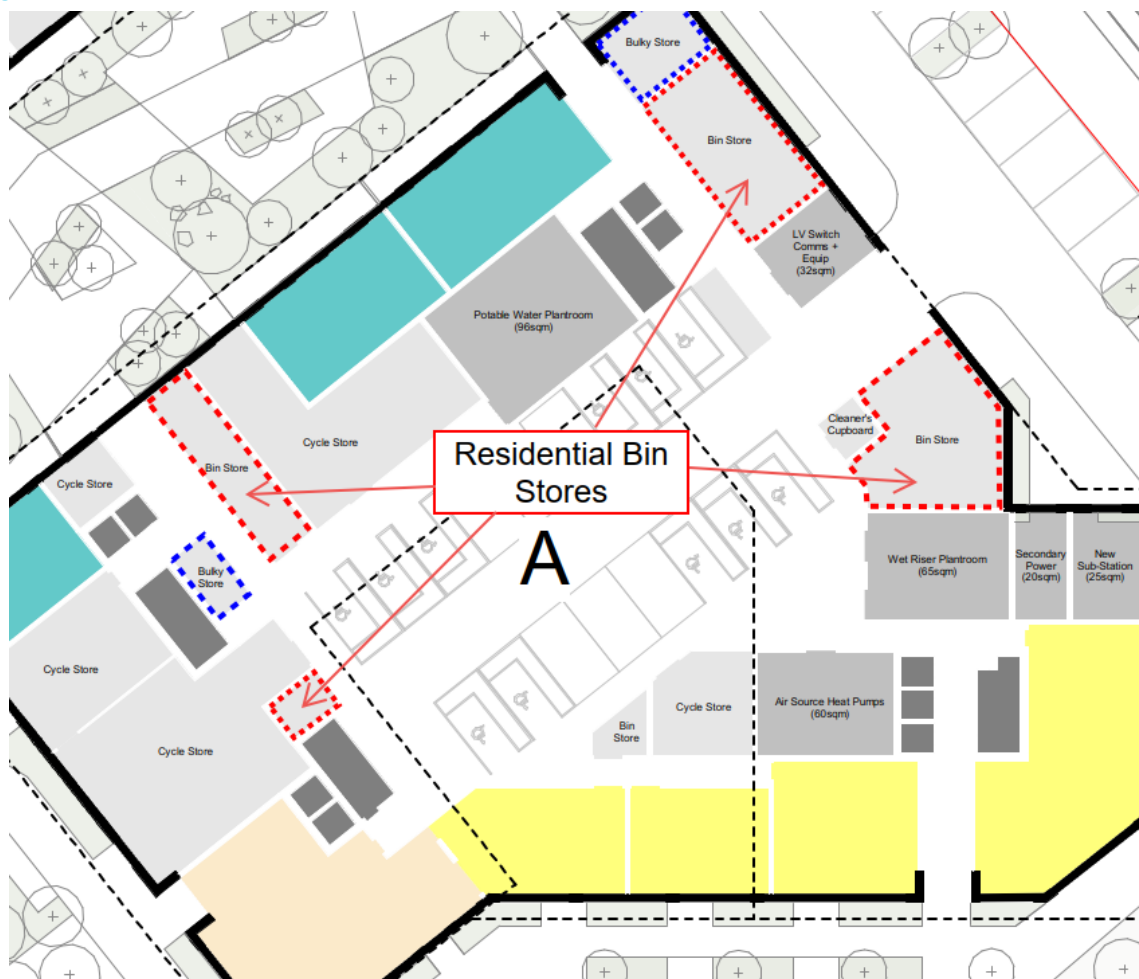
Table 10. Total Compacted Residential Waste and Recyclate Storage Provisions with Weekly Collection Frequency

Block	MDR	Food	Residual	Total
A	24 x 1,100 L	11 x 240 L	16 x 1,100 L	40 x 1,100 L 11 x 240 L
B	13 x 1,100 L	5 x 240 L	9 x 1,100 L	22 x 1,100 L 5 x 240 L
C	21 x 1,100 L	10 x 240 L	14 x 1,100 L	35 x 1,100 L 10 x 240 L
D	14 x 1,100 L	7 x 240 L	9 x 1,100 L	23 x 1,100 L 7 x 240 L
Total	72 x 1,100 L	33 x 240 L	48 x 1,100 L	120 x 1,100 L 33 x 240 L

Please note, storage provisions have been based on the Illustrative Masterplan at this stage. Exact storage provisions and waste arisings will be calculated at the RMA stage for each Development Parcel.

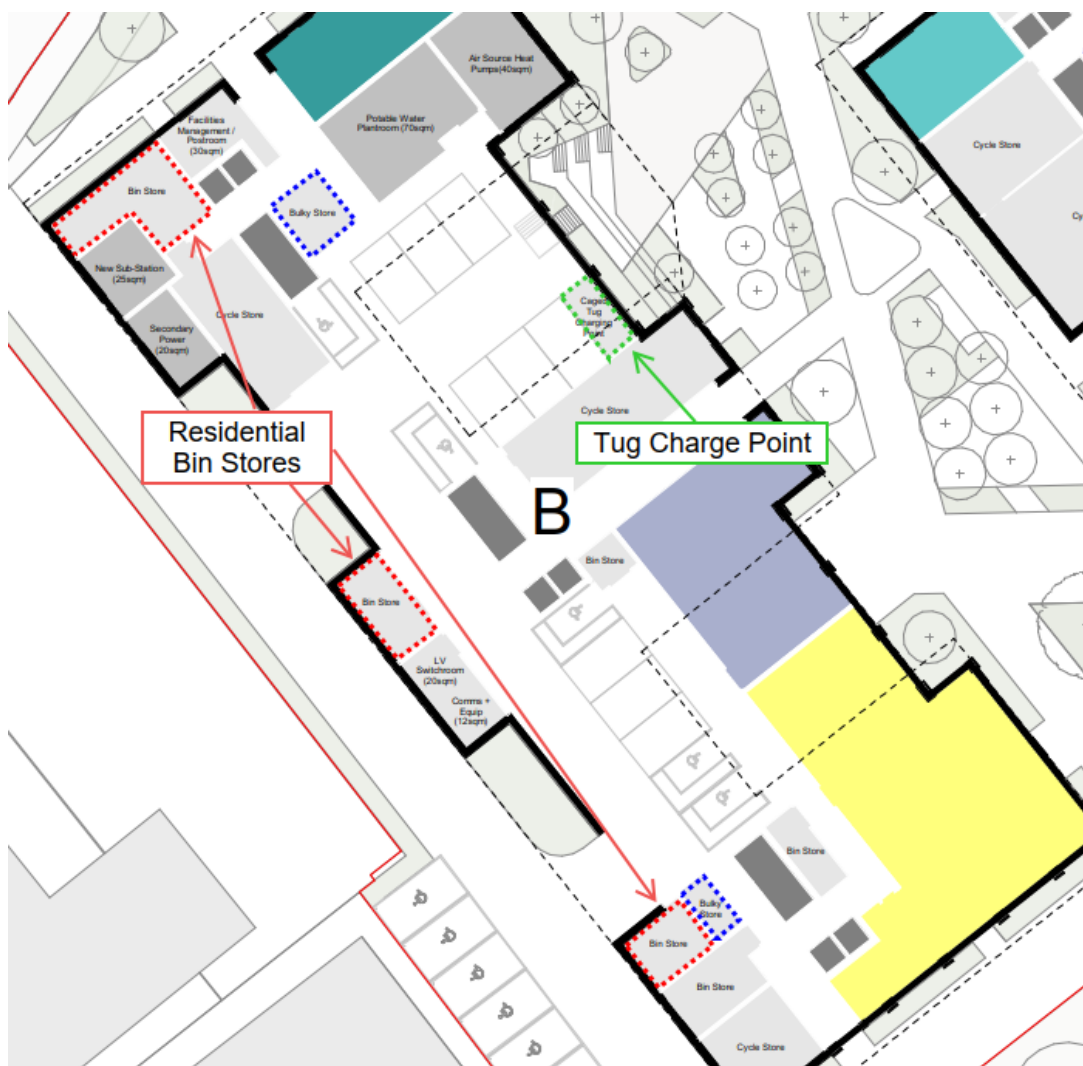
- 6.8 It is envisioned each residential core will be provided with designated bin stores therefore, Block A, in line with the Illustrative Masterplan, should provide a total of 4 stores, Block B should provide a total of 3 stores, Block C should provide a total of 3 bins stores, and Block D should provide a total of 2 bin stores. It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the RMA stage for each Development Parcel.
- 6.9 Bin stores within each block of the Proposed Development should have sufficient space to cater for the MDR, Food, and Residual bin storage requirements as highlighted in Table 10 of this Strategy. Figure 4, Figure 5, Figure 6 and Figure 7 of this Strategy demonstrate the illustrative bin store locations per block. Bin stores located in the figures below should be located at a 30 m distance from the residential units they are serving so to comply with the guidance provided in BS 5906:2005 and LBB's guidance document.

