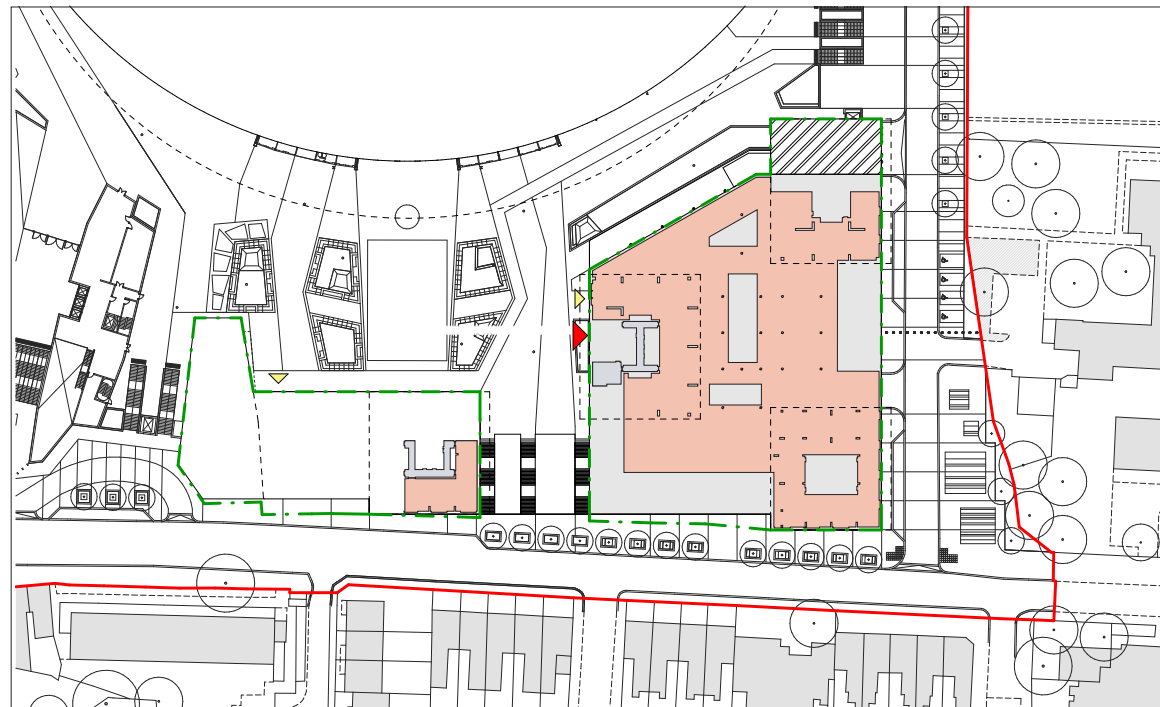




View of the multi use games area from the residential development



Podium level access diagram



Roof garden level access diagram



Ground floor level access diagram



Plinth level access diagram

- residential circulation
- 3B5P triplex housing
- flexible space
- residential access (communal)
- residential access (private)
- residential car park access
- stadium car park access
- extreme sports/ flexible space access
- maintenance/ services access
- refuse store access

11.9 Inclusive Access

The southern residential development is being designed to take into consideration the requirements of the London Plan and London Borough of Haringey planning policy to create an accessible and inclusive environment that will form one part of the strategic move to develop Lifetime Neighbourhoods in London. The development responds to London Plan Policy 7.1, delivering a good quality environment in an active and supportive local community based on the principles of Lifetime Neighbourhoods.

The new residential development will be an accessible environment to meet the needs of all potential users. The proposed scheme, comprising four residential blocks, will incorporate:

- Suitable means of access for all people from the entrance points;
- Sufficiently wide routes allowing people to pass each other with a minimum of level changes;
- Principal entrances and lobbies that are identifiable and accessible;
- Independent horizontal and vertical movement that is convenient and ensures that people can make use of all relevant facilities; and
- Residential units that will all meet Lifetime Homes Standards, 10% of the units will meet, or be capable of being adapted to the GLA's Housing SPG Annex 2 and Wheelchair Housing Design Guide. In light of the transition to the adoption of a national housing standard for accessible and adaptable dwellings and wheelchair user dwellings, there is nothing in the design of the proposed units that should preclude the adoption of those standards.

11.9.1 PLANNING POLICY, LEGISLATION AND STANDARDS

The National Planning Policy Framework (2012)

At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a thread running through both plan-making and decision-taking. Good design is a key aspect of sustainable development, and is stated to be indivisible from good planning. It should contribute positively to making places better for people. The NPPF sets out that it is important to plan positively

for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes.

The principles of inclusive design (CABE 2006)

Inclusive Design is a process that delivers an environment where everyone can access and benefit from the full range of opportunities available to members of society. It aims to remove barriers that create undue effort, separation or special treatment, and enables everyone regardless of disability, age or gender to participate equally, confidently and independently in mainstream activities with choice and dignity.

The London Plan (2014 - FALP/ 2015 - MALP)

London Plan Policies recognise that disabled people continue to be excluded from many mainstream activities which other people take for granted and are frequently denied the opportunity to participate fully as equal citizens.

On 25 March 2015, through a written ministerial statement, the Government introduced new technical housing standards in England and detailed how these would be applied thorough planning policy. These new standards will come into effect on the 1 October 2015, from which date planning policy must reference the new national standards in regards to access and space.

The draft Minor Alterations to the London Plan (MALP) propose to update Policies 3.5 and 3.8 by adopting the new national technical standards. In the interim the GLA have issued a transition statement which sets out how the existing policies relating to Housing Standards in the London Plan should be applied from October 2015. The revised Policy requirements for 3.5 and 3.8 are indicated below in square brackets.

London Plan Policy 3.5 Quality and design of housing developments

Housing developments should be of the highest quality internally, externally and in relation to their context and to the wider environment, taking account of strategic policies in this Plan to protect and enhance London's residential environment and attractiveness as a place to live.

The design of all new housing developments should enhance the quality of local places, taking into account physical

context; local character; density; tenure and land use mix; and relationships with, and provision of, public, communal and open spaces, taking particular account of the needs of children and older people.

New development should reflect these standards. The design of all new dwellings should also take account of factors relating to 'arrival' at the building and the 'home as a place of retreat', have adequately sized rooms and convenient and efficient room layouts, [which are functional and fit for purpose], meet the changing needs of Londoners over their lifetimes, address climate change adaptation and mitigation and social inclusion objectives and should be conceived and developed through an effective design process.

London Plan Policy 3.8 Housing choice

Londoners should have a genuine choice of homes that they can afford and which meet their requirements for different sizes and types of dwellings in the highest quality environments. Prior to 1 October 2015 all housing is to be built to Lifetime Home Standards and 10% is to be designed to be wheelchair accessible or easily adaptable for residents who are wheelchair users.

After 1 October 2015 the Policy requirement will be that ninety percent of new housing meets Building Regulation requirement M4 (2) 'accessible and adaptable dwellings' and ten per cent of new housing meets Building Regulation requirement M4 (3) 'wheelchair user dwellings', i.e. is designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users.

London Plan Policy 7.2: An inclusive environment

The Mayor will require all new development to achieve the highest standards of accessible and inclusive design and supports the principles of inclusive design which seek to ensure that developments: DPD policies should integrate and adopt the principles of inclusive design.

Design and access statements submitted with development proposals should explain how, following engagement with relevant user groups, the principles of inclusive design, including the specific needs of older and disabled people, have been integrated into the proposed development, whether relevant best practice standards have been complied with, and

how inclusion will be maintained and managed.

GLA supplementary planning guidance: Accessible London (2014)

The Accessible London SPG provides advice to boroughs, developers, designers and planning applicants on implementing inclusive design principles effectively and on creating an accessible environment in London, with particular emphasis on the access needs of disabled and older people. It does not introduce new policy or add any additional burdens on developers. It does not form part of the development plan, but will be taken into account as a further material consideration when considering planning applications so has weight as a formal supplement to the London Plan.

GLA supplementary planning guidance: Draft Interim Housing SPG 2015

The SPG provides guidance on how to implement the housing policies in the London Plan informed by the Government's National Planning Policy Framework and by its Housing Strategy for England. In particular, it provides detail on how to carry forward the Mayor's view that 'providing good homes for Londoners is not just about numbers'. The challenge of accelerated housing delivery cannot be met at the expense of housing quality. In fact, the scale of growth to be accommodated in London, an already dense city, underlines the importance of securing well-designed new housing. It reinforces the need for new development to provide accessible, adaptable and attractive homes and neighbourhoods that stand the test of time. The draft SPG carries forward the Mayor's housing design standards for London in the context of Government's new national housing standards.

LB Haringey Planning Policy

The Local Development Framework (LDF) is a folder of planning policy documents which will guide future growth and development in Haringey. The main Development Plan Document (DPD) in this portfolio is the Local Plan: Strategic Policies 2013. This document in conjunction with the London Plan and the Saved UDP Policies make up Haringey's current development plan for the borough.

Haringey's Local Plan Strategic Policies 2013 – 2026 (formerly the Core Strategy) March 2013

SP2 Housing

Excellence in design quality and sustainability will be required for all new homes. High quality new residential development in Haringey will be provided by ensuring that new development:

1. Meets the density levels set out in the Density Matrix of the London Plan;
2. Complies with the housing standards and range of unit sizes set out in the Council's Housing Supplementary Planning Document (SPD) 2008 and adopts the GLA Housing Space and Child Play Space Standards 2009 as Haringey's own standards;
3. Aims to maximise housing for people whose circumstances makes them vulnerable and/or people with specific needs; and
4. Is built to 100% Lifetime Homes Standards with a minimum of 10% wheelchair accessible housing or easily adaptable for wheelchair users with an aspiration for 20%. Units should range in size to accommodate various living needs including growing families and live-in carers.

SP 11: Design

All new development should enhance and enrich Haringey's built environment and create places and buildings that are high quality, attractive, sustainable, safe and easy to use. To achieve this all development shall:

- Be of the highest standard of design that respects its local context and character and historic significance, to contribute to the creation and enhancement of Haringey's sense of place and identity;
- Ensure impacts on health, climate change, natural resources and biodiversity are minimised by adopting and improving sustainable design and construction techniques;
- Incorporate solutions to reduce crime and the fear of crime, such as promoting social inclusion; creating well-connected and high quality public realm that is easy and safe to use; and by applying the principles set out in 'Secured by Design' and Safer Places;
- Promote high quality landscaping on and off site, including improvements to existing streets and public

spaces;

- Seek the highest standards of access in all buildings and places; and
- Ensure buildings are designed to be flexible and adaptable – and able to integrate services and functions.

High Quality Design

Good urban design is not just about how places look, but also about how they work. Design has a crucial impact on people's quality of life and their perception of an area. The Council will also take account of the Building for Life (BfL) criteria in the assessment of proposals for residential developments.

Safer and accessible design

Well-designed buildings and spaces are safe and accessible, and respond flexibly to the needs of their users. Good access benefits everyone but many people are disadvantaged by poor access to facilities. These disadvantaged and vulnerable groups, including disabled people, people with children in pushchairs and the elderly can be particularly affected by poor access, by difficulties in reaching facilities or difficulties in using the facilities themselves.

The Council requires new buildings and spaces to be inclusive and accessible to all. Design and Access Statements will be required for developments to show how the principles of inclusive design and access for all have been integrated into the proposed development. See SP2 Housing on Lifetime Homes and Wheelchair Accessible Housing.

In addition, making roads and pavements, and the spaces between buildings fully accessible is as important as making the buildings themselves accessible. The Council will ensure good quality access and circulation arrangements, including improvements to existing routes and footways.

Development Management Policies (Consultation Document) February 2015

All developments should secure a healthy and inclusive environment that can be used safely, easily and with dignity by all regardless of ethnicity, gender, age, disability, childcare responsibilities or economic circumstance.

A high quality, inclusive and accessible environment benefits the quality of life for visitors and residents alike. It

allows everyone to move around more easily and enables residents at all stages of the life cycle to remain in situ as part of the local community, including families with small children, older people and those with mobility impairment. Properly implemented, lifetime neighbourhoods (see London Plan Policy 7.1) enable people to remain independent and economically active for longer, and as they reduce the need for extensive adaptations to buildings to meet the needs of existing and potential future users.

11.9.2 INCLUSIVE DESIGN GUIDANCE AND STANDARDS

- Accessible London, Supplementary Planning Guidance, GLA 2014
- Building Regulations and associated Approved Documents
- BS 8300:2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people –
- Code of practice
- Equality Act 2010
- Draft Interim Housing, Supplementary Planning Guidance, GLA 2015
- Lifetime Home (LTH) Revised Criteria, Habinteg, July 2010
- Town Centre, Supplementary Planning Guidance, GLA 2014
- Wheelchair Housing Design Guide, Second Edition, Stephen Thorpe and Habinteg Housing Association, 2006

11.9.3 INCLUSIVE DESIGN PROVISION

Tottenham Towers has been designed to be an inclusive and accessible environment to meet the needs of all potential users. In removing barriers that create undue effort, separation or special treatment, everyone, regardless of disability, age or gender will be able to use the facilities of the scheme equally, confidently and independently with choice and dignity.

The proposed scheme creates 585 new dwellings. With the exception of the five triplexes and penthouses, the units will all be on a single level. As is required by the London Plan and LB Haringey planning policy, all units will conform to Lifetime Homes; wheelchair housing units will be provided as adaptable

to wheelchair housing standards as set out in the GLA's Draft Interim Housing SPG. In light of the transition to the adoption of a national housing standard for accessible and adaptable dwellings and wheelchair user dwellings, there is nothing in the design of the proposed units that would preclude the adoption of those standards.

Parking

Vehicular access to service areas and car park located at Ground Floor, Plinth P-1, Plinth B-1 and Plinth B-2 will be directly off Worcester Avenue. Residential Core 'C' will be accessible at ground level and podium level; all four cores will be accessible at basement levels.

There are 270 parking bays proposed; of those 10% will be designated parking bays for disabled people. To serve the wheelchair adaptable units, 27 bays will be based on a standard bay with 1200mm side access zones to both sides and satisfy the M4(3) and have a relationship with the lift cores for the wheelchair adaptable units in Tower B and D.