Figure 4. Illustrative Block A Core Residential Bin Stores



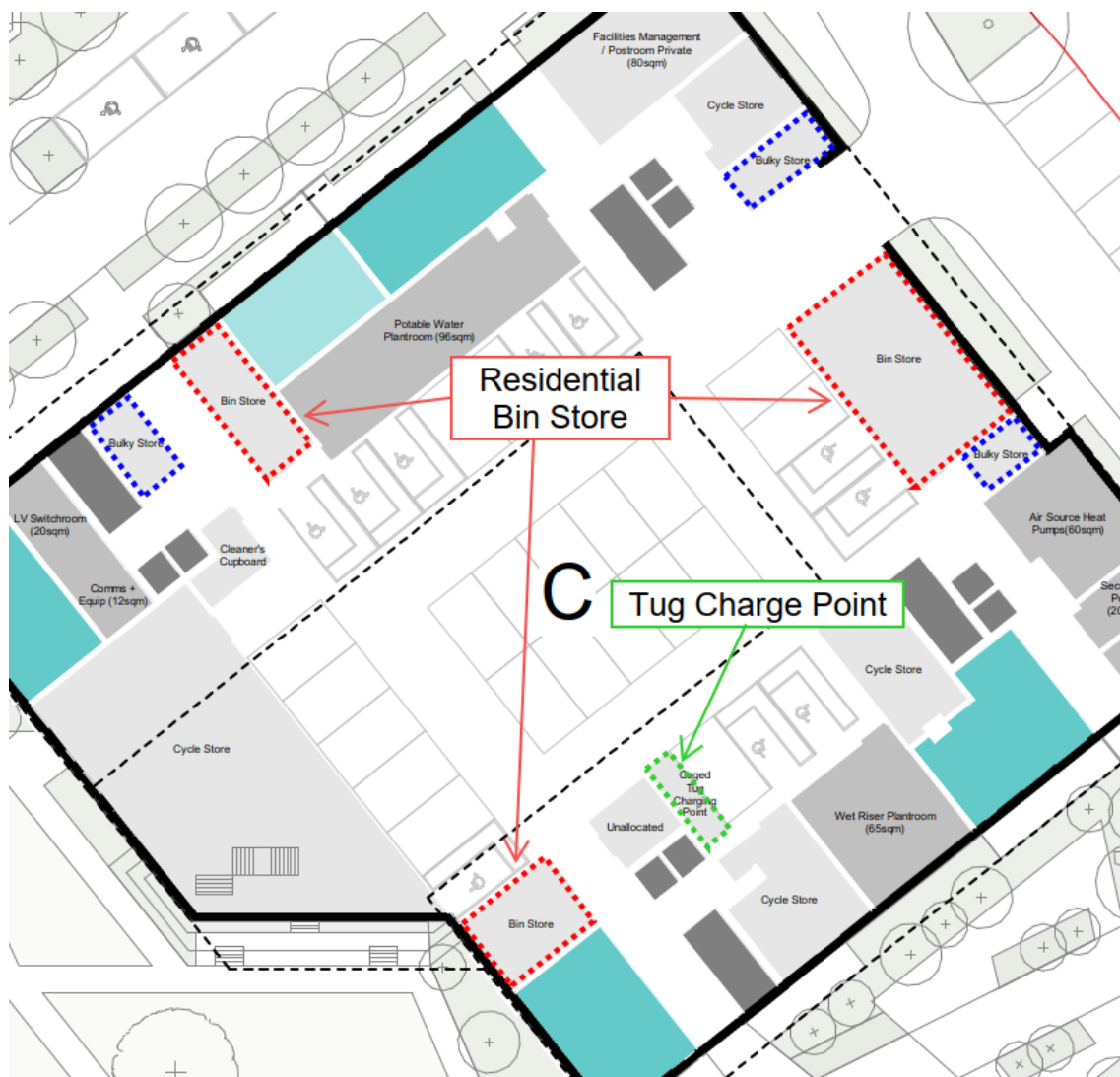
Please note that this figure is not drawn to scale and has represented the areas for bin stores as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 5. Illustrative Block B Core Residential Bin Store



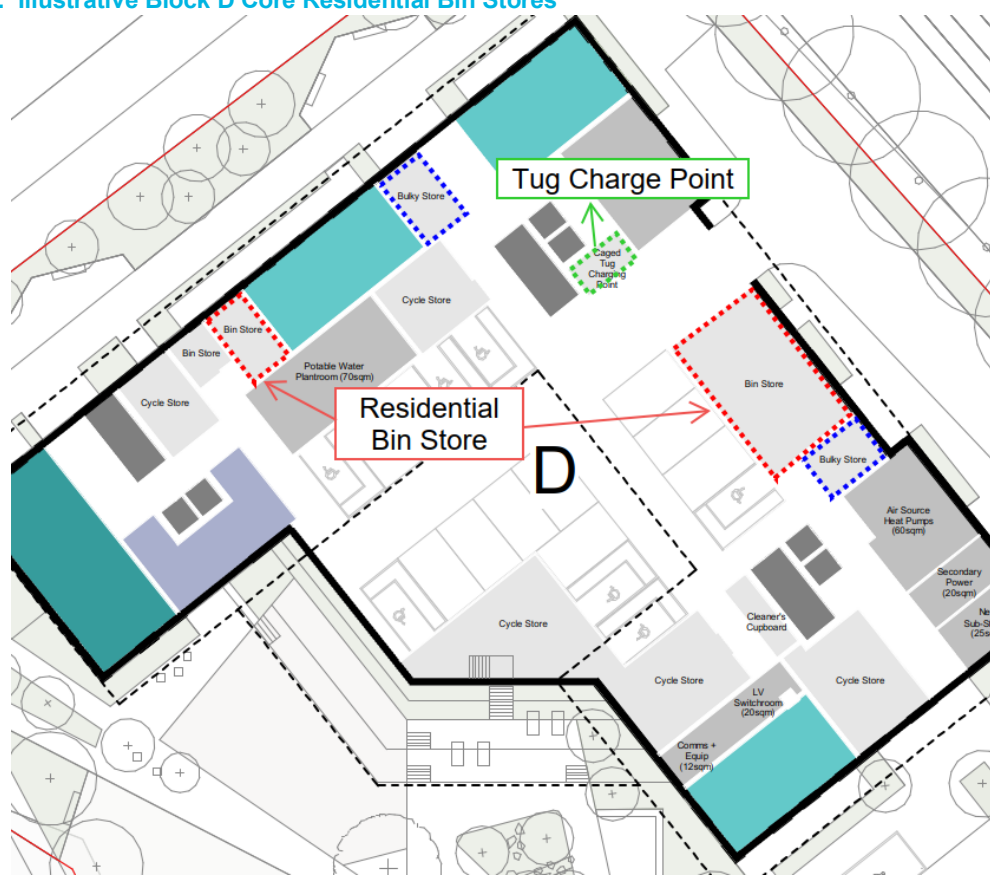
Please note that this figure is not drawn to scale and has represented the areas for bin stores as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage

Figure 6. Illustrative Block C Core Residential Bin Stores



Please note that this figure is not drawn to scale and has represented the areas for bin stores as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 7. Illustrative Block D Core Residential Bin Stores



Please note that this figure is not drawn to scale and has represented the areas for bin stores as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

- 6.10 The process of waste and recycle disposal within these bin stores should follow a conventional approach i.e. the residents should be allowed access to all residential bin stores (via lifts) to dispose the waste and recycle materials within the appropriate bins (i.e. MDR, Food and Residual), therefore to provide an extra layer of safety, the in-bin compactors should be caged. In addition, these compactors should be operated by trained members of the internal management team.
- 6.11 It is envisaged some of the bin stores may not have the capacity to house in-bin compaction units due to space constrains. Due to this, these stores should be monitored and managed by the internal management team. Once bins are full within these bin stores, it is envisioned that the internal management team should transfer these bins to the closest compaction units inside of the Block. After compaction, the bins should be returned back to the specific bin store within the Block.
- 6.12 At the time of collection, the Refuse Collection Vehicle (RCV) will park on the ground floor of the Proposed Development. Residential bin stores which are envisioned to be within a 10 m distance from the RCV parking point, should see the private collection crew transport the bins of the required waste and recycle stream directly from the bin store to the RCV for emptying purposes. Once emptied, the private collection crew should return bins back to the residential bin store.
- 6.13 Residential bin stores which are envisioned to exceed the 10 m distance from the parked RCV should require the internal management team to wheel the bins to a designated presentation area (i.e. envisioned to be located within 10 m from the RCV parking point). Bin stores that may exceed 30 m from the presentation area should require the internal management team to use tugs for the transportation of bins to the presentation area (similar to the examples provided in Figure 8 of this Strategy). From the designated presentation areas, the private collection crew should transfer bins to the RCV . Once bins are emptied, the private collection crew should return bins to the presentation area. The internal management team will then be responsible for returning bins back to the correct residential bin stores. Tug storage and charging points can be seen within Figure 5, Figure 6 and Figure 7 of this Strategy. Please see Appendix C of this Strategy for the RCV Swept Path Analysis.