Within the car park 1500mm wide defined non-vehicular routes have been provided to ensure safe passage through the car park.

One each bay at each lift core will be an 'enlargeable' bay as required by Lifetime Homes. These will be a standard bay with a side access aisle of at least 900mm; these will satisfy also satisfy M4 (2) and be located adjacent to each of the residential lift cores.

If not required at the first offering, a mechanism will be incorporated into the car parking management strategy to ensure that blue badge bays are available to future residents as required.

Communal cycle storage will be secure and adequately lit. Cycle parking will be accessed via lift from the associated residential cores.

Addressing car and cycle parking during design development

- A car parking management plan will be put in place to assist in securing parking that is suitable for tenants when required
- Charging points (for electric cars) will be proportionately

- provided for bays with side access aisles.
- Provision of storage and charging facilities for scooter users will be incorporated
- Provision of suitably spaced stands will be incorporated for non-standard inclusive cycles

Approach

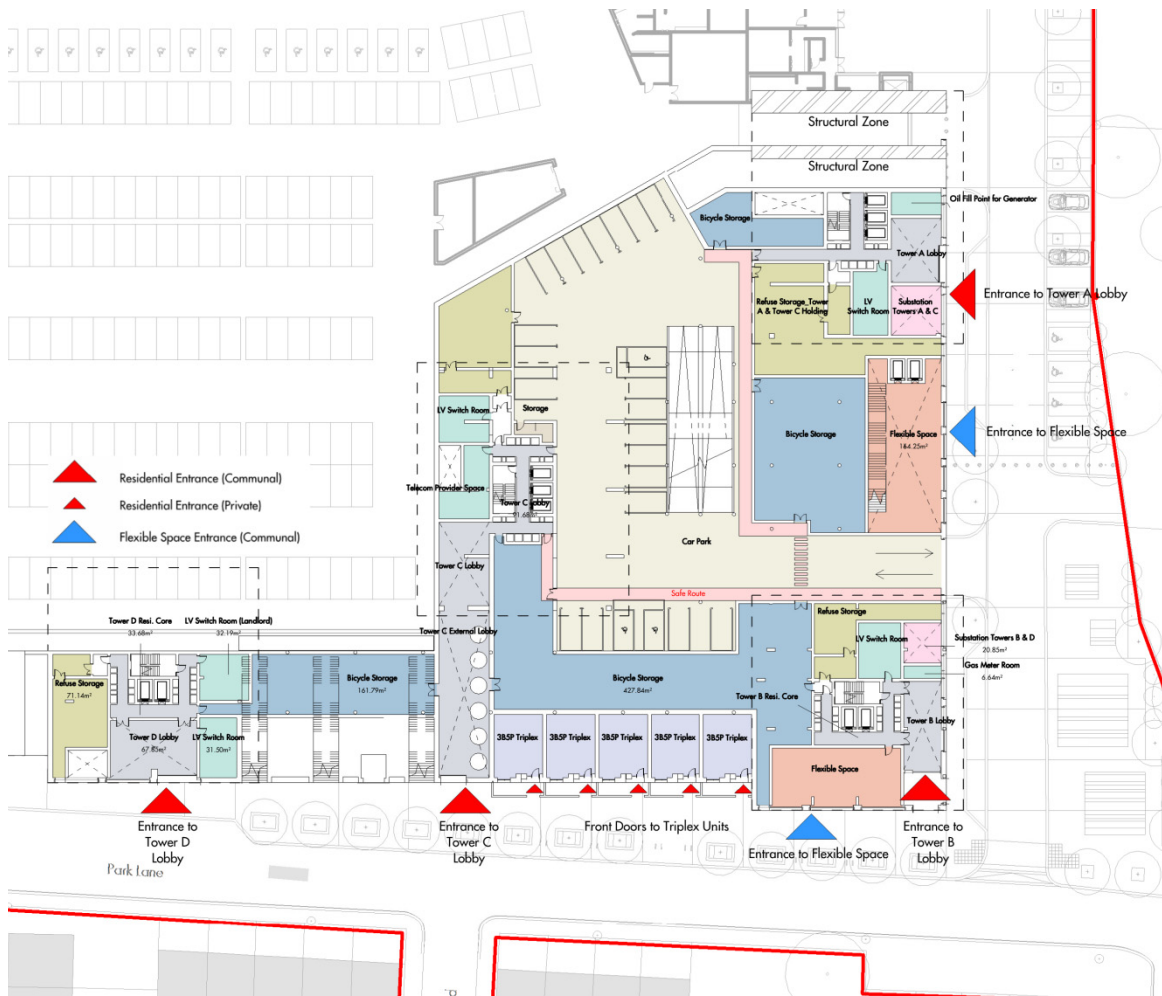
The site is bounded by Worcester Avenue to the east and Park Lane to the south. The residential scheme is comprised of four towers (Blocks A-D) ranging in height from 16 to 32 storeys. Five 3B5P triplex units will face Park Lane.

The public realm will have firm, slip-resistant and reasonably smooth surface treatments. Where there are different materials along the access routes they will have similar frictional characteristics and joints will conform to the provisions of AD M. Materials used in the external environment will contrast visually against the backgrounds which they are seen

Entrances

All the towers will have step-free, street level lobbies; Tower A and B will have lobby entrances directly from Worcester Avenue; Tower C and D will be accessed from Park Lane. The five townhouses are also accessed from Park Lane, they will each have a small front garden and a covered porch. The residents' spa centre and community facilities will have step-free access from the street.

The entrances to the residential lobbies will be legible within the façade; the lobbied entrances will all have weather protection to the depth of at least 1200mm which will satisfy both Lifetime Homes requirements but also M4(2) and M4(3).

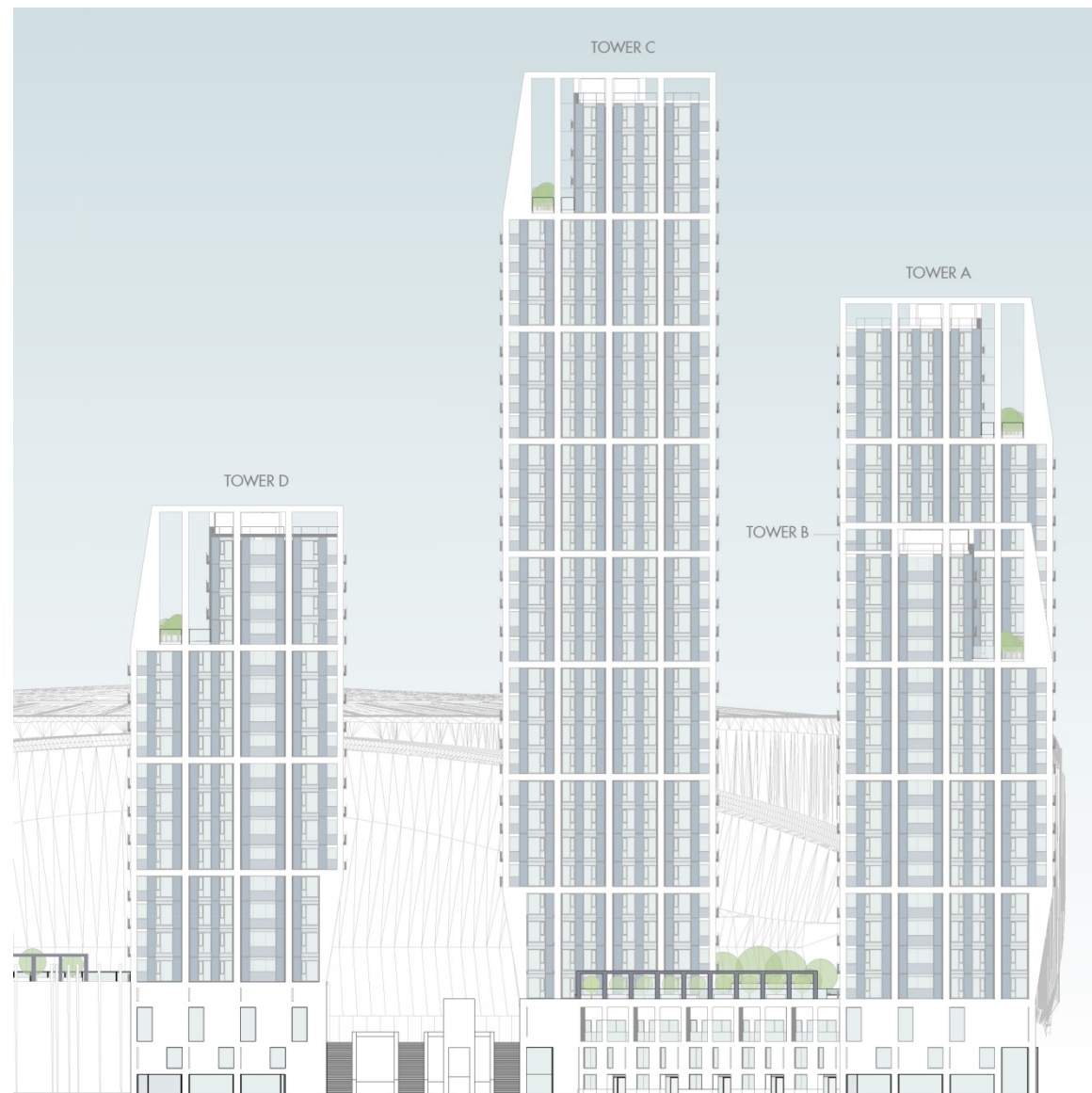


Entrances at street level

Addressing entrances and approach during design development

Entrance lobbies providing access routes into the cores will be detailed during further design stages. These areas will feature:

- Entry points with clear widths providing or exceeding 850mm. Where there are double doors, the main (or leading) leaf will provide the minimum 850mm clear width
- Doors will be operable with an opening force, when measured at the leading edge of the door, should be not more than 30N from 0° (the door in the closed position) to 30° open, and not more than 22.5N from 30° to 60° of the opening cycle.



Indicative elevation view from Park Lane

Circulation

The scheme will incorporate features making reasonable provision for disabled people to visit occupants who live on any storey. For many people, suitable means of access means independent lift access; for others it means having stairs that are designed to be suitable for ambulant disabled people. Circulation corridors will be at least 1200mm wide; where wheelchair adaptable units are located there will be a 1500mm x 1500mm space outside the entrance door (minimum).

Tower A and C will be served by 3 passenger lifts; a pair of lifts will serve Tower B and D. These will serve all levels.

All lifts will have, as a minimum, a 1500mm x 1500mm clear landing in front of entrances. Lift car doors will have a clear width of 800mm or greater and a clear internal area of at least 1100mm x 1400mm.

Addressing circulation during design development

- Lifts and their controls will be specified to comply with AD M, BS 8300 and BS-EN 81:70
- A lift conforming with the London Cycling Design Standards of 1.2m x 2.3m, with a door opening to 900mm will be provided to access to cycle parking.
- Stairs will conform to Part K
- Continuous handrails to both sides of the internal stairs will conform to AD K/BS 8300 and be 900-1000mm above the pitch line; and 900-1100mm above the level landings. They will contrast visually with against the background which they are seen.

Resident Amenity

The communal residential amenity provided within the plinth and roof gardens and will be accessible to all residents including children and wheelchair users.

Located between Towers A, B and C, and to the west of tower D, the community gardens provide a series of private spaces for residents and their children. The community gardens will include a range of play facilities for the children of all age groups, but focused on the 0-5 age range. Seating for parental supervision and general usage will be provided.

The Plinth Level Community Garden (tower D) will provide a private space, this will act as the hub for children's play for the residents of tower D.

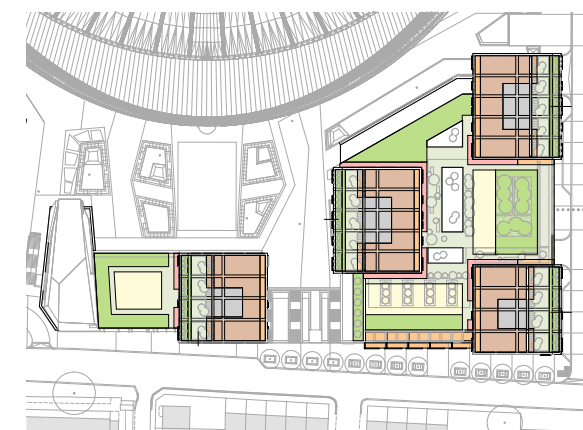
Accessible communal rooftop gardens at the top of each tower will provide hard and soft landscaped external communal amenity space. Separated from the public areas by their location, the roof space offers a private communal amenity space.

Residents' refuse disposal

Communal refuse and recycling containers, communal bin enclosures and refuse stores will be accessible to all residents including children and wheelchair users.

Residential Emergency Egress

Evacuation of disabled people is a combination of physical and management procedures plus a liaison between building managers and occupants. The evacuation strategy for disabled people will be developed in conjunction with the fire strategy and management policies with reference made to AD B and good practice recommendations within BS 9991:2011.



Indicative Amenity Space Zoning Plan

11.9.4 DRAFT INTERIM HOUSING SPG

The following table is an extract from the GLA's Interim Draft Housing SPG Annex 1 demonstrating that the design, which conforms to the current requirement to meet Lifetime Homes standards and the option for 10% of the units to be adapted to wheelchair accessible standards, will also conform to the proposed standards that come into force on 1 October 2015. There is nothing in the design of the proposed units that would preclude the adoption of those standards.

The extracted design standard references from the Interim Draft Housing SPG Annex 1 relate only to those issues that have a crossover with Lifetime Homes, wheelchair housing or have an impact on the accessibility or inclusiveness of the scheme's housing components.

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met
3.1	Entrance and Approach			
3.1.1	All main entrances to houses, ground floor flats and communal entrance lobbies should be visible from the public realm and clearly identified.	✓	All main entrances to houses, ground floor flats and communal entrance lobbies should be visible, clearly identifiable, and directly accessible from the public realm.	✓
3.1.2	The distance from the accessible car parking space of requirement 3.3.4 to the home or to the relevant block entrance or lift core should be kept to a minimum and should be level or gently sloping.	✓	The distance from the accessible car parking space of standard 3.3.4 to the home or to the relevant block entrance or lift core should be kept to a minimum.	✓
3.1.3	The approach to all entrances should preferably be level or gently sloping.	✓	Approach routes should comply with the requirements of Part M4 (2) unless they also serve Wheelchair User Dwellings, where they should comply with the requirements of Part M4 (3)2.	✓
3.1.4	All entrances should be illuminated and have level access over the threshold, Entrance doors should have 300mm of clear space to the pull side, and clear minimum opening widths of 800mm or 825mm depending on the direction and width of approach. Main entrances should have weather protection and a level external landing.	✓	All entrances should comply with the requirements of Part M4 (2), unless they also serve Wheelchair User Dwellings, where they should comply with the requirements of Part M4 (3).	✓
3.1.5			Active frontages should be maximised and inactive frontages minimised on the ground floor of buildings facing publically accessible space, in order to provide natural surveillance and activity. Active frontages are defined as development frontage on the ground floor where inhabited residential or non-residential uses are located, with a visually permeable elevation (eg windows or glazing) and a generous distribution of entrances. This is a new standard and reflects the 2015 London Plan (Policy 7.3).	✓
3.2	Shared Circulation			
3.2.1	The number of dwellings accessed from a single core should not exceed eight per floor, subject to dwelling size mix.	✓	Each core should be accessible to generally no more than eight units on each floor.	✓

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met
3.2.4	The minimum width for all paths, corridors and decks for communal circulation should be 1200mm. The preferred minimum width is 1500mm, and is considered particularly important where corridors serve dwellings on each side ('double loaded') and where wheelchair accessible dwellings are provided.	✓	Communal circulation should comply with Part M4 (2), unless they also serve Wheelchair User Dwellings, where they should comply with the requirements of Part M4 (3).	✓
3.2.5	For buildings with dwellings entered from communal circulation at the first, second or third floor where lifts are not provided, space should be identified within or adjacent to the circulation cores for the future installation of a wheelchair accessible lift.	N/A	Standard removed	
3.2.6	All dwellings entered at the fourth floor (fifth storey) and above should be served by at least one wheelchair accessible lift, and it is desirable that dwellings entered at the third floor (fourth storey) are served by at least one such lift. All dwellings entered at the seventh floor (eighth storey) and above should be served by at least two lifts.	✓	Every M4 (2) dwelling should be provided with step-free access. All dwellings entered at the seventh floor (eighth storey) and above should be served by at least two lifts.	✓
3.2.7	Every designated wheelchair accessible dwelling above the ground floor should be served by at least one wheelchair accessible lift. It is desirable that every wheelchair accessible dwelling is served by more than one lift.	✓	Every designated wheelchair accessible dwelling above the ground floor should be served by at least one wheelchair accessible lift. It is desirable that every wheelchair accessible dwelling is served by more than one lift.	✓
3.2.8	Principal access stairs should provide easy access regardless of whether a lift is provided. Where homes are reached by a lift, it should be fully wheelchair accessible.	✓	Principal access stairs should provide easy access regardless of whether a lift is provided. Where homes are reached by a lift, it should be fully wheelchair accessible.	✓
3.3	Car Parking			
3.3.1	All developments should conform to LP policy on car parking provision (see Annex 2.3 of this SPG for guidance on implementation of relevant policy including LP Policy 6.13 and associated standards below). In areas of good public transport accessibility	✓	All developments should conform to LP policy on car parking provision (see Annex 3 of this SPG for guidance on implementation of relevant policy including LP Policy 6.13 and associated standards below). In areas of good public transport accessibility	✓

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met
	and/ or town centres the aim should be to provide no more than one space per dwelling. Elsewhere parking provision should be broadly as follows, depending on location as indicated in Annex 2.4: a 4+ bedroom dwellings: 1.5 - 2 spaces per dwelling b 3 bedroom dwellings: 1 - 1.5 spaces per dwelling c 1 - 2 bedroom dwellings: Less than 1 per dwelling		and/or town centres the aim should be to provide no more than one space per dwelling. Elsewhere parking provision should be broadly as follows, depending on location as indicated in Annex 3: a 4+ bedroom dwellings: up to 2 spaces per dwelling b 3 bedroom dwellings: up to 1.5 spaces per dwelling c 1 - 2 bedroom dwellings: less than 1 per dwelling	
3.3.2	Each designated wheelchair accessible dwelling should have a car parking space 2400mm wide with a clear access way to one side of 1200mm	10% of overall parking provision provided	Each designated wheelchair accessible dwelling should have a car parking space that complies with Part M4 (3).	10% of overall parking provision provided
3.3.4	Where car parking is within the dwelling plot, at least one car parking space should be capable of enlargement to a width of 3300mm. Where parking is provided in communal bays, at least one space with a width of 3300mm should be provided per block entrance or access core in addition to spaces designated for wheelchair user dwellings.	✓	Where a dwelling has car parking within its plot, at least one parking space should comply with Part M4 (2). Where parking is provided in communal bays, at least one space should be provided per block entrance or access core that complies with Part M4 (3) in addition to spaces designated for wheelchair user dwellings.	✓
3.5	Refuse, post and deliveries			
	Communal refuse and recycling containers, communal bin enclosures and refuse stores should be accessible to all residents including children and wheelchair users, and located on a hard, level surface. The location should satisfy local requirements for waste collection and should achieve full credits under the Code for Sustainable Homes Technical Guide. Refuse stores within buildings should be located to limit the nuisance caused by noise and smells and provided with means for cleaning.	✓	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. The location should satisfy local requirements for waste collection. 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.	✓
4.3	Circulation in the home			

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met								
4.3.1	The minimum width of hallways and other circulation spaces inside the home should be 900mm. This may reduce to 750mm at ‘pinch points’ e.g. next to radiators, where doorway widths meet the following specification: <table><tr><td>Doorway clear opening width of a doorway (mm)</td><td>Minimum width of hallway where door is in a side wall (mm)</td></tr><tr><td>750 or wider</td><td>1200</td></tr><tr><td>775 or wider or</td><td>1050</td></tr><tr><td>900 or wider</td><td>900</td></tr></table> Where a hallway is at least 900mm wide and the approach to the door is head-on, a minimum clear opening door width of 750mm should be provided.	Doorway clear opening width of a doorway (mm)	Minimum width of hallway where door is in a side wall (mm)	750 or wider	1200	775 or wider or	1050	900 or wider	900	✓	The minimum width of hallways and other circulation spaces inside the home should comply with Part M4 (2).	✓
Doorway clear opening width of a doorway (mm)	Minimum width of hallway where door is in a side wall (mm)											
750 or wider	1200											
775 or wider or	1050											
900 or wider	900											
4.3.2	The design of dwellings of more than one storey should incorporate potential for a stair lift to be installed and a suitable identified space for a through-the-floor lift from the entrance level to a storey containing a main bedroom and an accessible bathroom.	In triplexes, soft-spots will not be provided as M4(2) does not require them	The design of dwellings of more than one storey should incorporate potential for a future stair lift to be installed by providing stairs that complies with M4 (2).	✓								
4.4.4	There should be space for turning a wheelchair in dining areas and living rooms and basic circulation space for wheelchairs elsewhere.	✓	There should be space for turning a wheelchair in dining areas and living rooms and basic circulation space for wheelchairs elsewhere.	✓								
4.4.5	A living room, living space or kitchen dining room should be at entrance level.	✓	A living area that complies with M4 (2) should be at entrance level.	✓								
4.4.6	Windows in the principal living space should be no higher than 800mm above finished floor level (+/- 50mm) to allow people to see out while seated. At least one opening window should be easy to approach and operate by people with restricted movement and reach.	✓	Glazing to the principal window should comply with Part M4 (2). At least one opening window in the principal living area should comply with Part M4 (2).	✓								
4.5	Bedrooms											
4.5.1	The minimum area of a single bedroom should be 8 sq m. The minimum area of a double or	✓	The minimum area of a single bedroom should be 7.5sqm. The	✓								

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met
	twin bedroom should be 12 sq m.		minimum area of a double or twin bedroom should be 11.5sqm to comply with the nationally described space standard.	
4.5.2	The minimum width of double and twin bedrooms should be 2.75m in most of the length of the room.	✓	One double or twin bedroom should be at least 2.75m wide and every other double or twin should be at least 2.55m wide, in most of the length of the room, to comply with the nationally described space standard.	✓
4.5.3	In homes of two or more storeys with no permanent bedroom at entrance level, there should be space on the entrance level that could be used as a convenient temporary bed space.	✓	Standard removed	
4.5.4	Building structure above a main bedroom and an accessible bathroom should be capable of supporting a ceiling hoist and the design should allow for a reasonable route between this bedroom and bathroom.	✓	Standard removed	
4.6	Bathrooms and WCs			
4.6.1	Dwellings designed for a potential occupancy of five or more people should provide a minimum of one bathroom with WC and one additional WC.	✓	Standard removed.	
4.6.2	Where there is no accessible bathroom at entrance level, a wheelchair accessible WC with potential for a shower to be installed should be provided at entrance level.	✓	To provide step-free access to a WC that is suitable and convenient to some wheelchair users and, where reasonable, to make provision for showing, dwellings should comply with the requirements of Part M4 (2).	✓
4.6.3	An accessible bathroom should be provided in every dwelling on the same storey as a main bedroom.	✓	An accessible bathroom that complies with Part M4 (2) should be provided in every dwelling on the same storey as a double (or twin) bedroom.	✓
4.6.4	Walls in bathrooms and WCs should be capable of taking adaptations such as handrails.	✓	Walls in the bathrooms and WCs should be capable of taking adaptations and comply with Part M4 (2).	✓
	To be addressed during design development		To be addressed during design	

	Existing Standard (Housing SPG 2012)	Met	Proposed Standard (Interim Draft Housing SPG, 2015)	Met
			development	
4.8	Study and work			
4.8.2	Service controls should be within a height band of 450mm to 1200mm from the floor and at least 300mm away from any internal room corner. To be addressed during design development	Location of service controls to conform to M4(2) as these now conform to Part P	Service controls should be within easy reach and comply with Part M4 (2). To be addressed during design development	✓
4.9	Wheelchair accessible dwellings			
4.9.1	Ten percent of new housing should be designed to be wheelchair accessible or easily adaptable for residents who are wheelchair users in accordance with the GLA Best Practice Guide on Wheelchair Accessible Housing.	✓	Ten percent of new housing should be designed to be wheelchair user dwellings that comply with Part M4 (3).	✓
4.10	Private open space			
4.10.2	Private outdoor spaces should have level access from the home	✓	All private outdoor space should have accessible threshold from the home	✓
4.10.3	The minimum depth and width of all balconies and other private external spaces should be 1500mm.	✓	The minimum depth and width for all balconies and other private external spaces should be 1500mm.	✓

11.9.5 LIFETIME HOMES CRITERIA

In accordance with the London Plan requirement, all dwellings will meet Lifetime Homes standards. The tables below demonstrate the level of compliance with the Lifetime Homes (LTH) Revised Criteria July 2010.

The following is a key to the table below. The annotations on the sample plans in figure 6-1 to figure 6-2 relate to the Lifetime Homes Criterion listed in the tables.

Key	
	Status
Compliant	
To be addressed in design development/detailed design	

Lifetime Homes Criterion Conformance Table

Lifetime Homes Criterion	Description	Stated Specification and dimensions which meet the Lifetime Home Standard	Status	Comments								
1	Parking	Where parking is provided by communal or shared bays, spaces with a width of 3300mm should be provided		Enlarged bays will be provided at Tower cores at basement level								
2	Approach to dwelling from parking	The distance from the car parking space of Criterion 1 to the dwelling entrance (or relevant block entrance or lift core), should be kept to a minimum and be level or gently sloping. The distance from visitors parking to relevant entrances should be as short as practicable and be level or gently sloping. It is preferable to have a level approach. However, where the topography prevents this, the following table highlights the maximum gradients dependent on the distance <table><tr><td>Going</td><td>Maximum Gradient</td></tr><tr><td><5m</td><td>1:12</td></tr><tr><td>5m - 10m</td><td>1:15</td></tr><tr><td>>10m</td><td>1:20</td></tr></table> Paths should be a minimum of 900mm width	Going	Maximum Gradient	<5m	1:12	5m - 10m	1:15	>10m	1:20		Level access provided
Going	Maximum Gradient											
<5m	1:12											
5m - 10m	1:15											
>10m	1:20											
3	Approach to all entrances	The approach to all entrances should be level or gently sloping. See specification and dimensional requirements of standard 2 above for the definition of gently sloping		Access to the scheme is step-free								
4		All entrances should:		All entrances will be illuminated and have level access to the								

Lifetime Homes Criterion	Description	Stated Specification and dimensions which meet the Lifetime Home Standard	Status	Comments						
	Entrances	a) Be illuminated b) Have level access over the threshold; and c) Have effective clear opening widths and nibs. (Communal and dwelling entrances doors should provide a minimum 800mm effective clear width) In addition, main entrances should also: d) Have adequate weather protection e) Have a level external landing.		residential lobby. The principle entrances will be covered by a canopy. All communal and dwelling entrance doors will provide a minimum of 850mm clear width.						
5	Communal stairs and lifts	Principal access stairs should provide easy access regardless of whether or not a lift is provided. Where a dwelling is reached by a lift, it should be fully accessible		Nosings, treads and handrail design to be confirmed at detail design stages. Clear landings of 1500mm x 1500mm are provided next to all lifts. Minimum internal dimensions will be met or exceeded Control heights to be confirmed in detailed design.						
6	Internal doorways and hallways	The width of the doorways and hallways should conform to the specifications in the table below: <table><tr><td>Doorway clear opening width (mm)</td><td>Corridor/ passageway width (mm) minimum</td></tr><tr><td>750 or wider</td><td>900 (when approach is head-on)</td></tr><tr><td>750 or wider</td><td>1200 (when approach is not head-on)</td></tr></table>	Doorway clear opening width (mm)	Corridor/ passageway width (mm) minimum	750 or wider	900 (when approach is head-on)	750 or wider	1200 (when approach is not head-on)		
Doorway clear opening width (mm)	Corridor/ passageway width (mm) minimum									
750 or wider	900 (when approach is head-on)									
750 or wider	1200 (when approach is not head-on)									