Figure 8. Example of Towing Tugs

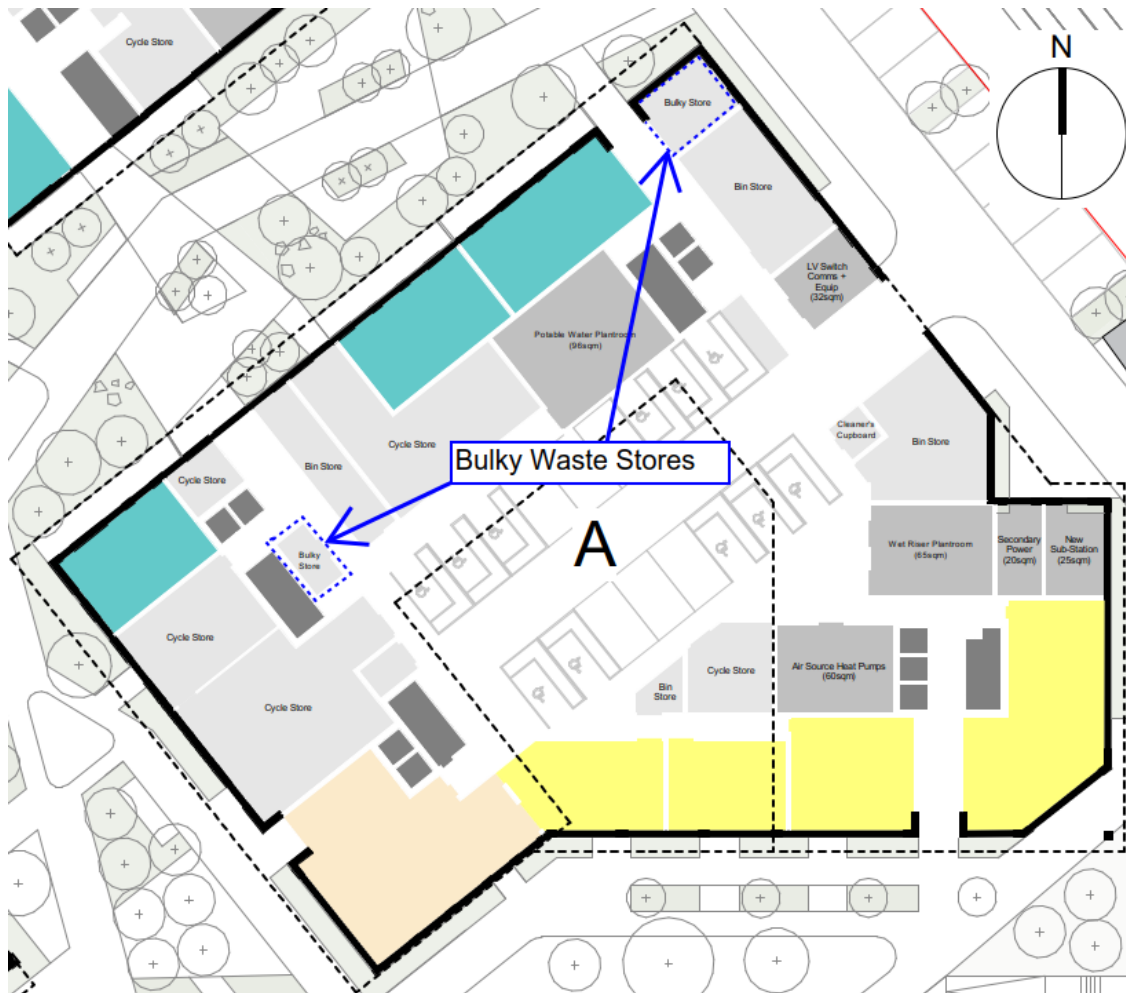


Tug examples are provided for reference only.

Bulky Waste

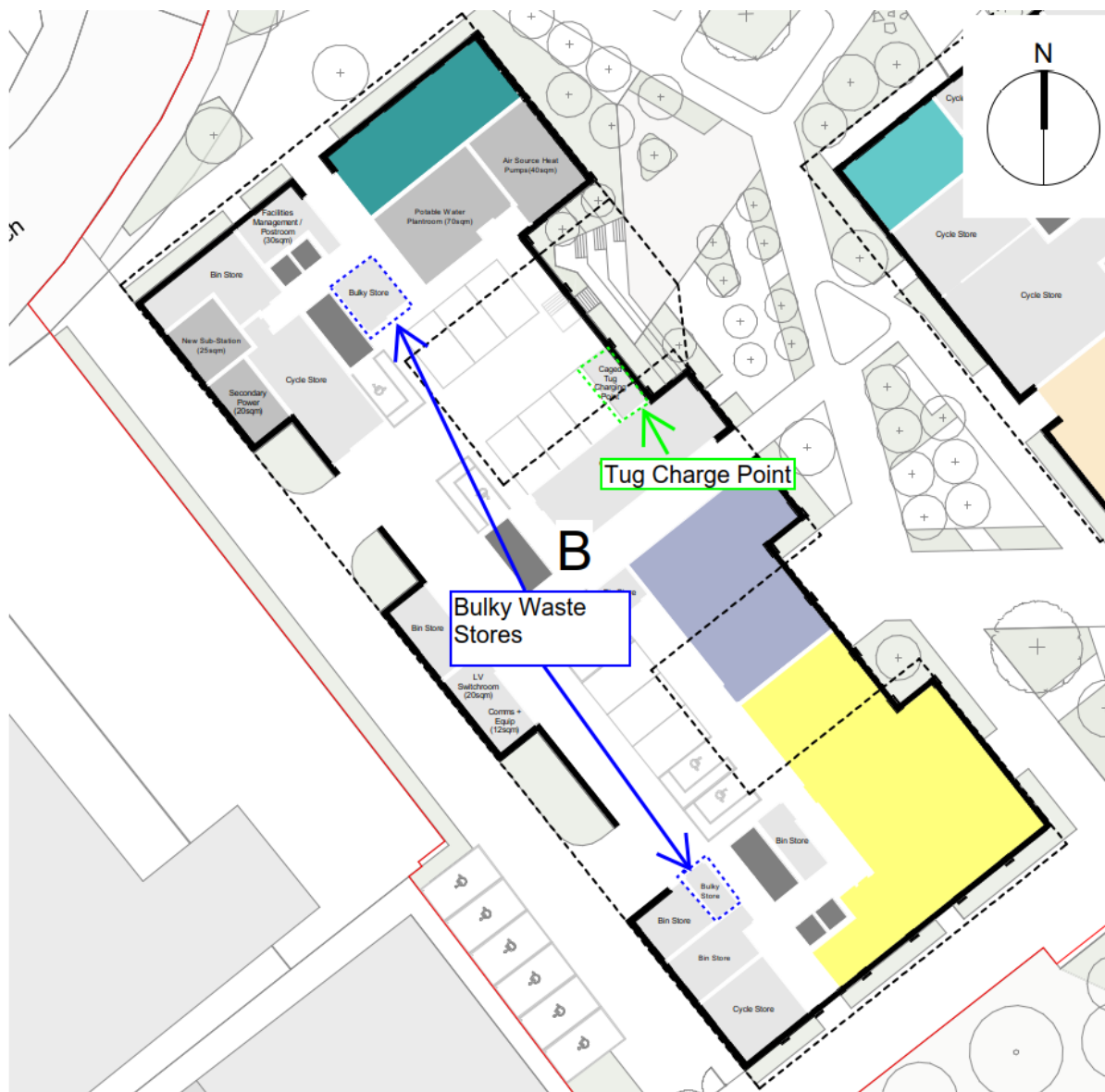
6.14 The Proposed Development is envisioned to provide 0.1 m² of Bulky waste storage per residential unit. This will equate to a total of 110 m² of bulky waste storage for the entirety of the Proposed Development. Please note, more information on the bulky waste stores will be provided during the RMA stage. Illustrative locations of bulky waste stores within the Proposed Development can be seen in Figure 9, Figure 10, Figure 11, and Figure 12 of this Strategy.

Figure 9 Illustrative Block A Bulky Waste Stores



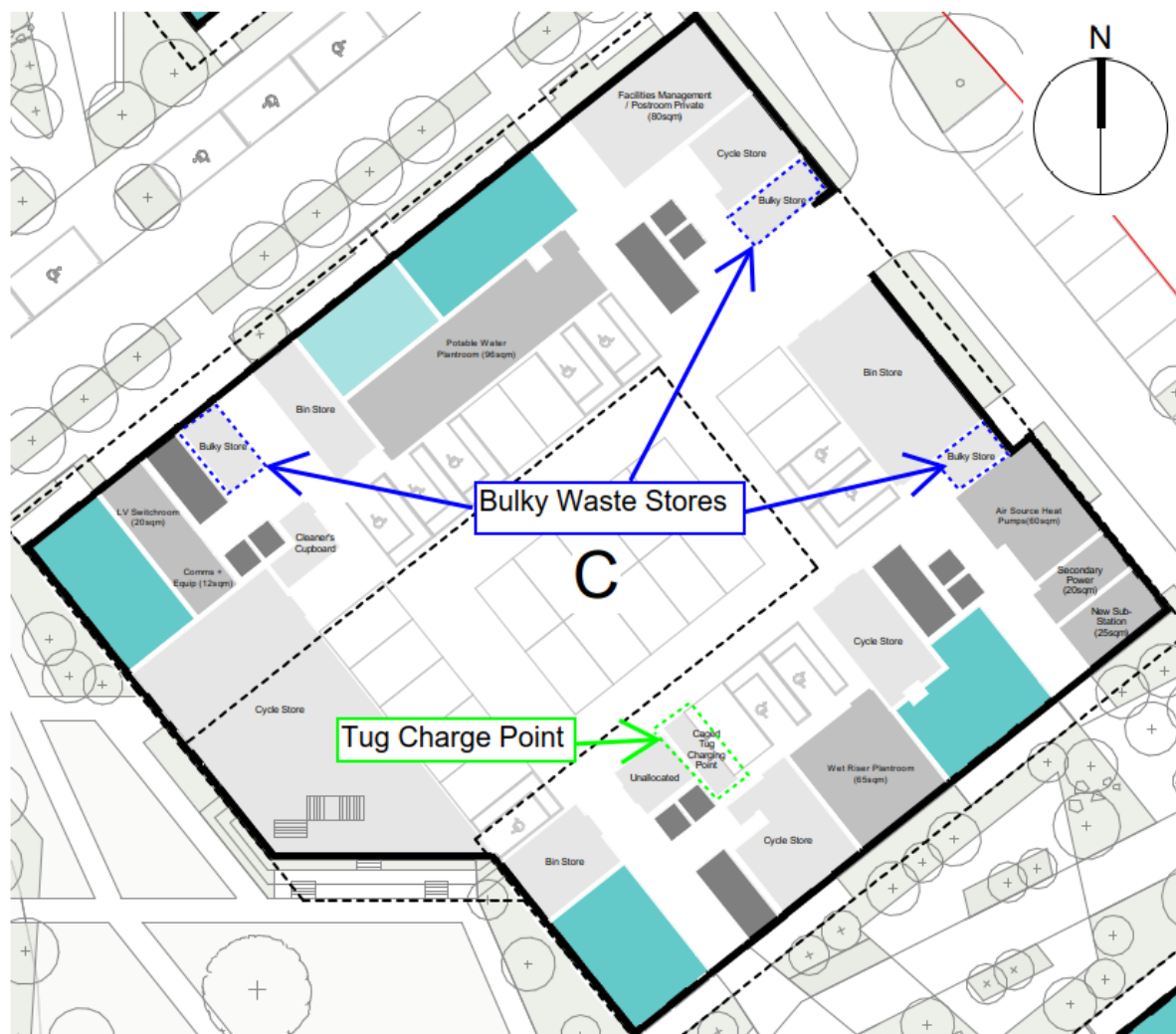
Please note that this figure is not drawn to scale and has represented the areas for bulky waste store as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 10 Illustrative Block B Bulky Waste Store