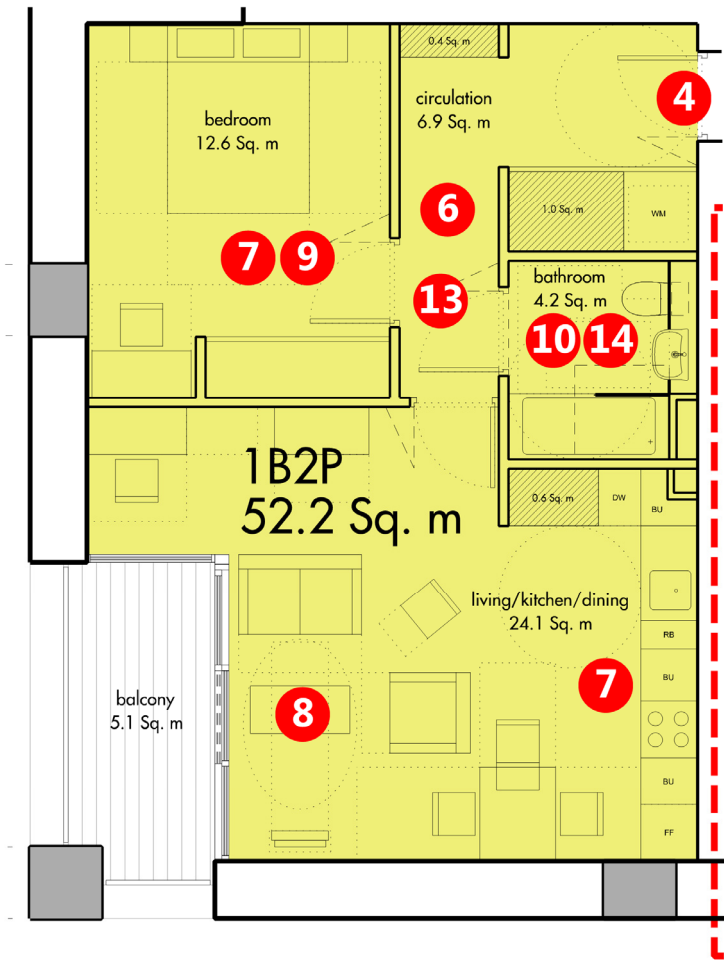
Lifetime Homes Criterion	Description	Stated Specification and dimensions which meet the Lifetime Home Standard		Status	Comments
		775 or wider or	1050 (when approach is not head-on)		
		900 or wider	900 (when approach is not head-on)		
		The clear opening width of the front door should be 800mm. All front doors to all dwellings and communal entrance doors to blocks of dwellings			All principal entrances will provide a minimum 850mm effective clear width
		There should be 300mm to the side of the leading edge of doors at entrance level. All communal entrance doors to blocks of dwellings, all communal doors within a block of dwellings (on any storey), and all doors on the entrance level of each dwelling (ie all doors on the entrance level of houses/ maisonettes and every door within a flat).			A 300m nib will be provided on the pull side of the leading edge of each door.
7	Circulation space	There should be a space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchairs elsewhere. A turning circle of 1500mm diameter or a 1700mm x 1400mm ellipse is required The main bedroom in a dwelling should be capable of having a clear space, 750mm wide to both sides and the foot of the bed.			All living and dining areas will provide necessary turning/circulation space; bedrooms will have required circulation space
8	Entrance level living space	A living room / living space should be provided on the entrance level of every dwelling			All living rooms will be at entrance level.
9	Potential for entrance level bed space	In dwellings of two or more storeys, with no permanent bedroom on the entrance level, there should be space on the entrance level that could be used as a convenient bed-space.			
10	Entrance level WC and shower drainage	Where an accessible bathroom, in accordance with Criterion 14, is not provided on the entrance level of a dwelling, the			All units will have an entrance level accessible WC or bathroom with

Lifetime Homes Criterion	Description	Stated Specification and dimensions which meet the Lifetime Home Standard	Status	Comments
		entrance level should have an accessible WC compartment, with potential for a shower to be installed		shower drainage
11	WC and bathroom walls	Walls in bathrooms and toilets should be capable of taking adaptations such as grab rails.		To be addressed in design development/ detailed design
12	Stairs and potential through lift in dwelling	The design should incorporate both; a) Potential for stair lift installation; and, b) A suitable identified space for a through-the-floor lift from the entrance level to a storey containing a main bedroom and a bathroom satisfying Criterion 14.		Soft spot for through lift will not be provided; this accords with M4(2)
13	Potential for fitting of hoists and bedroom / bathroom	Structure above a main bedroom and bathroom ceilings should be capable of supporting ceiling hoists and the design should provide a reasonable route between this bedroom and the bathroom.		While structurally possible, this standard has been removed from M4(2)
14	Bathrooms	An accessible bathroom, providing ease of access should be provided in every dwelling on the same storey as a main bedroom.		
15	Glazing and window handle heights	Windows in the principal living space (typically the living room), should allow people to see out when seated. In addition, at least one opening light in each habitable room should be approachable and usable by a wide range of people – including those with restricted movement and reach		All living room window glazing will begin at 800mm or lower Window control heights are to be addressed at detail design stages
16	Location of service controls	Switches, sockets, ventilation and service controls should be at a height usable by all (ie between 450mm and 1200mm from the floor). This applies to all rooms including the kitchen and bathroom		To be addressed in design development/ detailed design. The location of service controls will conform to LTH Criterion 16 with the exception of the consumer service units; location of consumer service units will accord with Part P 2013 which indicates that one way of complying with Part M in new dwellings is to mount consumer units so

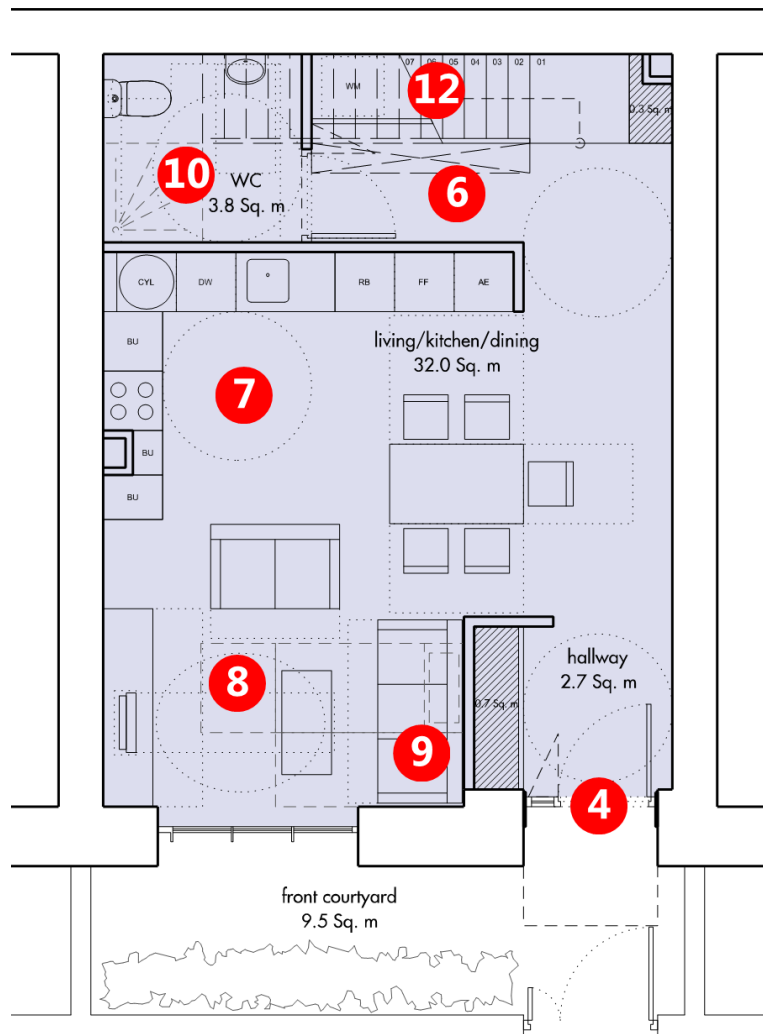
Lifetime Homes Criterion	Description	Stated Specification and dimensions which meet the Lifetime Home Standard	Status	Comments
				that the switches are between 1350mm and 1450mm above floor level. At this height, the consumer unit is out of reach of young children yet accessible to other people when standing or sitting.

Lifetime Homes illustrative layouts

The numbers on each indicative layout are keyed to the relevant LTH criterion in the above table: Lifetime Homes Criterion Conformance

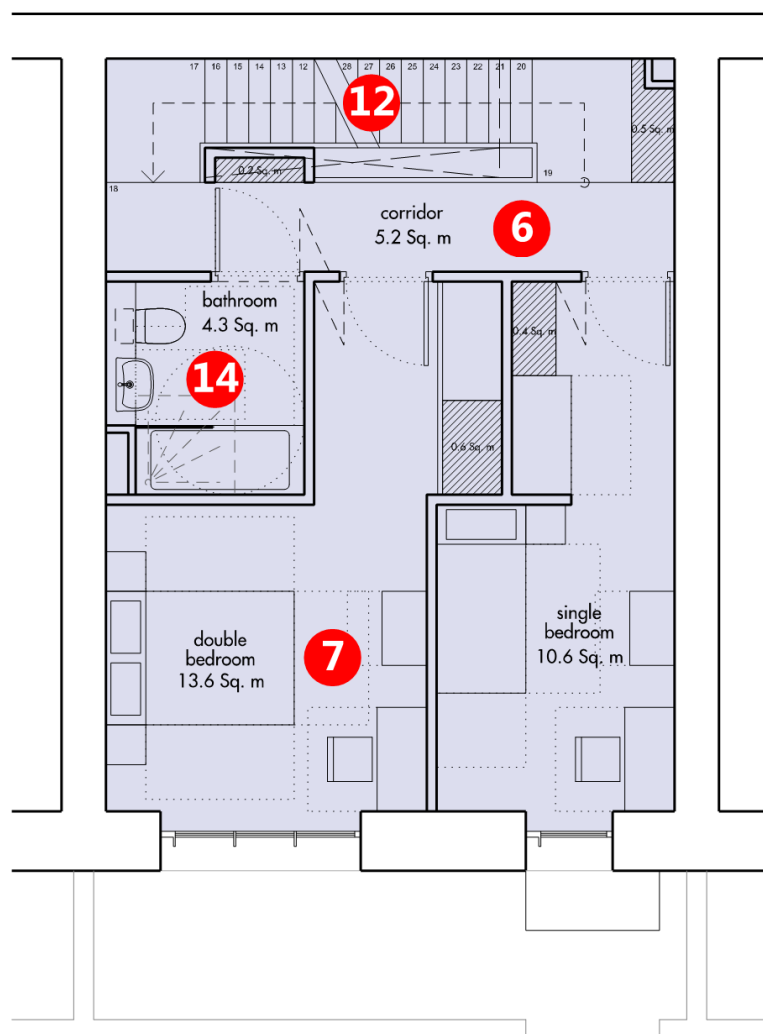


LTH indicative single level unit

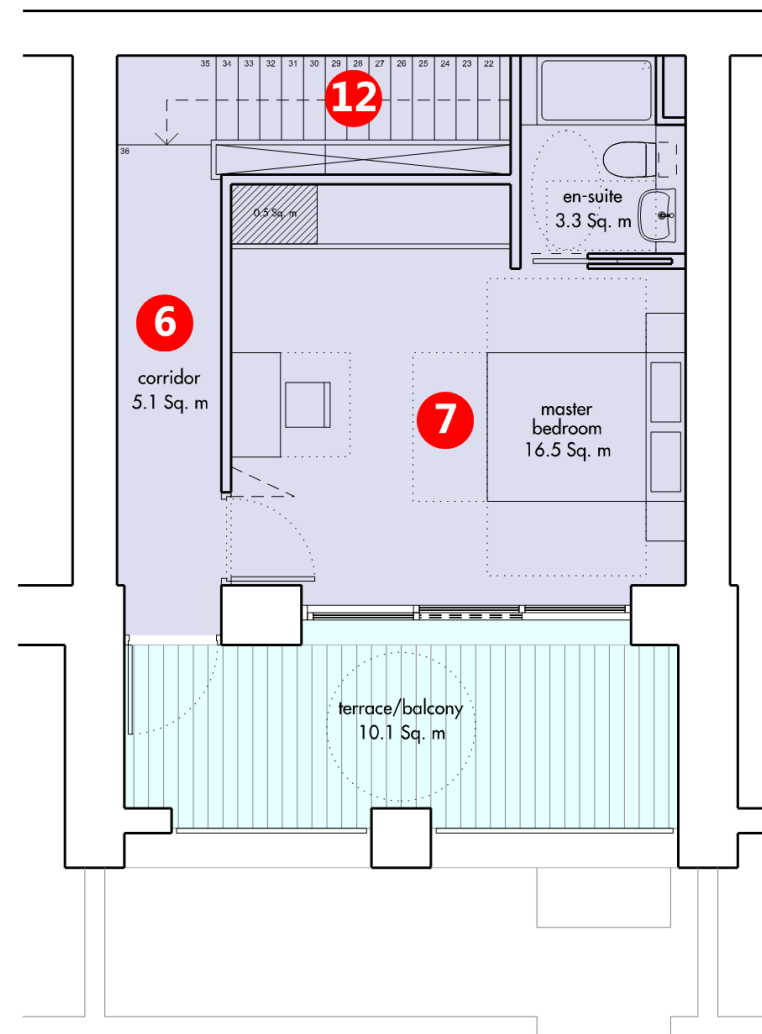


ground floor plan

LTH Indicative three storey maisonnette unit



first floor plan



second floor plan

11.9.6 WHEELCHAIR HOUSING

58 units (eg 10%) will be provided as easily adaptable wheelchair housing units in Tower B and D. Two indicative typologies are illustrated below.