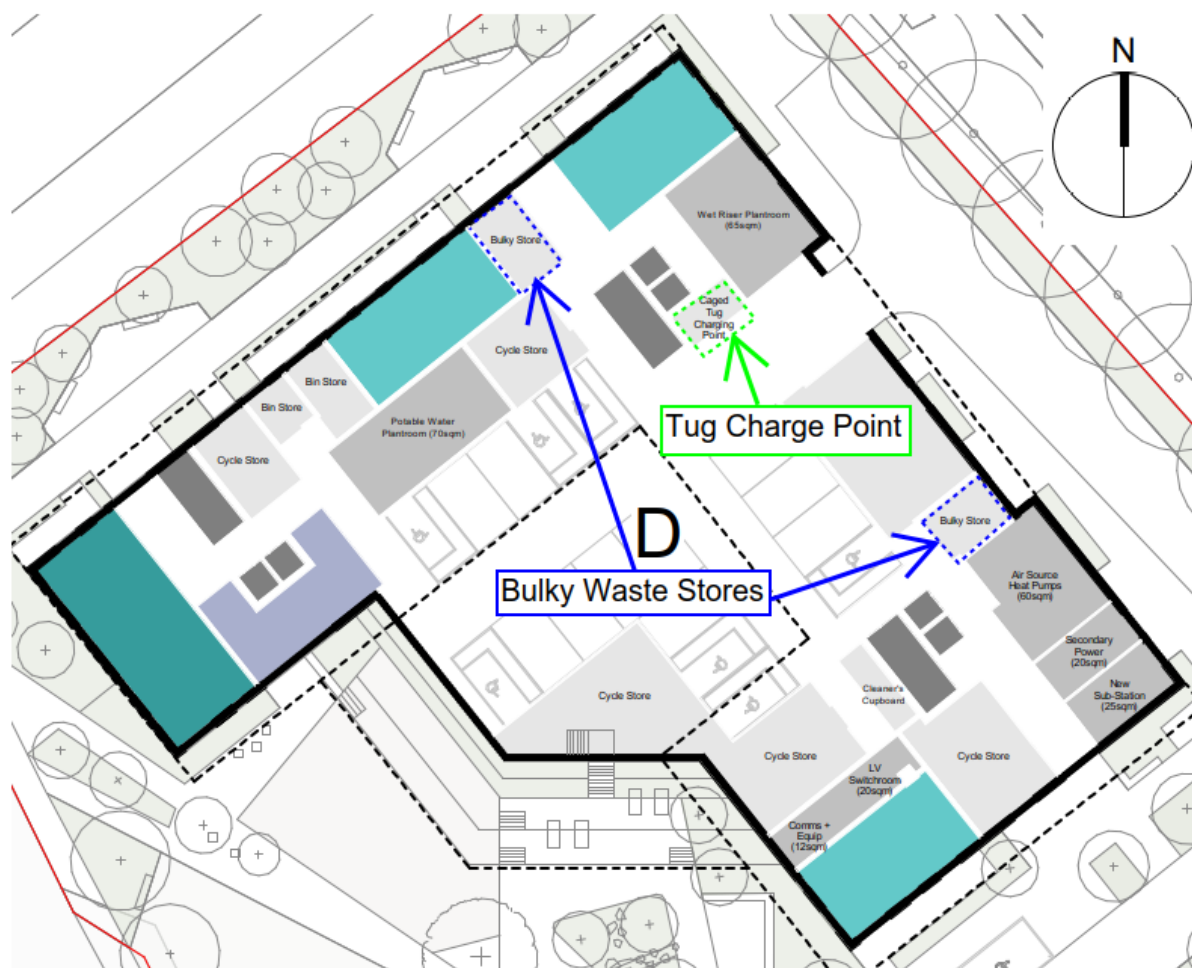
Please note that this figure is not drawn to scale and has represented the areas for bulky waste store as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 11 Illustrative Block C Bulky Waste Store



Please note that this figure is not drawn to scale and has represented the areas for bulky waste store as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 12 Illustrative Block D Bulky Waste Store



Please note that this figure is not drawn to scale and has represented the areas for bulky waste store as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Residential Waste and Recyclate Management – Conventional/Un-Compacted

- 6.15 As aforementioned in paragraph 6.4, to allow flexibility and therefore waste and recyclate collection from LBB, the option of managing waste and recyclate arisings conventionally i.e. without any compactors within the Proposed Development has been also explored by the Architects. It should be noted, this is an alternative option to the in-bin compacted Strategy as demonstrated in paragraphs 6.6 to 6.14. The current Outline Planning Application is envisioned to adopt the use of in-bin compaction units as the preferred option for waste and recyclate management.
- 6.16 Considering the methodology as stated in Table 6 of this Strategy, Table 11 of this Strategy highlights the overall storage requirements for the separate residential blocks of the Proposed Development based on an un-compacted, weekly collection frequency. Full waste and recyclate arisings based on a weekly collection frequency can be seen in Appendix B of this Strategy.

Table 11. Un-compacted Bin Storage Requirements Based on a Weekly Collection Frequency.

Block	MDR	Food	Residual	Total
A	48 x 1,100 L	11 x 240 L	48 x 1,100 L	96 x 1,100 L 11 x 240 L
B	26 x 1,100 L	5 x 240 L	26 x 1,100 L	52 x 1,100 L 5 x 240 L
C	41 x 1,100 L	10 x 240 L	41 x 1,100 L	82 x 1,100 L 10 x 240 L
D	27 x 1,100 L	7 x 240 L	27 x 1,100 L	54 x 1,100 L 7 x 240 L
Total	142 x 1,100 L	33 x 240 L	142 x 1,100 L	284 x 1,100 L 33 x 240 L

Please note, storage provisions have been based on the Illustrative Masterplan at this stage. Exact storage provisions and waste arisings will be calculated at the RMA stage for each Development Parcel if required.

- 6.17 It is understood that to cater for the additional space required for the storage requirements (compared to the requirements using in-bin compaction) as provided in Table 11 of this Strategy, the areas allocated for bulky waste stores and a single residential unit located on the GF level (location to be confirmed at the detailed design stage) would be converted into bin stores. Considering these arrangements, the Architects have confirmed that the Proposed Development would have sufficient space to cater for the MDR, Food and Residual bin storage requirements as highlighted in Table 11 of this Strategy.
- 6.18 Detailed locations and layouts of these bin stores would be provided in the RMA stage if LBB waste and recyclate collection is opted for.
- 6.19 Residential bin stores, which are within 10 m distance from the RCV parking point, should see the LBB collection crew transport the bins of the required waste and recyclate stream directly from the bin store to the RCV for emptying purposes. Once emptied, the LBB collection crew should return bins back to the residential bin store.
- 6.20 Residential bin stores, which are envisioned to exceed the 10 m distance from the parked RCV would require the internal management team to wheel the bins to a designated presentation area. Bin stores that may exceed 30 m from the presentation area should require the internal management team to use tugs for the transportation of bins to the presentation area (similar to the examples provided in Figure 8 of this Strategy). From the designated presentation areas, the LBB collection crew should transfer bins to the RCV (parked within 10 m of the presentation point). Once bins are emptied, the LBB collection crew should return bins to the presentation area. The internal management team would then be responsible for returning bins back to the correct residential bin stores.

Commercial Waste and Recycling Management Strategy

6.21 Based on the methodology provided in Table 7 of this Strategy, the subsequent storage requirements (based on a weekly collection frequency) are provided in Table 12 of this Strategy. For details on the weekly waste arisings from the commercial units of the Proposed Development, please see Appendix B of this Strategy.

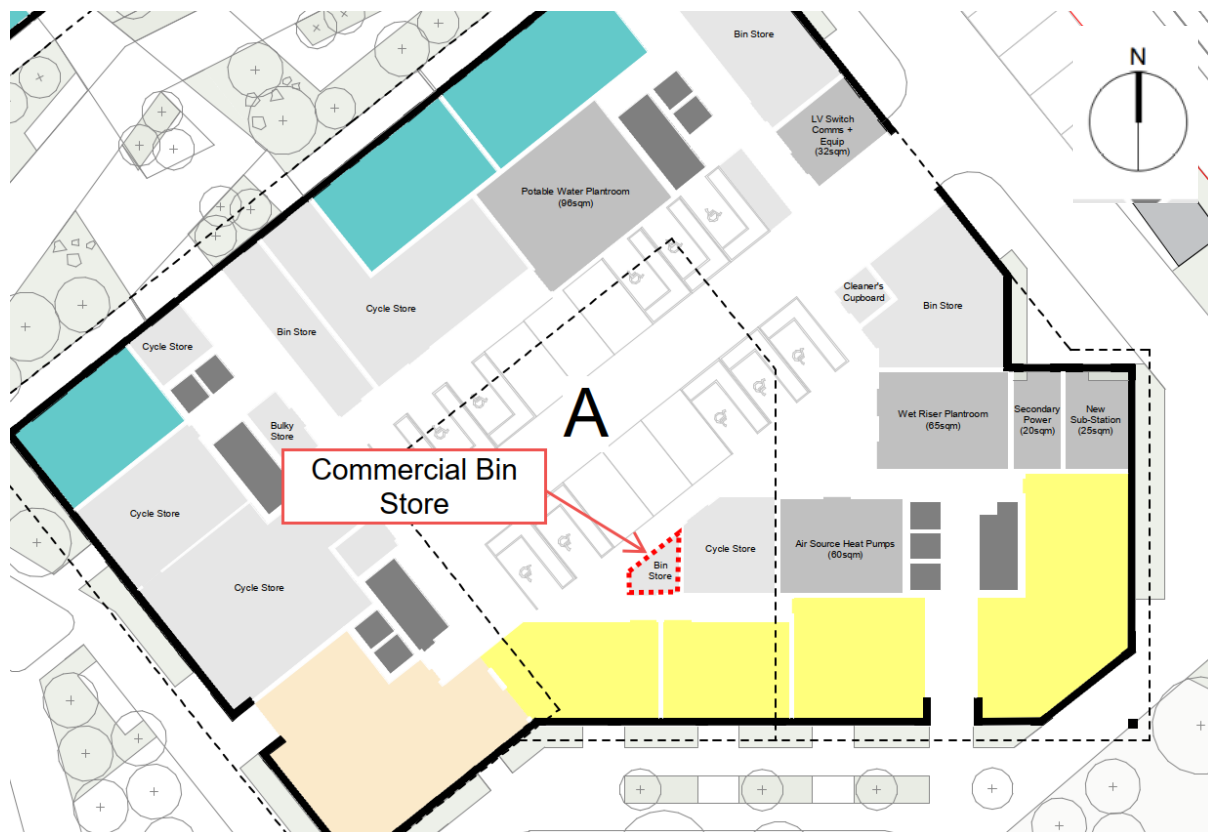
Table 12. Commercial Waste and Recyclate Storage Provisions based on a Weekly Collection Frequency

Land Use	Working Capacity	MDR	Food	Residual
A3	168 Covers	6 x 1,100 L	16 x 240 L	3 x 1,100 L
D2	251 m ²	1 x 1,100 L	-	1 x 1,100 L
B1	26 employees	1 x 1,100 L	-	1 x 1,100 L
Total		8 x 1,100 L	16 x 240 L	5 x 1,100 L

It should be noted, for the commercial areas, a realistic worst-case scenario has been tested to calculate storage requirements. Exact storage requirements/numbers should be designated at the RMA stage for each Development Parcel.

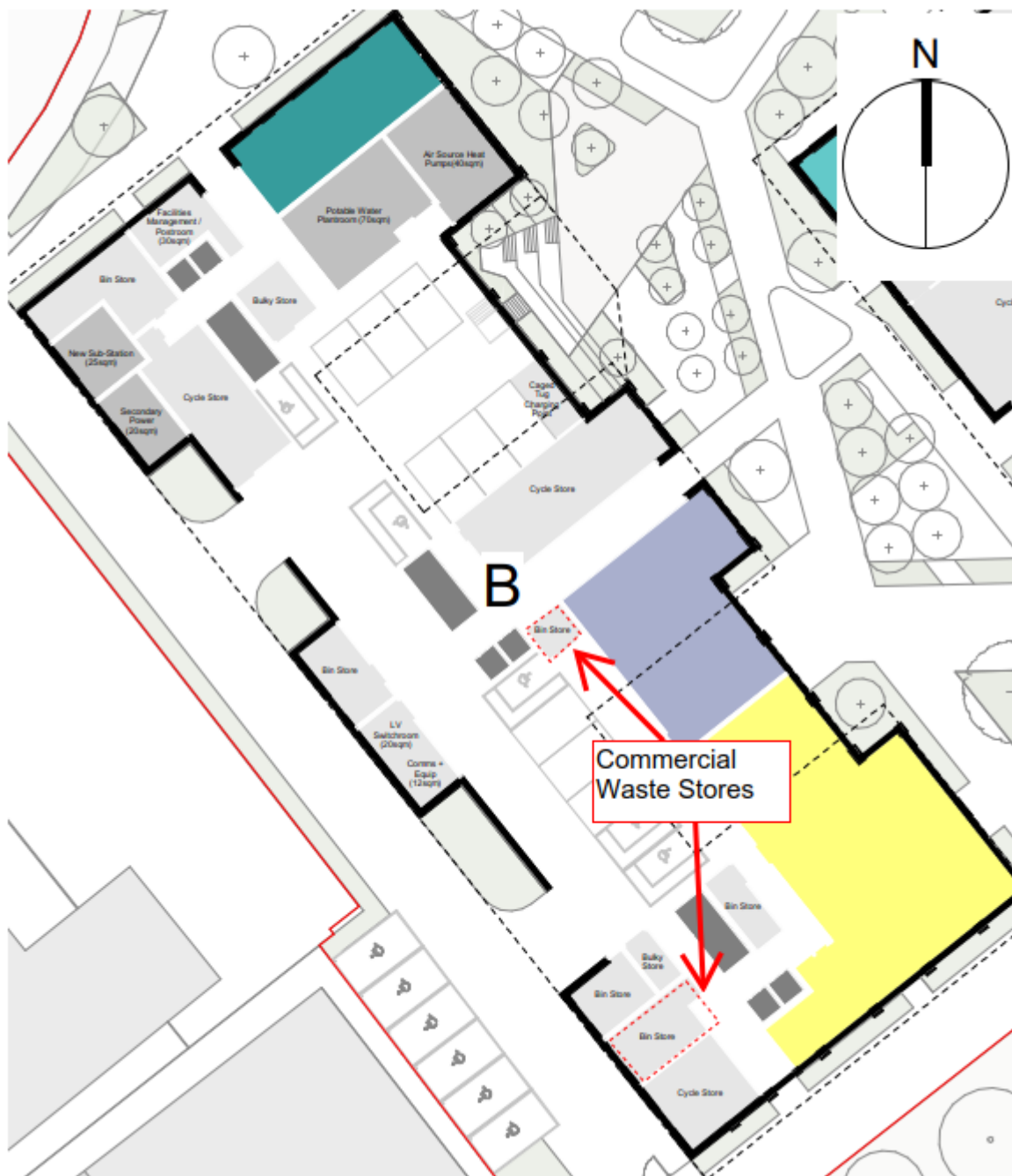
- 6.22 Commercial bin stores are envisioned to be provided within in Blocks A, B, and D. The commercial bin stores should provide sufficient space to hold bins for all waste streams (i.e. MDR, Food and Residual waste) based on weekly collection frequency. Daily (or as agreed), the internal management team, or staff, should collect waste and recyclate material from all commercial units and dispose of this waste and recyclate material into the bin store dependant on waste stream (i.e. MDR, Food and Residual waste). It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the RMA stage for each Development Parcel'. Figure 13, Please note that this figure is not drawn to scale and has represented the areas for bin stores locations as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.
- 6.23 Figure 14 and Please note that this figure is not drawn to scale and has represented the areas for bin stores locations as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.
- 6.24 Figure 15 of this Strategy show the Illustrative locations of the commercial bin stores within the Proposed Development.
- 6.25 As aforementioned in paragraph 4.6 of this Strategy, a 50:25:25 split has been assumed between A3, D2 and B1 land uses. However, to consider for the worst-case scenario, the Proposed Development has also been tested assuming a 100% A3 land use. Using this assumption, it is understood that the proposed commercial bin stores within the Proposed Development could cater for the bin storage requirements based on a twice weekly collection frequency.