The identified units have been all designed as adaptable, and will be capable of alteration to conform to the GLA Housing SPG which refers to specific detail in the WHDG or to the requirements of AD M M4(3). All wheelchair adaptable units must fundamentally meet the required

The 58 units have been set out to conform to the provisions of AD M Vol 1 Category M4 (3)(a) in that they will be adaptable. The spatial requirements between the two sets of guidance are roughly equivalent; AD M, however, allows for some encroachment of the basin into the side access zone for the WC pan which WHDG does not, and this approach has been adopted in the wheelchair housing adaptable units.

Key

	Status
Compliant	
Does not meet guidance	
Deemed compliant through specification	
Management Procedure	
Not applicable	

Wheelchair Accessible Dwelling Criteria extracted from Accessible London SPG Appendix 7

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
1. Moving around outside		
Ensure a high degree of accessibility within the development.		
Convenient access should be available throughout the development, connecting community facilities and public transport beyond the site to the site entrance, to all dwelling entrances and site facilities such as gardens, gyms, and play space. Wheelchair accessible homes are best sited close to public transport, car parking, taxi drop-off, and to communal facilities.		
Footpaths - Ensure that footpaths are smooth, slip resistant, at least 1200mm minimum wide with adequate space to negotiate obstacles, turn and pass (WHDG 1.2.1).		
Gradients - Ensure that length to gradient ratios of footpaths and other routes do not exceed 2000mm at 1 in 12 and 5000mm at 1 in 15. Interpolation between these figures is acceptable. Where required, intermediate level landings should be at least 1200mm long (WHDG 1.2.3). Routes to entrances should not be steeper than 1 in 15 (WHDG 3.2.5).		
Cross falls - Ensure that cross falls to paving do not exceed 1 in 50, whether paving is dedicated to pedestrian use or shared with vehicles (WHDG 1.2.4).		
Crossings - Ensure that crossings have flush junctions or shallow gradients. Avoid gratings and channels that could trap wheels or footrests. (WHDG 1.2.5)		
2. Using outdoor spaces		
Ensure that spaces within the curtilage of the home are accessible, usable and secure.		
Gardens - Provide an accessible route between the external door, external storage and external gate (WHDG 2.2.3). Where private back or side gardens are provided, ensure that gates have an 850mm clear opening and can be operated from each side (WHDG 2.2.1).		
Balconies - Provide level access to balconies and useable space clear of any door swings (WHDG 2.2.2).		
Refuse - Make suitable provision for refuse and recycling containers within a short distance of an external door, or ensure appropriate management provision (WHDG 2.2.4).		Waste and recycling disposal accommodates a 1500 x 15000mm manoeuvring space. Management will assist if required.
3. Approaching the home		
Ensure ease of approach to the home by car, wheelchair or mobility scooter with cover at the point of transfer, and protection from the elements at the individual or common entrance.		

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
The parking strategy, including the provision and dimensions of bays, the management of the supply and future demand for bays and how their use will be enforced should be made clear in the Design and Access Statement. Designers should refer to BS 8300: 2009 + A1:2010 for guidance about common areas of multi-storey developments, including circulation areas, doors, lifts and parking. Suitable designated parking spaces should be as close as possible to wheelchair accessible dwellings and ideally under cover.		In the event a bay is not available in the future a management plan will be put in place to assist in securing a parking space in the vicinity, for example, the Smithfield car park adjacent to the development. As the basement car park is not directly accessed by many of the units this level of provision will be comparable to the limited number of residents who own a car parking bay.
Dwellings with a direct external entrance - Provide a parking space (ideally covered) for every wheelchair user dwelling (WHDG 3.2.1). Ensure that minimum clear dimensions are 3600mm wide x 5400mm long x 2200mm high and the parking area is paved with a slip resistant, smooth and level surface. (WHDG 3.2.2)	N/A	Triplexes will not be provided as wheelchair adaptable units.
Dwellings with a communal external entrance - Where there is no direct external ground-floor entrance, ensure parking provision in the form of designated parking space for each wheelchair user dwelling, off street or kerbside, nominally level that can enable transfer to and from vehicle (WHDG 3.2.3). Ensure a smooth, slip resistant route to dwelling entrances. Ramps, where unavoidable, are not steeper than 1 in 15 and not longer than 5000mm (WHDG 3.2.5).		10% of the overall parking allotment will be made available as standard bays with 1200mm access zones to both sides of the bays.
Entrance landing - Provide a level landing 1500mm x 1500mm, 1800mm by 1800mm is preferred. Ensure a 1200mm depth clear of any door swing. Provide side protection where the ground level is below the path or landing level (WHDG 3.2.6).		
Canopy at entrance - Provide a canopy of minimum dimensions 1200mm x 1500mm extending beyond the door on the lock side and at a maximum height of 2300mm (WHDG 3.2.7).		
Lifts - Where wheelchair dwellings are above the ground floor, lifts should be as detailed in BS 8300: 2010 (internal car dimensions of 1100mm wide by 1400mm deep). A second lift should preferably be accessible to and from wheelchair user dwellings for use when the first or core lift is undergoing maintenance. (WHDG 3.2.9)		
4. Negotiating the entrance door		
<i>Ensure that the clear opening, approach space and threshold are wheelchair accessible.</i>		

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
Door - Provide easy to use doors with, effective clear opening width of at least 800mm (WHDG 4.2.1). Designers should consider increasing this to 900mm or wider, particularly in relation to communal doors.		
Approach space - Provide a minimum 200mm space beside the leading edge of the entrance door for a door opening away from the wheelchair user and 300mm for a door opening towards a wheelchair user, extending 1800mm from face of door (WHDG 4.2.2).		
Threshold - Provide a weather tight accessible detail (i.e. a tapered or chamfered external profile) with a total upstand not exceeding 15mm. (WHDG 4.2.3)		
5. Entering and leaving; dealing with callers		
<i>Ensure that the wheelchair user can:</i> - enter the dwelling, manoeuvre an outdoor chair to allow transfer to an indoor chair, and reverse the process when leaving; - leave the outdoor or indoor chair on charge - approach the entrance door to receive deliveries, retrieve post, open the door to visitors, manoeuvre, and return into living areas.		
Lobby - Where there is an entrance lobby or inner door, ensure there is adequate space to manoeuvre between doors (WHDG 5.2.5).		
Turning space - Provide a turning space of 1800mm deep x 1500mm wide behind the closed door, clear of fittings and obstructions, and a 300mm clear space to the side of the leading edge of the door (WHDG 5.2.2).		
Transfer space - Provide 1100mm deep x 1700mm wide space to transfer to a second wheelchair, to store the first clear of circulation routes and to approach furniture and doors (WHDG 5.2.1). The space should include an electrical socket to allow batteries to be recharged.		
6. Negotiating the secondary door		
<i>Ensure a direct connection to external spaces by an easily operated, secure door, to provide access to private or shared gardens or balconies, and as an escape route in an emergency.</i>		
External landing - Provide a nominally level landing 1500mm wide x 1500mm deep with a 1200mm space clear of the door swing (WHDG 6.2.1).		
Door - Provide effective clear width of 800mm to single or main leaf (WHDG 6.2.2).		

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
Approach space - Ensure there is adequate space to approach, manoeuvre and pass through the door on line (WHDG 6.2.3).		
Threshold - Provide weather-tight, accessible detail (WHDG 6.2.4).		
7. Moving around inside; storing things		
- Ensure that wheelchair users can: conveniently manoeuvre, approach and negotiate all doors within circulation areas - approach and use storage off circulation areas. - Open plan living room/kitchens can be more convenient because there are fewer doors to negotiate but designers should consider the noise from kitchen appliances. Radiators should not constrain circulation		
Straight passages - Ensure that passage widths or approaches, where no turning or door approach is required, are no less than 900mm wide clear of all obstructions except skirtings (WHDG 7.2.1).		
Head-on approach to doors in passages - Ensure space beside latch edge of door, minimum 200mm on push side and minimum 300mm on pull side (WHDG 7.2.2).		
Turning 90° - Ensure at right angles that passage width clear of all obstructions (except skirting) for the extent the turn is no less than 1200mm width in one direction, and 900mm in the other; or 900mm in each direction in combination with an angle splayed by 300mm (WHDG 7.2.5).		
Turning 180° - Ensure that passage widths or approaches to turn through 180° are no less than 1500mm clear of all obstructions (except skirting) for extent of manoeuvring space. (WHDG 7.2.4)		
Effective clear widths for doors - Ensure 775mm minimum effective clear width. Increase where approach is at an angle (WHDG 7.2.6). Effective clear width of doors refers to the width between the face of the door or projecting fitting in the open position and the nearest point on the opposite frame or second door.		
Doors at angles - Provide space to turn between doors at an angle to each other (At least 400mm from door to corner) (WHDG 7.2.8).		
Sliding doors - Provide space beyond doorway at latch side for sideways approach and operation (300mm minimum) (WHDG 7.2.9).		
Storage - Ensure that the depth and width of storage space, in combination with any shelving layout, provides optimum		Adaptable

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
access to space and other stored items. Ensure that opening width of doors suits angled or head-on approach (WHDG 7.2.10).		
8. Moving between levels within the dwelling		
<i>Ensure that there is provision in dwellings on more than one floor for independent movement in a wheelchair between floors, without the need to transfer, without compromising circulation or living space, and with all the rooms remaining accessible.</i>		
Through the floor lift - Provide a soft pocket or structural opening of adequate size to enable the installation of a through-the-floor lift connecting a circulation space on the entrance level with a circulation space on the level of the main bedroom. The space could be used for easily removable storage until the lift is installed, provided enough storage is provided elsewhere.	N/A	Triplexes will not be provided as wheelchair adaptable units
Circulation - Provide adequate circulation space at each level to manoeuvre, call the lift, approach and open the lift door (WHDG 8.2.3).	N/A	
9. Using living spaces		
<i>A room should accommodate the usual range of furniture with space for a wheelchair user to circulate and transfer from wheelchair to seat (see WHDG page 14 for basic criteria for space required for room layouts).</i>		
Room layout - Provide space for wheelchair users to approach furniture, circulate around it, transfer to seating and approach and operate doors, windows, equipment and controls (WHDG 9.2.1).		
10. Using the kitchen		
<i>Ensure ease of approach to and use, from a wheelchair, of the sink, worktops, equipment, all appliances and controls and all storage essential to kitchen operations.</i>		
The kitchen should have sufficient space between the units to enable a wheelchair user to manoeuvre freely and safely. Position the hob, oven housing and sink on the same run of units uninterrupted by doors, windows or main circulation routes. Windows should be operable from a wheelchair. Accessible storage capacity should be retained following future changes to provide clear knee space underneath the sink, hob or oven housing.		Spatial requirements are achieved – the kitchen areas will be adaptable as required by M4(3)(a)
Layout - Provide clear manoeuvring space not less than 1800mm x 1500mm (WHDG 10.2.1).		

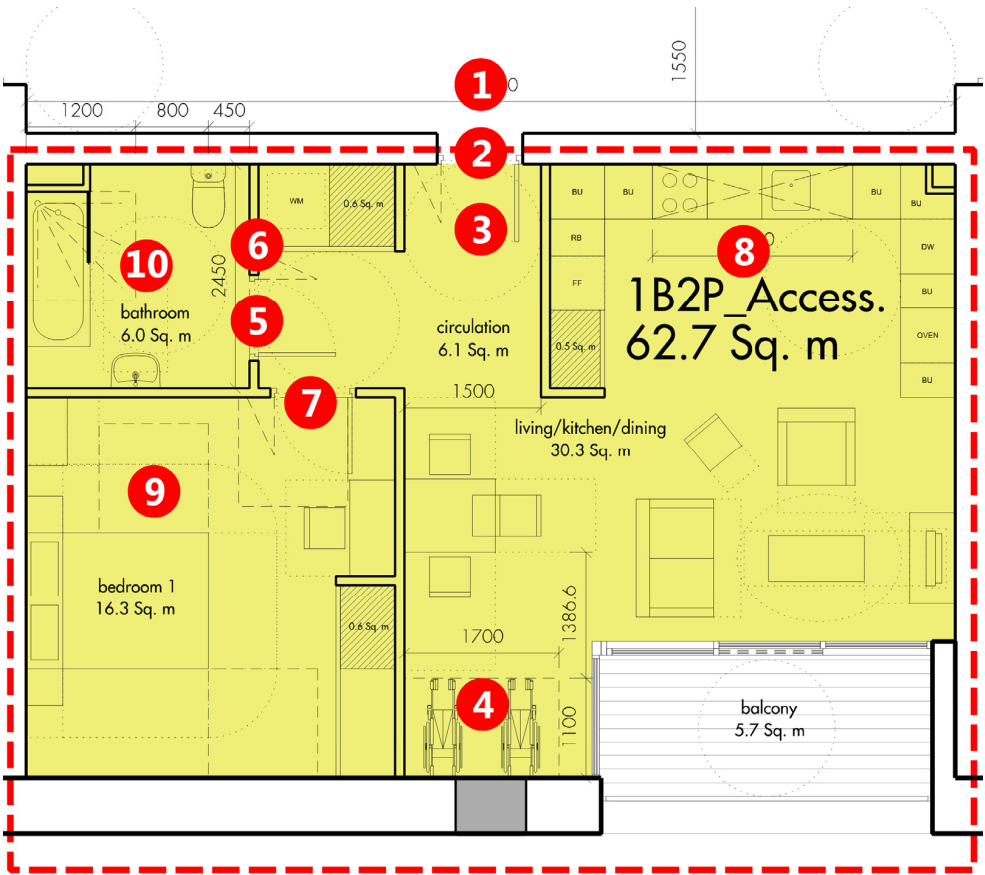
Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
11. Using the bathroom		
<i>The design of the bathroom is key to enabling independence and dignity for disabled people. The ability to manage toileting and bathing functions without assistance is highly desirable. See WHDG section 11 for the spatial requirements of bathrooms.</i>		
Bathroom Layout - Ensure independent approach and safe transfer to and use of all fittings, including manoeuvring space clear of fittings and door swings (WHDG 11.2.4) with flexible or easily adapted services (WHDG 11.2.1).		Spatial criteria met – adaptable layouts will conform to M4(3)(a). Sanitary fittings associated clear access zones and permitted encroachment of basins will conform to AD M Vol 1 Diagram 3.10 an associated text
Bath - Where provided select bath and taps position and detail to allow a range of transfers, access to and operation of taps (WHDG 11.2.7).		Adaptable
Level-access shower - Where installed, detail to be fully accessible comprising drained floor, reachable and usable controls and scope for suitable water containment or suitable enclosure (WHDG 11.2.6). A shower area 1200 x 1200mm is more convenient than an area 1000 by 1000mm. Under-floor heating dries the floor quickly, improving safety.		
WC - Provide space to approach WC head-on, obliquely or to make a side-transfer (11.2.5).		Adaptable
Supports - Ensure that walls and ceiling are adequate for adjustable height basins and subsequent fixing of hoists, seats, supports and other fittings to suit user (WHDG 11.2.10).		Adaptable
Access from bedroom - A full height knock-out panel allows for direct access from main bedroom to bathroom or to the en-suite bathroom and the installation of a ceiling-mounted hoist (WHDG 11.2.2).		Adaptable; however, M4(3)(a) does not require this
Second WC - In dwellings of four or more persons, provide fully accessible second WC with basin. The side transfer space should be on opposite sides to provide both left and right-handed transfer options within the dwelling (WHDG 11.2.3).		Adaptable; as allowed in M4(3) diagram 3.10; sanitary fittings will be set out with associated clear space access zones and permitted encroachment of basins
12. Using bedrooms		
<i>Ensure that there is space in all bedrooms to accommodate the normal range of bedroom furniture and for a wheelchair user to enter approach and transfer to beds, approach and use other furniture and operate windows.</i>		
Layouts - Provide bedroom layouts to ensure access to both sides of beds in double bedrooms and outer side of beds in single bedrooms, access to other furniture and to window		

Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
(WHDG 12.2.1 and page 14 for basic criteria for space required for room layouts).		
Door - Make provision for connection between main bedroom and bathroom by means of full-height knock-out panel, a door with panel over in full-height frame or fully detailed door (WHDG 12.2.3).		Adaptable: AD M M4(3)(a) does not require knock out panel
Hoist - Make provision for future ceiling track hoist installation in main bedroom - strengthen ceiling to allow run into bathroom (WHDG 12.2.4).		Adaptable: AD M M4(3)(a) does not require tracking hoist route
13. Internal doors		
<i>All internal doors, including those to storage spaces, can be operated conveniently.</i>		
Construction - Ensure that door construction permits subsequent fixing of pull handles or other fittings to suit individual requirements (WHDG 13.2.1).		
14. Windows		
<i>Ensure independent control of opening windows, passive and mechanical ventilation and a balance of daylight, views out, privacy and security. Where windows extend to floor level consider radiator location to ensure they do not reduce circulation space or restrict furniture location.</i>		
Approach - Ensure that a wheelchair user can approach each window to operate controls for opening and ventilation (WHDG 14.2.1).		
Transoms - Avoid full-width transoms (horizontal divisions) between 800 and 1500mm high (WHDG 14.2.6).		
15. Service Controls		
<i>Ensure wheelchair users can reach, control and read mains water stopcocks, gas and electricity mains switches and consumer units.</i>		
		It is assumed that the location of service controls within the contractor specification will meet this criteria with the exception of the consumer service units; location of consumer service units will accord with Part P 2013 which indicates that one way of complying with Part M in new dwellings is to mount consumer units so that the switches are between 1350mm and 1450mm above floor level. At this height, the consumer

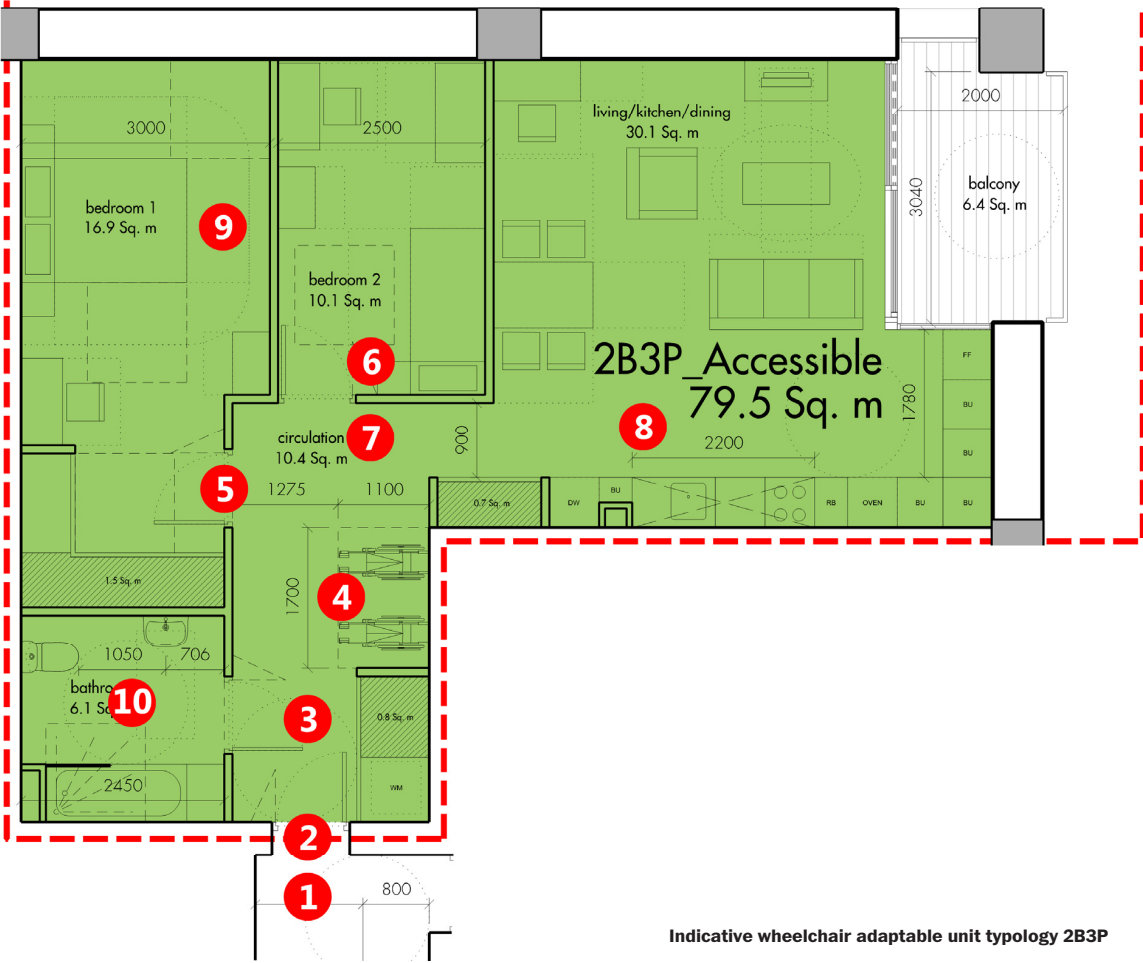
Wheelchair Accessible Dwelling Criteria		
Specification	Level of compliance	Comments
		unit is out of reach of young children yet accessible to other people when standing or siting

The numbers on each apartment layout relate to the additional requirements to achieve the spatial requirements of wheelchair accessible/adaptable housing in addition to Lifetime Homes criteria based on Wheelchair Housing Design Guide.

KEY	Requirement
1	Clear landing space of at least 1500mm x 1500mm in front of the entrance door
2	At least 800mm effective clear width at the apartment entrance door
3	A clear welcoming space of at least 1800 x 1500mm behind the entrance door (including the door swing)
4	Space for a wheelchair user to transfer to a second chair with a place to store and charge the first of 1100 x 1700mm
5	Internal doors with an effective clear width of at least 775mm
6	At least 300mm unobstructed clear space at the leading edge of doors on the pull side of the door, also space to manoeuvre back clear of the door swing;
7	At least 200mm unobstructed clear space at the leading edge of doors on the push side of the door;
8	Usable kitchen space with 1800 x 1500mm clear space
9	A clear space of 1200x1200mm on one side of the master bed and 1000x1000mm on the other. A clear 1200x1200mm space at the foot of the bed
10	Bathroom layouts to include: 1500x1500mm turning space, 1100mm clear in front of the pan, 1000x1000mm level shower area, 1500mm transfer space, direct link to the master bedroom. For four or more occupants have choice of handing of WC pan (indicated on plan as 10R and 10L)



Indicative wheelchair adaptable unit 1B2P



Indicative wheelchair adaptable unit typology 2B3P

11.10 Summary of MEP and Fire Strategies

Ventilation

Each dwelling will be served by a whole house Mechanical Ventilation with Heat Recovery (MVHR) system, achieving the fresh air ventilation requirements set out in Part F, Section 2 of the Building Regulations. Fresh air will be delivered into the bedroom and living spaces and extracted from the bathroom and kitchen area. The MVHR unit incorporates a heat exchanger which will temper the incoming air before it is delivered to the habitable rooms. The kitchen will have an independent extract system, extracting from the oven hood and exhausting at the façade. The exhaust and kitchen extract louvre will be integrated into the façade and will have suitable separation from the fresh air louvre located in the balcony ceiling.

Heating / Domestic Hot Water

A centralised heating system will be located at Level B2 and will provide space heating and domestic hot water to the four towers. The boiler plant room will also incorporate two heat exchangers to ensure the development is ready to connect to the future Haringey district heating scheme. Each apartment will be served from an independent Heat Interface Unit (HIU) which will meter the usage and deliver the space heating and domestic hot water requirements. Space heating will be achieved from underfloor heating; The HIU will feed an underfloor heating manifold and distribution pipework.

Energy metering to each of the dwellings will be provided at the heat interface units, the energy used by each dwelling being recorded and charged to the Tenant.

Domestic Cold Water

A potable water storage tank is located at Level B2 and will provide approximately half a day storage to the apartments. Low flow sanitary ware will be used throughout.

A water authority compliant water meter will be installed at each dwelling, the individual Tenant being responsible for paying the relevant water charges.

Fire Safety Systems

A dedicated residential sprinkler tank and pump room will be located at Level B2 and has been designed to provide a sufficient quantity and pressure of water to extinguish a fire in one of the towers at one time. This system is to be compliant with 'BSEN12845:2004 Fixed Firefighting systems'. The wet riser tank and pump room is also located at Level B2 and is linked to landing valves positioned within the stair core at each level to be compliant with standards laid out in 'BS9990:2015 Non automatic fire fighting systems'. The car park ventilation system is designed to direct smoke towards the extract point and clear smoke from the car park in event of a fire. It consists of a fresh air intake shaft, exhaust shaft, main extract fan and impulse fans located within the car park. To protect the lobbies to assist escape in the event of a fire, a mechanical Automatic Opening Ventilator (AOV) has been incorporated into the core. Under normal operation, it will provide mechanical ventilation to the residential core and smoke clearance in event of a fire in compliance with the recommendations of Approved Document B and BS 9991:2011.

Electrical

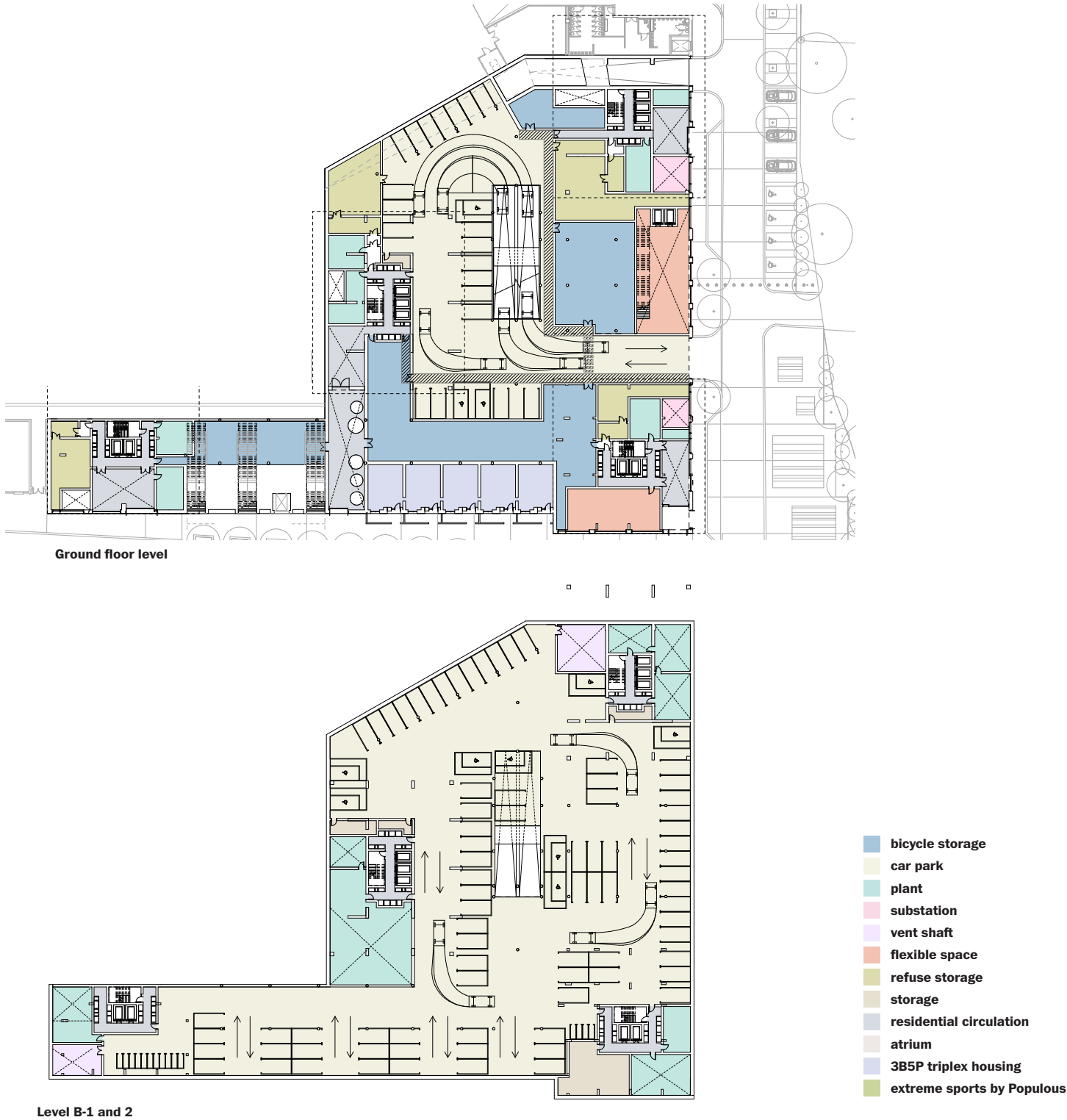
The four residential towers will be served by dedicated HV substations. Electrical distribution will be provided within the risers, the individual Tenant's electricity supply meters being located in a suitably located meter room. Each Tenant will be responsible for paying for the electrical energy used directly with a supplier.

A life safety generator will be located at Level B1. The flue gases will be diluted and exhausted at a minimum of three metres above occupied areas.

Lighting throughout the residential buildings will be provided by high efficiency LED lighting.

Energy Centre

The club is committed to connecting into the proposed Haringey District Heating network, which will supply all heating demands for the development. In the unfortunate scenario that the network is not constructed, a CHP-led site-wide heating network will be investigated, with the basement of the residential towers identified as a potential suitable location.



11.11 Operational Waste Management Strategy

BUROHAPPOLD
ENGINEERING

Tottenham Hotspur Football Club
Southern Residential Operational Waste Management Strategy

031627

1 September 2015

Revision 00

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Revision	Description	Issued by	Date	Checked
00	Southern Residential OWMS for planning	Fergus Anderson	01.09.15	James Hobson

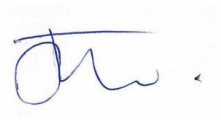
\\srv-edn01\Non-Project\I&E\1 Waste Management\Resource Management\3 Projects1\UK projects\151001 THFC Residential and Hotel Development\Resi\New design Allies and Morrison\Reports\150901 FA 031627 Southern Resi Operational Waste Management Strategy 00.docx

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author Fergus Anderson

date 01.09.15

approved James Hobson

signature 

date 01.09.15

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Southern Residential Operational Waste Management Strategy
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1 September 2015
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1 Introduction

An Outline Operational Waste Management Strategy is required to support the outline planning application for the Tottenham Hotspur Football Club (THFC) four residential towers located in Tottenham, North London. The proposals are for the towers to contain a mixture of studios, 1, 2, and 3 bedroom flats as well as 5 town houses. The residential towers development forms sits in the north east corner of the wider THFC Masterplan which includes the stadium, THFC experience, THFC hotel and a public square (which will contain spectator screens for members of the public to watch events taking place within the stadium).

This document forms the Operational Waste Management Strategy for the THFC residential towers only and covers how waste within the development will be managed. This development will operate and be run independently. A separate Operational Waste Management Strategy has been prepared for the stadium, THFC experience, THFC hotel and public square. The planning application for the residential towers is due to be submitted to the London Borough of Haringey (LBH) in August 2015.

The management of solid waste is an important element to consider as buildings are designed. Planning for future operational waste management ensures that a building will be able to operate efficiently and sustainably while minimising the impacts on the designed requirements building performance and site users. Good waste management will be essential ensure safe operational practice throughout the development. The waste management strategy must ensure that the residential tower Facilities Management (FM) teams can collect, store, recycle, re-use and dispose of waste quickly and efficiently and in a discreet manner in line with THFC Waste Management Policy and the waste hierarchy as shown in **Figure 1**. Waste management operations will need to be hidden from visitors and residents to ensure that they do not interfere with the day to day operations within the residential towers.

Figure 1: The Waste Hierarchy



- 01** Minimise the amount of waste produced and avoid producing waste in the first instance
- 02** Re-use items as many times as possible
- 03** Recycle what you can once you have re-used it and it is no longer able to be used or is no longer needed
- 04** Turn waste materials into a new product where possible i.e. the generation of waste from energy
- 05** Dispose of what is unable to be recovered in a responsible way

In summary, the aims of the Operational Waste Management Strategy are to:

- Provide an outline estimate of anticipated waste generation for the residential towers;
- Provide guidance on waste management to ensure that adequate spatial provision for clean, hygienic and efficient storage and collection of waste is incorporated into the design. This is essential to the successful operation and aesthetics of these buildings;
- Enable the residential towers FM teams to collect, store, recycle, re-use and dispose of the different types of waste quickly, sustainably and efficiently and in a discreet manner;
- Ensure national and local targets as well as any other client waste management aims and aspirations (which are outlined in full in **Appendix A**) are met; and
- Ensure that waste management practices are efficient and improve productivity whilst championing environmental protection principles.

2 Anticipated Generation and Bin Numbers

2.1 Waste generation

In order to determine spatial requirements for waste in the residential towers, outline waste generation and bin numbers have been generated. This has been based on the Allies and Morrison area schedule (1007 Tottenham Towers Rev 2, dated 13/07/15) and drawings (1007_03, dated 02/06/15) and a number of assumptions which are outlined below. LBH do not provide any specific generation rates for commercial or residential waste, therefore waste generation rates from waste audits undertaken in similar developments have been utilised. The waste generation estimates provided in **Table 1** are high level and are based on the following assumptions which are subject to change:

- Revised accommodation schedule dated 13/07/15;
- Average recycling target of 50%;
- The British Standard (BS5906:2005)- Waste Management in Buildings, with weekly generation rates as follows: 100litres per 1 bed unit, 170 litres per week 2 bed unit, 240litres per week 3 bed unit; and
- An outline agreement with LBH was made which allowed for waste from the residential towers can be collected twice weekly (if required) for mixed recyclables, residual and organic (food) waste by LBH.

Table 1: Residential Towers and Hotel Waste Generation Estimates

Land use	Capacity (units)	Estimated weekly waste (litres per week)
Tower A	168	23,520
Tower B	90	12,820
Tower C	232	32,160
Tower D	90	12,820
Town Houses	5	1,200

Outline waste generation calculations estimate that approximately 83,000 litres per week from the four residential towers. This is equivalent to approximately 16,500 tonnes of waste per week. A further break down of waste generation on the basis of room type (e.g. studio litres per week) has been provided in **Appendix B**.

2.2 Outline bin numbers

The waste generation estimates for the residential towers have been used to estimate the likely number of bins that will be required within the buildings, shown in **Table 2**. This has been calculated based on an anticipated collection frequency twice a week collection. Mixed recyclables, residual waste and organics will be collected. Other waste streams will be collected at less frequent intervals as and when they are needed.

Table 2: Residential towers and hotel waste bin number estimates

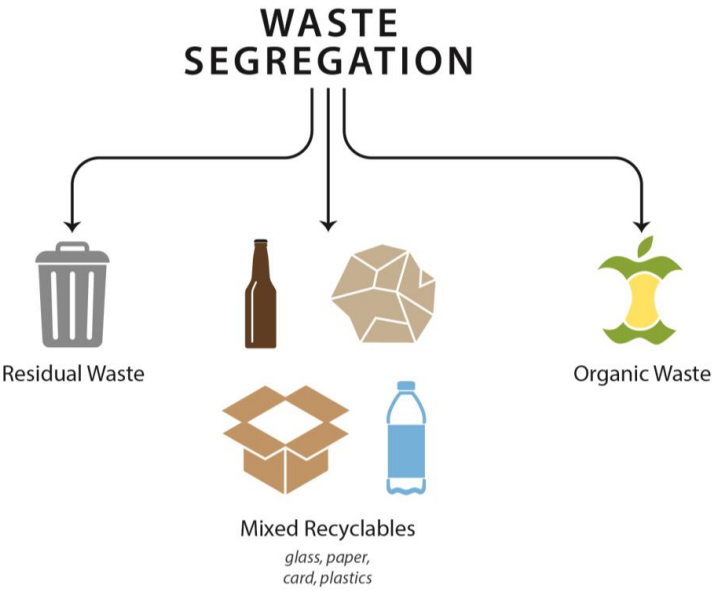
Land use	Bin numbers for recyclables	Bin numbers for organic (food) waste	Bin numbers for residual waste
Tower A	6 x 1100 litre bins	5 x 240 litre bins	3 x 1100 litre bins
Tower B	2 x 1100 litre bins	6 x 240 litre bins	2 x 1100 litre bins
Tower C	8 x 1100 litre bins	14 x 240 litre bins	5 x 1100 litre bins
Tower D	3 x 1100 litre bins	6 x 240 litre bins	2 x 1100 litre bins

3 Waste Management within the Residential Towers

3.1 Waste Segregation

Within the residential towers the following three main streams: residual waste, mixed recyclables (glass, paper, cardboard and plastics) and organic waste (food) as outlined in Figure 2.

Figure 2: Segregation of Waste and Recyclables



3.2 Key Waste Management Operational Principles

Waste management infrastructure within the towers must ensure that waste management operations are hidden and do not interfere with residents or have a detrimental impact on the aesthetics of the buildings. Adequate spatial provision for clean, hygienic and efficient waste management services has been provided. A summary of how waste will be stored, collected and treated throughout the residential towers is provided below.

Storage

Each of the residential towers contains a dedicated waste and recycling room and a smaller bulky waste room on the ground floor of the buildings. Residents will be responsible for transferring their waste from their property to the ground floor, via the lifts or stairs within the building and segregating their waste and placing it into the appropriate receptacle. Each of the buildings is self-sufficient and all waste will remain within the building in which it is generated with rooms sized accordingly.

The following LBH information has been used to provide advice to the design team on the recommended spatial provision within each of the residential towers. Assumptions have also been made by BuroHappold, based on previous experience on how much space per bin should be allocated. This includes space for the manoeuvring of the bins:

- The dimensions of a 1100 litre bin are: 985mm(D) x 1260mm(W) x 1370mm(H). It is estimated that each 1100 litre bin will each require approximately 3.5m₂ of space within the residential towers (this includes space around the bins); and
- The dimensions of a 240 litre bin are: 730mm(D) x 580mm(W) x 1080mm(H). It is estimated that each 240 litre bin will require approximately 1.4m₂ of space within the residential towers (this includes space around the bins).

The waste and recycling room is made up of two distinct areas. It comprises a small area, which is accessible to residents to deposit their waste and contain a minimum of three bins (1 x 1100 litre bin for residual waste, 1 x 1100 litre bin for recyclables and 1 x 240 litre bin for organic (food) waste). A larger area will also be present which contains the remainder of the bins required for the tower. This room will only be accessible to the FM team who will service the small room on a daily basis and exchange the full bins with empty bins. If residents have access to all of the bins it is likely they will just throw waste into the nearest bin and recycling rates will be poor.

The larger of the two areas will include some spare capacity to prevent overflow during unusual activity i.e. bad weather, collection cancellations, refurbishment phases etc. and a bin wash area. All bins will be washed when required by FM staff. Space for cleaning equipment will also be allocated within the larger area.

The waste rooms have been positioned as close as reasonably practical to the lifts to minimise the distance that residents have to transport their waste. All flats will be within a 30m horizontal travelling distance of the waste room. A summary of the sizes of the rooms provided in each tower are outlined in **Table 3** below.

Table 3: Waste and recycling and bulky waste room size and components

Land use	Minimum Required Size of Waste and Recycling room	Size of Bulky Waste room	Room components
Tower A	26m ²	5m ²	Bin wash
Tower B	14m ²	5m ²	Bin wash
Tower C	36m ²	10m ²	Bin wash
Tower D	15m ²	5m ²	Bin wash

Access to the waste rooms will be restricted to residents, the FM team and the LBH waste collection teams only for security purposes. It is anticipated this will be via a swipe card or key code system.

Collection

Discussions the LBH have been undertaken and it has been agreed that a twice weekly collection of waste will be possible (confirmed during meeting 04.08.15). This will be undertaken by LBH on designated days. There is access from the waste rooms to external serving bays on Park Lane and Worcester Avenue where waste collection vehicles will be able to pull up outside the towers and collect the residential waste. Waste will be wheeled out to the laybys by the FM team on the designated days. An illustrative plan is provided below in **Figure 3**.

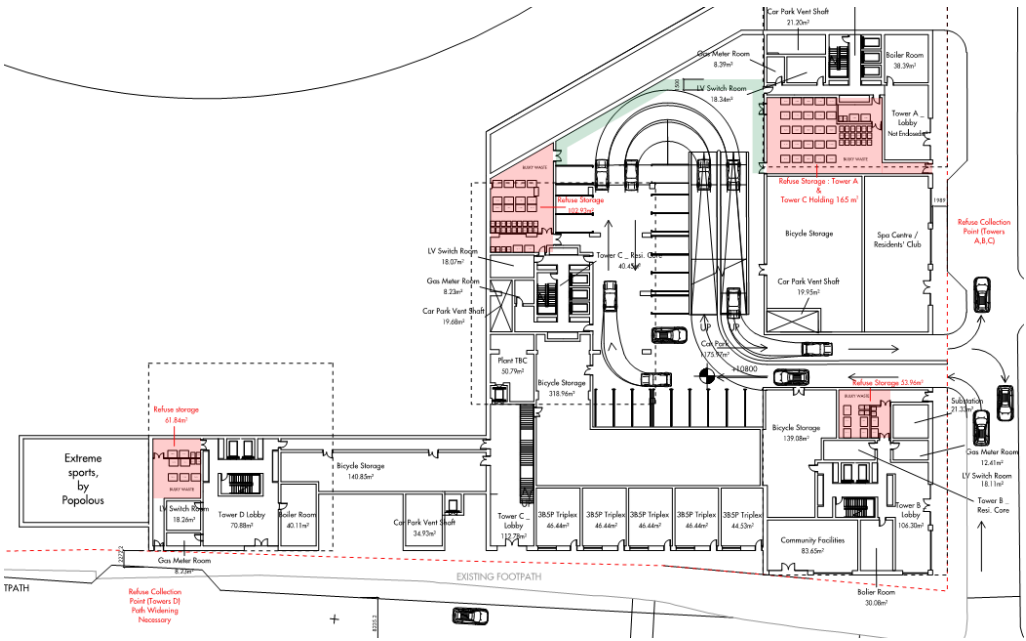


Figure 3 : Waste collection strategy

Due to the limitations outlined waste cannot be directly collected from Tower C by the current fleet of refuse vehicles serving Haringey. For the purpose of servicing Tower C where waste collection vehicles will not be able to access and operate within the car park area, waste will be wheeled by the FM team from the waste storage area around the north of the car park to a holding area in Tower A. A 1.5m wide marked route for pedestrian movement has been created to make this route as safe as possible. This will then be serviced as above.