Figure 13. Illustrative Block A Commercial Bin Store



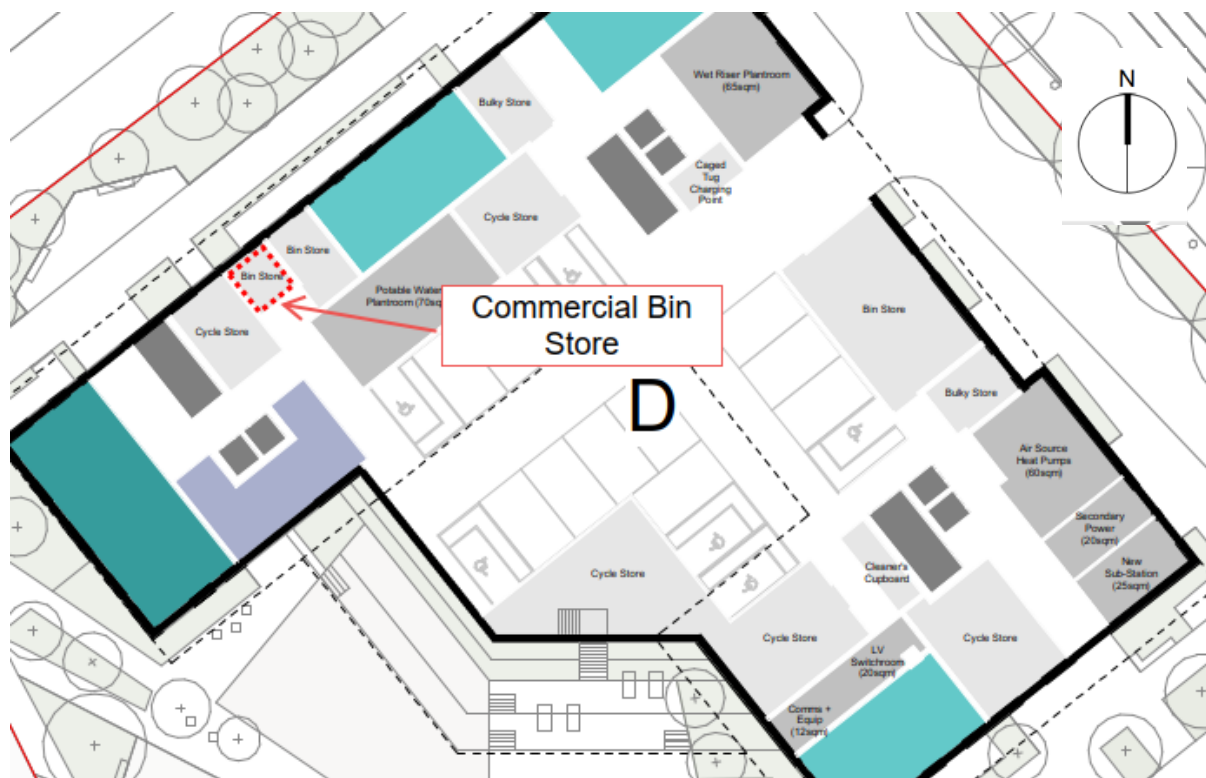
Please note that this figure is not drawn to scale and has represented the areas for bin stores locations as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 14. Illustrative Block B Commercial Bin Stores



Please note that this figure is not drawn to scale and has represented the areas for bin stores locations as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

Figure 15. Illustrative Block D Commercial Bin Store



Please note that this figure is not drawn to scale and has represented the areas for bin stores locations as provided in the Illustrative Masterplan. The detailed locations will be provided at the RMA stage.

6.26 Prior to the collection time (or as agreed), the internal management team should transfer waste and recycle bins for the stream (i.e. MDR, Food or Residual waste) scheduled to be collected on the day to a designated presentation area (located within 10 m of the RCV collection point). Stores that are envisioned to exceed 30 m from the presentation area should require the use of tugs for transportation of bins. From the designated presentation areas, the private collection crew should transfer bins to the RCV. Once bins are emptied, the private collection crew should return bins to the presentation area. The internal management team should then be responsible for returning bins back to the correct commercial bin stores. The RCV Swept Path Analysis can be seen in Appendix C of this Strategy.

Maintenance and Fit Out

6.27 It is envisioned that a car parking space will be used to place a temporary skip in the case any future maintenance and fit out activities are required by the residents of the Proposed Development. Location and further details of the skip will be demonstrated within the RMA stage of the Planning Application.

6.28 Commercial tenants that require the use of a temporary skip to undertake any future maintenance and fit out activities will be advised to contact the local authority. A skip permit is not required if needed for occupation on private land, however, if a skip is to be placed on the public highway, a permit must be applied for. This permit is subject to approval from the council and a fee is payable for this permit.

6.29 Once a skip is in place, commercial tenants will make their own private arrangement for the delivery, management and collection of the skip.

Unique Waste

6.30 There is likely to be a small component of the overall waste arisings from the Proposed Development that will comprise of other waste streams, such as waste electrical and electronic equipment (WEEE), printer and toner cartridges and fluorescent light tubes. Building maintenance will also give rise to materials such as paints and waste lubricating oils that will require separate storage in dedicated sealed containers.

- 6.31 This type of waste is termed 'unique' as it will not be produced on a regular basis and therefore its management will be on special arrangement with a registered waste handler for the specific waste that is produced. The commercial bin stores will provide separate space to store this type of waste from the waste and recycle material. Separate arrangements will be made for the safe disposal of these waste streams, as covered by the Hazardous Waste (Amendment) Regulations 2016 and WEEE Regulations 2015. All waste management will have to comply with Environmental Protection Act 1990 and The Waste (England and Wales) (Amendment) Regulations 2014.
- 6.32 Management of similar waste arisings from the residential units will be the responsibility of the residents, who can take this to the nearby Household Waste Recycling Centre.

7. Waste and Recycling Storage Provision

- 7.1 In accordance with BS EN 840 (Ref. 41), as set out in BS5906:2005 (for all waste chambers), all waste and recycle containers within the Proposed Development should be stored under cover in specially designed bin stores. The walls and roofs of this store should be formed of non-combustible, robust, secure and impervious material, they should also 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. 42), whilst the door of the store should be made of steel, and should have a fire resistance of 30 minutes when tested in accordance with the BS 476-22 – Fire tests on building materials and structure: Part 22 (Ref. 43).
- Further to these requirements, the Proposed Development should also comply with the guidance set out in LBB's 'Information for developers and architects, provision of household recycling and waste service', BS5906:2005 and Part H6 of the Building Regulations (2010) (2015 Edition) (hereafter referred to as 'Part H6') as provided below:

Location

- Recycling bins would be located where residents are likely to pass frequently as part of their daily lives.
- Bin stores would be located at vehicle access level. Basement level storage should have adequate facilities to move waste and recycle material to the ground level for collection e.g. dedicated lift.
- Bin stores would not block the main entrance to the building.
- External storage areas for bins would be away from windows and ventilators and preferably be in shade or under shelter.
- 240 L bins would be presented at the boundary of the property where it meets the public highway.
- Larger communal bins would be presented within 10 m of the property boundary.

Convenience

- Bin stores would be situated in readily accessible positions and should be sited within 30 m (excluding any vertical distance) from each dwelling.
- The collection crew would not be required to carry individual bins or move two wheeled bins for a distance more than 15 m, nor to manoeuvre four wheeled bins from storage points to RCV more than 10 m.

Screening or covering

- Internal built storage areas would conform to British Standard BS 5906-2005 – Waste management in buildings.
- Bins may need to be fitted with close fitting lids to prevent vermin access.

Signage

- Bin stores would be marked, and signs should be provided.
- Residents would be made aware of the fire risk from waste and recycle material storage. This would be done using signage and displaying the dangers of when waste and recycle materials are stored carelessly.
- Developments producing household/commercial and or industrial waste would have clearly identifiable different containers.
- All roads would be clearly marked and controlled to prevent unauthorised parking.

Accessibility

- External and internal facilities for buildings would be designed for older persons and persons with disabilities as set out by the Disability and Discrimination Act (DDA), as specified in the BS 8300:2009 (Ref. 44).
- Bin stores would be large enough to allow gangway access to all bins without needing to arrange other bins in the space with access points and floor level at the same height as entrance footway.
- Steps and projections at the entrance of a bin store would be avoided to allow bins to be manoeuvred through easily.

Access paths

- The bin stores would be either external to the building or capable of being isolated from the main building. This should ensure access to the main building should not be used through the bin stores.
- Roads would have a minimum width of 5 m for RCV access.
- Paths between bin stores and collection vehicles would be free from kerbs, steps or inclines with a gradient more than 1:12, be non-slip and a minimum of 2 m wide.
- For waste and recycle bins up to 240 L, steps would be avoided between the bin stores and the collection point. If steps are unavoidable, they would not exceed three in number.
- Footpaths would be built wide enough to accommodate bins of all sized with dropped kerbs.

Vehicle Access

- Roads would be arranged so that RCV can continue mainly in a forward direction.
- Reversing of RCV would be avoided wherever possible. If RCV are reversing than the distance should not exceed 15m (if turntables cannot be accommodated).
- The roads of the Proposed Development would accommodate an RCV with the dimensions as demonstrated in Table 13 of this Strategy.
- Vehicles operating in service areas would enter and leave in a forward-facing direction.

Table 13. LBB Refuse Collection Vehicle Dimension

Width	2.53 m
Maximum vehicle weight	26,000 kg
Length	9.25 m (Plus 1m for bin lift)
Height	3.4 m
Swept Circle Diameter	18.5-21 m

Materials and finishing

- The walls and roofs of the bin store would be formed of non-combustible robust and secure materials with a smooth finish suitable of washing down. The door of the chamber would be made of steel.
- The door would be capable from being opened from the inside as well as the outside for reasons of safety.
- The floor of the bin store would be no less than 100 mm thick.

Safety and anti-social behaviour

- The entrance of the bin store would be free from steps and projections;
- Unsightly bins can damage the visual amenity and contribute to increased levels of anti-social nuisance such as odour and litter. Therefore, bins would be planned carefully and should be stored in a publicly accessible area.

Locks

- Ease of access is essential for collection crews to collect bins efficiently and consistently. Where communal bin areas need to be locked, the use of key-pad entry would be used due to its simplicity.

Fire Safety

- Fire safety guidance states that all wheeled bins should be 6 meters or further from a building, unless the bins are in a purpose-built brick bin store which has a roof and fire doors. See BS 9999:2008 Code of practice for fire safety in the design, management and use of buildings including DDA compliance (Ref. 45).
- The walls and roofs of all bin stores would 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 (whilst the door of the stores would be made of steel or have a fire resistance of 30 min when tested in accordance with BS 476-22).
- Consideration would be taken to align with a development of fire strategy and plans and review emergency access and egress routes;
- Bins and sacks would not be left in entrances, atriums, gangways, shared communal areas or balconies; and
- Any internal storage areas adjacent to a fire escape route must be fitted with fire doors, automatic fire detection and a sprinkler system and comply with the Regulatory Reform (Fire Safety) Order 2005 (Ref. 46).

Ventilation and lighting

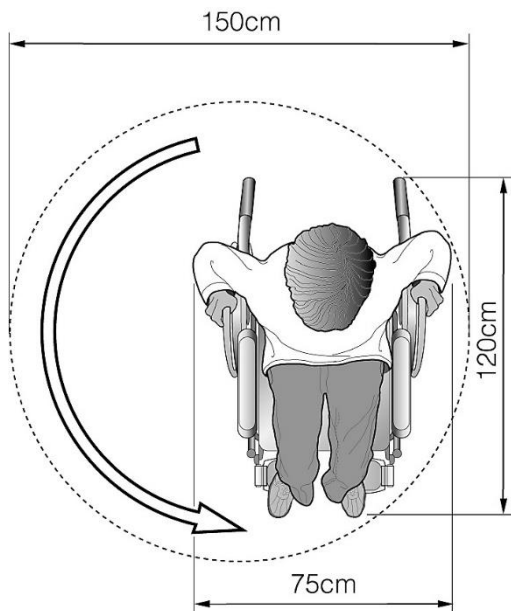
- Permanent ventilators would be provided giving a total ventilation area of not less than 0.2 m². Passive ventilators would be fly and vermin proof and located as near the ceiling and floor of the chamber as possible but away from windows and dwellings;
- Electrical lighting would consist of sealed bulkhead fittings with houses related to IP65 in BS EN 60529: 1992 (Ref. 47) for the purposes of cleaning down with hoses and inevitable splashing.
- Luminaires would 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.

Maintenance

- Arrangements would be made for cleaning of the bin store with water. A hose union tap would be provided in agreement with the local water authority and the environment agency.

- The floor of the bin store would have suitable fall towards the drainage point. Gullies would be positioned not to be in the track of bin wheels and should incorporate a trap, which maintains a seal, even during prolonged periods of disuse.
- The residential bin stores would be accessible for disabled/wheelchair users (example of turning circle provided in Figure 16 of this Strategy)

Figure 16. Example Wheelchair Turning Circle



8. Further Consideration

Building Research Establishment Environmental Assessment Method

- 8.1 Building Research Establishment Environmental Assessment Method (BREEAM) provides assessment criteria for newly constructed developments, such as the Proposed Development, for a range of environmental factors, including waste. These assessment criteria are detailed within the BREEAM New Construction Non-Domestic Buildings Technical Manual (Ref. 48). With regards to waste and recycle arisings generated during the operational phase of the Proposed Development, one credit is available for meeting requirements of Wst 03 Operational.
- 8.2 In order to meet Wst 03 Operational, the following criteria must be complied with:
- Provision of dedicated storage space to cater for the segregation and storage of operational MDR waste volumes generated by the Proposed Development, its occupants and activities;
 - The dedicated space must be:
 - Clearly labelled, to assist with segregation, storage and collection of the MDR waste streams;
 - Accessible to occupants/facilities operators (i.e. management teams) for the deposit of materials and collections by waste management contractors; and
 - Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volume of waste that will arise from daily/weekly operational activities and occupancy rates.
 - Where consistent generation in volume of the appropriate operational waste stream is likely to exist (i.e. large amounts of packaging or compostable waste), the following facilities are provided as part of the management strategy:
 - Static waste compactors or balers; situated in a service area or dedicated waste management space.
- 8.3 It is understood that providing the storage requirements outlined within this Strategy are adhered to, it is considered that the Proposed Development will meet the Wst 03 Operational criteria.

9. Conclusion

- 9.1 In keeping with national, district, regional (NLWA), and local (LBB) policy, this Strategy demonstrates how the Proposed Development will promote sustainable waste and recycle management methods for waste and recycle materials. The Strategy displays the prospective space requirements for waste and recycle management for the Illustrative Masterplan both residential and commercial units and explores the segregation of MDR, Food, and Residual waste. It should be noted, the Illustrative Masterplan has been tested to show the potential bin store locations at this stage. Exact locations and numbers should be designated at the RMA stage for each Development Parcel.
- 9.2 Having a successful waste and recycle management strategy for the Proposed Development is key in aiding LBB's objective of achieving higher household recycling rates as demonstrated within LBB's Municipal Recycling and Waste Strategy and Future Delivery for Barnet (2016-2030). Alongside this, a successful Strategy can help achieve wider district goals such as reaching recycling targets (65% of municipal waste) alongside providing adequate, flexible, and easily accessible bin stores to support recyclables and food waste as set by the Intend to Publish London Plan – Spatial Development for the Greater London, 2019. It should be noted, bin storage requirements within the Proposed Development currently holds the capacity to facilitate 50 % recycling rates (162,780 L of recycle residential material per week). Allocations for waste and recycle materials within the Strategy have been based on the council's requirements to provide a compliant approach for planning. With aspirations to continually increase recycling rates to achieve the Intend to Publish London Plan recycling targets, bin composition will be monitored and reallocated as recycling trends change.
- 9.3 This Strategy has reviewed policy alongside best practise to provide guidance and recommendations for a sustainable and flexible waste and recycle management for both the residential and commercial elements of the Proposed Development, helping the Proposed Development to achieve BREEAM Wst 03; Operational Waste Credit. The Strategy has taken into consideration logistical challenges such as space constraints within the ground floor level to recommend a residential in-bin compacted waste and recycling management strategy for the purposes of the Outline Planning Application. In addition to this, the adoption of a residential conventional or un-compacted waste and recycle management Strategy has been tested to provide flexibility of waste and recycle management options for future occupiers of the Proposed Development. The Strategy has also demonstrated the illustrative locations of accessible and conveniently located bin stores for both residential and commercial uses, alongside introducing technologies such as tugs to help with the safe transportation of waste and recycle materials around the Proposed Development where necessary.
- 9.4 It is highly recommended that a Detailed Operational Waste and Recycling Management Strategy is produced before the occupation of the Proposed Development to demonstrate the finer details of waste and recycle management methods, tailored to the Proposed Developments future occupier.

10. References

- Ref. 1 London Borough of Barnet (LBB), (2019); Information for developers and architects, Provision of Household Recycling and Waste Service.
- Ref. 2 British Standards Institute (BSI), (2005); BS 5906:2005 Waste Management in Buildings, Code of Practice.
- Ref. 3 Her Majesty's Stationary Office, (HMSO) (2003); The Waste (England and Wales) Regulations 2011 (as amended 2014).
- Ref. 4 Department for Communities and Local Governments (DCLG), (2013); Building Regulations – Approved Document H: Drainage and Waste Disposal (Incorporating 2010, 2013, and 2015 amendments)
- Ref. 5 HMSO, (2015); The Animal By-Products (Enforcement) (Amendment) Regulations 2015.
- Ref. 6 HMSO, (2015); Clean Neighbourhoods and Environment Act.
- Ref. 7 HMSO, (1989); Control of Pollution (Amendment) Act 1989.
- Ref. 8 HMSO, (2012); The Controlled Waste (England and Wales) (Amendment) Regulations 2012.
- Ref. 9 HMSO, (1995); Environment Act 1995.
- Ref. 10 HMSO, (1990); Environmental Protection Act 1990.
- Ref. 11 HMSO, (1996); The Landfill Tax (Amendment 2017) Regulations 1996.
- Ref. 12 HMSO, (2005); The List of Wastes (England) (Amendment) Regulations 2005.
- Ref. 13 HMSO, (2015); The Packaging (Essential Requirements) Regulations 2015.
- Ref. 14 HMSO, (2017); The Pollution Prevention and Control (Fees) (Miscellaneous Amendments) Regulations as amended.
- Ref. 15 HMSO, (2016); The Producer Responsibility Obligations (Packaging Waste) (Miscellaneous Amendments) Regulations 2017).
- Ref. 16 HMSO, (2005); The Hazardous Waste Regulations 2005 (as amended 2016).
- Ref. 17 HMSO, (2015); The Waste Batteries and Accumulators Regulations (Amendment) 2015.
- Ref. 18 HMSO, (2015); The Waste Electrical and Electronic Equipment (WEEE) (Amendment) Regulations (2015).
- Ref. 19 HMSO, (2007); The Waste Management (England and Wales) Regulations 2007.
- Ref. 20 Ministry of Housing, Communities and Local Government (MHCLG), (2019); National Planning Policy Framework (NPPF).
- Ref. 21 Department for Communities and Local Government (DCLG), (2014); National Planning Policy for Waste.
- Ref. 22 Defra, (2013); Waste Management Plan for England 2013.
- Ref. 23 DCLG, (2018); National Planning Guidance.
- Ref. 24 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and repealing certain Directives (Waste Framework Directive).
- Ref. 25 DCLG, (2018); National Planning Practice Guidance: Waste [available online] <http://planningguidance.planningportal.gov.uk/blog/guidance/waste/>
- Ref. 26 HMSO, (2018); A Green Future: Our 25 Year Plan to Improve the Environment
- Ref. 27 HMSO, (2018); Our Waste, Our Resources: A Strategy for England.
- Ref. 28 Greater London Authority (GLA), (2016); The London Plan.
- Ref. 29 Greater London Authority (GLA), (2019); The Intend to Publish London Plan- Spatial Development Strategy for the Greater London.
- Ref. 30 GLA, (2018); London Environment Strategy.
- Ref. 31 GLA, (2011); The Mayor's Business Waste Management Strategy.
- Ref. 32 GLA, (2011); The Mayor's Municipal Waste Management Strategy.
- Ref. 33 North London Waste Authority (NLWA), (2019); North London Waste Plan- Proposed Submission (Regulation 19)