On agreed collection days a designated member of the FM will be responsible for moving bins from Tower C to Tower A prior to waste collection services beginning in the borough either early morning or night before. This will ensure that the bins from Tower C are in Tower A ready for collection, the contractor with the assistance of the FM team will then move bins out from the refuse stores to the agreed collection points when the contractor arrives on site.

In order to overcome the above the team has sized the refuse store in Tower A suitably so as it can contain half a weeks' worth of waste from both Towers A and C. This is illustrated in **Figure 4** below.

In the instance that the designated member of the FM team is not on site for reasons of sickness, annual leave or otherwise the duty will be handed over to an alternative member of the FM team and a management plan with such procedures will be prepared to mitigate this. Should in the unlikely event that all the FM are not available this duty will be undertaken by the FM team from others areas of the Masterplan (i.e. stadium or hotel).

It is acknowledged that the bins once full are heavy and as such it is proposed that an Electric Vehicle (EV) is used to transport waste from Tower C to holding in Tower A. Provisions for this (i.e. parking and charging) will be made onsite or accommodated elsewhere in the Masterplan. Bin rooms and doors have been appropriately sized to enable this.



REV	DATE	DESCRIPTION

Do not scale from this drawing. Use figured dimensions only. Figured dimensions are in millimetres. All levels are in metres. All dimensions and levels shall be verified on site before proceeding with works. Detailed site survey to be carried out to verify positions and level relationships with site features and ordnance survey. Boundaries are indicative only and are to be verified by others.

This drawing is to be read in conjunction with other documentation from the architect, design team, main contractor and employer's agent. The architect must be notified of any discrepancies.

Where building components are described in the specification as contractor designed, "construction" information relating to those components that are shown on this drawing represents design intent only.

REFUSE STRATEGY LEGEND			
	RECYCLABLE WASTE BIN (110L)		BIN WASH
	RESIDUAL WASTE BIN (110L)		EMPTY BINS
	ORGANIC WASTE BINS (240L)		BULKY WASTE STORAGE



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Tottenham Hotspur FC Southern Residential Development

Waste Strategy Proposal
1007-SK_000
SCALE As indicated © A3

Figure 5 details the proposed layby design.

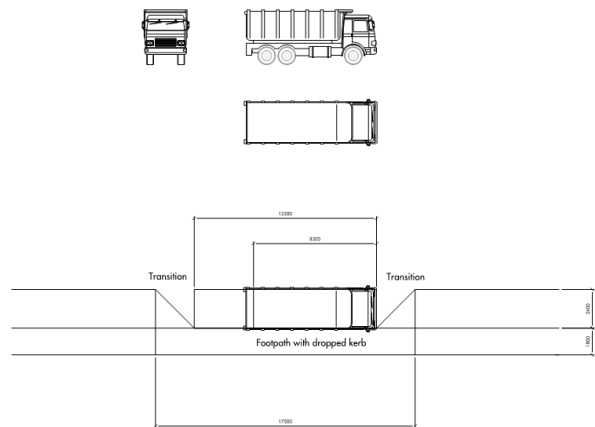


Figure 5 : Proposed layby diagram

Education

THFC will aim to educate residents about the importance of recycling and provide three-stream bins within all units. Where bins are located within the waste rooms, clear signage with recycling and disposal guidance will be provided.

4 Conclusions

- Productive and efficient waste management practice is required within the residential towers to ensure waste is managed in a way that ensures waste management operations are discreet and hygienic. The client hopes that the developments will be a leading example of excellent waste management within the residential and hospitality sectors, which achieves a recycling rate of at least 50%, with the aim of improving recycling rates and reducing waste generation each year following opening;
- Outline waste generation calculations estimate that approximately 83,000 litres per week; and
- Waste will be segregated at source, where practicable into the following three main streams: residual waste, mixed recyclables (glass, paper, cardboard, plastics) and organic waste (food).
- This strategy has been agreed to by Jim Goodson and Wisdom Osei-Wusu of Harringey Council as per their confirmation email 26.08.15.

Appendix A - Waste Management Practice and Policy

Information on the relevant national and local waste management practice and policy is provided below. There is a large amount of national policy and guidance for residential developments. Little LBH guidance for commercial waste is available. Existing guidance provides comprehensive and detailed storage and collection requirements for new developments within the borough although the focus is on residential developments. However, the guidance provides direction to ensure good practice and effective and efficient waste management.

National Policy

Government Review of Waste Policy 2011

Prioritises efforts to manage waste in line with the waste hierarchy and reduce the carbon effect of waste. This document also encourages waste prevention and re-use, supporting greater efficiency and initiatives which reward and recognises individuals who reduce, re-use and recycle their waste. It also sets out plans to work with councils to increase the frequency and quality of rubbish collections and make it easier to recycle.

Hazardous Waste (England and Wales) (Amendment) Regulations 2009 SI 507

The Hazardous Waste Regulations, which came into force in 2005 provide requirements for controlling and tracking the movement of hazardous waste and bans mixing different types of hazardous waste.

The Waste Strategy for England 2007 (WS2007)

The Department of Environment Food and Rural Affairs (DEFRA) in 2009 updated the published WS2007. There is a focus primarily on Municipal Solid Waste (MSW), as well as making provision for the future creation of recycling / recovery targets for Commercial & Industrial (C&I) waste.

The Waste (England and Wales) (Amended) Regulations 2012

These regulations came into force 29 March 2011. The regulations implement the revised Waste Framework Directive and require businesses to confirm that they have applied the waste management hierarchy when transferring waste. They introduce a two-tier system for waste carrier and broker registration along with a new concept of waste dealer. They also exclude some categories of waste from waste controls and include a small number of radioactive materials.

Making Space for Waste. A Practical Guide for Developers and Local Authorities, June 2010

This document was designed to allow developers to follow a step by step process when considering the design of waste facilities in new developments.

Material Recovery Facility (MRF) Code of Practice for England and Wales:

The regulations require all permitted MRFs processing more than 1,000 tonnes of dry recyclables per annum to measure and report the quality of the input, output and residual waste streams every three months. This is intended to boost confidence in the quality of material produced at MRFs.

The Producer Responsibility Obligations (Packaging Waste) (Amendment) Regulations 2012

Aims to achieve requirements of the EU Directive 94/62/EC (as amended) by setting packaging recycling targets on larger UK business.

Local Policy

The London Plan 2013 (Sustainable Design and Construction Supplementary Planning Guidance April 2014)

Describes an integrated economic, social environmental and transport framework for the development of London over the next 20 to 25 years. The plan sets out to improve the environment and tackle climate change by reducing CO₂ emissions and improving London’s recycling performance and waste management. The plan provides updated guidance on designing out waste in buildings during the early stages of a project and on the importance of sufficient and well-designed storage for recyclables, organic and residual waste and the implementation of the waste hierarchy.

The Mayor’s Municipal Waste Management Strategy 2011

This document sets out the Mayor’s policies and proposals for reducing the amount of municipal waste produced, increasing the amount of waste re-used, recycled or composted, and generating low carbon energy from waste remaining. This strategy also sets out how the Mayor, through the London Waste and Recycling Board, will help develop waste management infrastructure in London. Broadly, the key targets are for zero waste to landfill, a reduction in household waste generation rates of 20%, increased recycling rates to 60% and the generation of energy from waste where appropriate. The Mayor’s targets are for London as a whole, placing no specific requirements on individual waste authorities to achieve them.

The Mayor’s Business Waste Management Strategy 2011

Sets out initiatives to help London’s business (from shops, restaurants, office buildings, manufacturers to construction companies) to save money and reduce harm to the environment through better waste management. Of specific relevance here are the Mayor’s proposals to ensure buildings provide suitable storage and access for the management of waste. Additionally, the Mayor will be supporting planning guidance to engage developers, architects and designers in looking for ways to design out waste at source and improve the overall resource efficiency of buildings and infrastructure projects.

London Borough of Haringey (LBH)

Information related to the current waste management practices and policies in LBH has been extracted from the following documents and is summarised below:

- London Borough of Haringey Local Plan;
- London Borough of Haringey Sustainable Design and Construction Supplementary Planning Document (adopted May 2013); and
- North London Joint Waste Strategy.

LBH has strategies in place which seek to deliver more sustainable waste management, namely encouraging waste reduction, maximising re-use and recycling and treating remaining waste as a resource in line with the waste hierarchy.

LBH currently collects mixed recyclables (paper, cardboard, plastic, glass, cans), organics (food and garden waste) and residual waste. Bulky waste collection is also provided. For businesses, commercial collection services of residual waste and dry recycling can be provided. Local planning guidance states that consideration should be given to how the storage and collection of waste and recyclable material can best be incorporated. Commercial waste collection is dependent on waste type and storage capacity. All waste storage areas, internal and external, must be easily accessible to both collectors and occupants. Enough space should be provided on-site to securely and safely store all waste and recycling containers. Space should be provided inside buildings to allow the separation of waste into containers for recyclables, organics and residual waste.

The LBH require all major planning applications within LBH to provide a Site Waste Management Plan (SWMP) with any planning submission. The content of the plan must include full details of the arrangements for the storage and collection of waste for disposal and waste to be recycled. The plan must make reference to the following:

- The number, type and size of receptacles to be dedicated to storage of residual waste and recyclables;
- The positions where receptacles are to be stored between collections;
- The size, design and materials used in construction of any housing built for the storage of receptacles;
- Access arrangements for persons using receptacles showing that consideration has been given to safety, equalities, convenience, user friendliness and maximum walking distances under building regulations; and
- Access arrangements for collection personnel giving consideration to Health and Safety at Work Act, recommended maximum pulling distances for receptacles, vehicle access, height and turning requirements and the construction and width of pathways, doors and access ways.

LBH is working with the North London Boroughs of Hackney, Enfield, Waltham Forest, Barnet, Camden and Islington as part of the North London Waste Plan (NLWP) to achieve 45% recycling and composting standards by 2015 and 50% by 2020 in line with national policy. LBH aim to meet the targets set in the NLWP in a sustainable manner by:

- Promoting the prevention and reduction of waste produced in the borough, increasing the re-use of materials wherever possible, and seeking to increase recycling and composting of waste;
- Ensuring that new development including change of use provides accessible, adequate and well-designed internal and external storage facilities and recycling infrastructure for both residual and recyclable wastes;
- Ensuring that waste is minimised during the design and construction of new developments, encourage the use of sustainably sourced materials and requiring developments to make on-site provision for the recycling and re-use of construction, demolition and operational wastes;
- Ensuring there is sufficient land allocated for waste management purposes and establishing appropriate policies for waste applications to maximise self-sufficiency through the Joint NLWP and applying its policies to waste development. Additionally the council will safeguard existing waste management sites within LBWF; and
- Encouraging waste to be treated as close to the source as possible and encouraging sustainable movement of waste, maximising the potential use of rail and water transport where waste is not treated at its source.

Tottenham Hotspur Football Club Waste Management Policy

THFC is committed to manage its waste in line with the waste hierarchy, as shown in **Figure 1**, and other relevant national and local legislation and guidance. The client recognises that in order for the buildings to operate in a productive and efficient manner good waste management is required. A meeting with THFC staff and the design team was held on 12th February 2015 to discuss the preliminary waste management aims and aspirations.

THFC have produced a Waste Management Policy to ensure that all waste generated is disposed of safely and efficiently to ensure good waste management. This document is principally focussed on the stadium although some of the key objectives and principles are relevant to the hotel and residential towers. The key principles and aims and aspirations for the residential towers are summarised below:

Residential Towers

- Waste is to be managed in line with the waste hierarchy with zero waste sent to landfill;
- Encourage waste minimisation and promote recycling and re-use with a minimum of 50% recycling aiming to target 60% recycling and composting by 2020 in line with London Major and LBH targets;
- Provide appropriate storage facilities for recyclables, organic (food) and residual wastes; and
- Provision for other wastes including bulky waste.

Appendix B – Waste generation (per room type)

Land Use	Units	Waste Generation Rate (litres per household)	Weekly Litres
Tower A			
Studio	4	100	400
One bedroom	71	100	7100
Two bedrooms	89	170	15130
Three bedrooms	4	240	960
TOTAL	168	-	23590

Land Use	Units	Waste Generation Rate (litres per household)	Weekly Litres
Tower B			-
Studio	4	100	400
One bedroom	38	100	3800
Two bedrooms	39	170	6630
Three bedrooms	9	240	2160
TOTAL	90	-	12990

Land Use	Units	Waste Generation Rate (litres per household)	Weekly Litres
Tower C			-
Studio	4	100	400
One bedroom	103	100	10300
Two bedrooms	121	170	20570

Three bedrooms	4	240	960
TOTAL	232	-	32230

Land Use	Units	Waste Generation Rate (litres per household)	Weekly Litres
Tower D			
Studio	4	100	400
One bedroom	38	100	3800
Two bedrooms	39	170	6630
Three bedrooms	9	240	2160
TOTAL	90	-	12990

Land Use	Units	Waste Generation Rate (litres per household)	Weekly Litres
Town House			
Two bedrooms			
Three bedrooms	5	240	1200
TOTAL	5	-	1200