- Ref. 34 NLWA, (2009); Joint Waste Strategy
- Ref. 35 LBB, (2012); Local Plan – Core Strategy
- Ref. 36 LBB, (2016); Local Plan, Supplementary Planning Document: Sustainable Design and Construction
- Ref. 37 LBB, (2016-2030); Municipal Recycling and Waste Strategy and Future Delivery for Barnet
- Ref. 38 Defra, (2015); Quarterly local authority collected waste management statistics from 2010 incorporating April 2015 to March 2016.
- Ref. 39 Cabinet Office, (2002); Strategy Unit Report - Waste Not Want Not: The Strategy for Tackling Waste Problems in England.
- Ref. 40 Resources Futures, (2009); WRO121- Understanding Waste Growth at a Local Authority Level – Final Report to Defra.
- Ref. 41 BSI, (2004); BS EN 840 Mobile Waste Containers.
- Ref. 42 BSI, (1987); BS 476-21, Fire tests on building materials and structures: Part 21
- Ref. 43 BSI, (1987); BS 476-21, Fire tests on building materials and structures: Part 22
- Ref. 44 BSI 8300:2009; Design of Buildings and their approaches to meet the needs of disabled people
- Ref. 45 BSI 9999:2008; Code of practices for fire safety in the design, management and use of buildings
- Ref. 46 BSI, (2005); Regulatory Reform (Fire Safety) Order, (2005).
- Ref. 47 BSI, (1992); BS EN 60529:1992, Specification for degrees of protection provided by enclosures IP65.
- Ref. 48 Building Research Establishment Environment Assessment Method (BREEAM), (2018); BREEAM New Construction Non-Domestic Buildings Technical Manual.

Appendix A Communication with LBB

Ansell, Yasmin

From: Ellis, Dave <Dave.Ellis@Barnet.gov.uk>
Sent: 21 January 2020 15:41
To: Ansell, Yasmin
Subject: RE: Future Food Waste Provisions

Hi Yasmin,

I'm happy to move forward with your proposal outlined below.

Kind regards

Dave Ellis
Account Manager
Commercial Services – Street Scene

Oakleigh Depot, Oakleigh Road South, N11 1HJ
Tel: 020 8359 5178
Barnet Online: www.barnet.gov.uk

From: Ansell, Yasmin <yasmin.ansell@aecom.com>
Sent: 21 January 2020 11:32
To: Ellis, Dave <Dave.Ellis@Barnet.gov.uk>
Cc: Lees, Katherine <katherine.lees@aecom.com>; Lai, Michael <Michael.Lai@barnet.gov.uk>
Subject: RE: Future Food Waste Provisions

Hi Dave,

Would you kindly be able to reply to the below email?

We are under a tight deadline for this project, and need to inform the architects on bins number totals as soon as possible.

Many thanks,

Yasmin Ansell
Graduate Waste Management Consultant
Environmental Liability Solutions

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From: Ansell, Yasmin
 Sent: 14 January 2020 16:29
 To: Ellis, Dave <Dave.Ellis@Barnet.gov.uk>
 Cc: Lees, Katherine <katherine.lees@aecom.com>; Lai, Michael <Michael.Lai@barnet.gov.uk>
 Subject: RE: Future Food Waste Provisions

Hi Dave,

Thank you for your time on the phone earlier.

As discussed, we have originally enquired with you and your colleagues regarding food storage provisions for the Cricklewood development site.

As mentioned, the development will consist of roughly 1,100 units held within 4 individual blocks. 90 % of the units within this development will consist of 1-2-bedroom units and are expected to produce less food waste than those within family homes.

We have currently advised the Proposed Development caters space for the following Residual and Mixed Dry Recyclable waste bins;

Block	Block Section	MDR	Residual	Total
A	A1	20 x 1,100 L	20 x 1,100 L	40 x 1,100 L
	A2	15 x 1,100 L	15 x 1,100 L	30 x 1,100 L
	A3	10 x 1,100 L	10 x 1,100 L	20 x 1,100 L
	A4	3 x 1,100 L	3 x 1,100 L	6 x 1,100 L
	Total	48 x 1,100 L	48 x 1,100L	96 x 1,100 L
B	B1	7 x 1,100 L	7 x 1,100 L	14 x 1,100L
	B2	8 x 1,100 L	8 x 240 L	16 x 1,100L
	B3	12 x 1,100 L	12 x 1,100 L	24 x 1,100 L
	Total	27 x 1,100 L	27 x 1,100 L	54 x 1,100 L
C	C1	5 x 1,100 L	5 x 1,100 L	10 x 1,100 L
	C2	14 x 1,100 L	14 x 1,100 L	28 x 1,100 L
	C3	13 x 1,100 L	13 x 1,100 L	26 x 1,100L

	C4	10 x 1,100 L	10 x 1,100 L	18 x 1,100 L
	Total	42 x 1,100 L	42 x 1,100 L	84 x 1,100 L
D	D1	12 x 1,100 L	12 x 1,100 L	24 x 1,100 L
	D2	12 x 1,100 L	12 x 1,100 L	24 x 1,100 L
	D3	3 x 1,100 L	3 x 1,100 L	6 x 1,100 L
	Total	27 x 1,100 L	27 x 1,100 L	54 x 1,100 L
Overall Total:		144 x 1,100 L	144 x 1,100 L	288 x 1,100 L

Within current policy, food waste is at present collected within the residual waste stream. If due to emerging policy (for example in England's Waste and Resources Strategy) food waste collection is rolled out within the future, it is envisioned that a proportion (~23 L per unit) is likely to be taken out of the residual waste stream, in place for food waste.

In order to future proof developments we are consulting on, we suggest our clients allow comfort space for food waste. In this case, we will advise our client to allow for an additional 7 L per unit of food waste within the current waste store. This additional provision will create a larger footprint area if mandatory food waste collections are to be rolled out within the future.

Could you please confirm you are happy with the additional 7 L of food waste provisions?

Many thanks,

Yasmin Ansell

Graduate Waste Management Consultant
Environmental Liability Solutions

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From: Ellis, Dave <Dave.Ellis@Barnet.gov.uk>

Sent: 13 January 2020 08:18

To: Ansell, Yasmin <yasmin.ansell@aecom.com>
Subject: RE: Future Food Waste Provisions

Good Morning Yasmin,

I will be available to talk to you at 3pm on Tuesday 14/01/2020.

Please call me on: 07540329199

Kind Regards

Dave Ellis
Account Manager
Commercial Services – Street Scene

Oakleigh Depot, Oakleigh Road South, N11 1HJ
Tel: 020 8359 5178
Barnet Online: www.barnet.gov.uk

From: Ansell, Yasmin <yasmin.ansell@aecom.com>
Sent: 09 January 2020 15:47
To: Ellis, Dave <Dave.Ellis@Barnet.gov.uk>
Cc: Lees, Katherine <katherine.lees@aecom.com>; Lai, Michael <Michael.Lai@barnet.gov.uk>
Subject: FW: Future Food Waste Provisions

Good afternoon Dave,

I am currently working for the AECOM Waste Management Team as a graduate consultant, working alongside Kat Lees. We are currently advising a client and their architects on their waste management strategy for a new infrastructure development in the Borough. This includes providing waste provisions for future collection waste streams such as food waste.

As seen in the email chain below, I have been in contact with your colleague Michael Lai. We have been liaising in regards to future food waste provisions concerning the specific development.

I understand this is a topic which would be easier discussed over a call. Would you be available Tuesday afternoon to speak to myself and my manager, Kat Lees about the required food waste provisions for the Proposed Development?

Please do let me know if this day is possible or if there is a more suitable time for you.

Many thanks,

Yasmin Ansell
Graduate Waste Management Consultant
Environmental Liability Solutions

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Appendix B Weekly Waste and Recyclate Arisings

Residential Weekly Waste and Recyclate Arisings (un-compacted)

Block	MDR	Food	Residual
A	52,400 L	2,639 L	52,400 L
B	27,780 L	1,190 L	27,780 L
C	45,220 L	2,303 L	45,220 L
D	29,680 L	1,568 L	29,680 L
Total	155,080 L	7,700 L	155,080 L

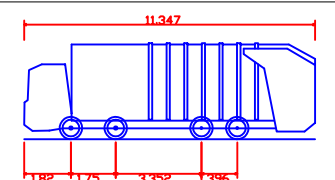
Please note, waste arisings have been based on the Illustrative Masterplan at this stage. Exact waste arisings will be calculated at the RMA stage for each Development Parcel.

Commercial Weekly Waste and Recyclate Arisings

Land Use	MDR	Food	Residual
A3	6,300 L	3,780 L	2,520 L
D2	628 L	-	628 L
B1	650 L	-	650 L
Total	7,578 L	3,780 L	3,798 L

It should be noted, waste arisings for the commercial areas are based on a realistic worst-case scenario. Exact storage waste arisings should be calculated at the RMA stage for each Development Parcel.

Appendix C – RCV Swept Path Analysis



Large Refuse Vehicle (4 axle)
 Overall Length 11.347m
 Overall Width 2.500m
 Overall Body Height 3.751m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to lock time 6.00s
 Wall to Wall Turning Radius 11.330m

'P1' Relates to a refuse presentation area

REV	DATE	REVISION DETAILS	BY
A	JUL20	Additional annotations	LL



7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL
 TELEPHONE : 0117 937 4077

PROJECT TITLE
 LAND AT CRICKLEWOOD LANE
 NW2 1ES

DRAWING TITLE
 REFUSE COLLECTION STRATEGY
 SPA LARGE REFUSE

CLIENT / ARCHITECT
 MONTREAUX

SCALE	AT A3	DRAWN	LL
CHECKED	RF	APPROVED	RF
DRG SIZE	DATE	DRAWING NUMBER	REV
A3	07/2020	SK201	A

