

6.7 Sustainability strategy

The proposals for the commercial block seek to achieve high standards of sustainable design by achieving a BREEAM Excellent rating. The development endeavors to promote environmental sustainability through land use, improved biodiversity, sustainable building practices, utilising clean and renewable sources of energy, designing buildings which are energy and water efficient, ensuring good resource and waste management, material selection, responsible sourcing of materials and reducing the risk of pollution and flooding as a result of the development.

The sustainability of the development will be achieved through:

- Building design – fresh air, daylight, non-polluting materials good fabric performance;
- Resource efficiency – less energy use, low carbon, water and waste minimisation; and
- Healthier, safer community – green travel, communal spaces, access to local amenities, security of site and buildings.

Building Design

An initial Passive Design Analysis and Low Zero Carbon Feasibility Study (LZC) has been carried out as part of the planning process. This identifies the opportunities for incorporating passive design measures such as high-performance building fabric with enhanced u-values to all elements, air tightness and low thermal bridging, maximised daylighting and passive solar gain in order to reduce the total heating and cooling demand of the building. Renewable energies will be specified in accordance with the recommendations of the LZC Study to ensure clean, green energy is provided to the building where feasible. The LZC currently recommends the use of high efficiency photovoltaic panels delivering the building's electricity together with air source heat pumps to provide heating, cooling and hot water generation (part of tenant fit out).

The project will endeavour to use materials with a low environmental impact (including embodied carbon) over the full life cycle of the building by careful selection of materials and constructions.

A life cycle analysis of the building has been completed with option appraisals to enable the design team to understand the environmental impact of each decision or material selection. A more detailed life cycle analysis will be completed at Technical Design to review further construction options and their impact on the embodied carbon over the life cycle of the building.

Materials will be specified which are robust and durable to cater for their level of use and exposure. Externally the building will predominantly be faced with brick which provides a robust and easily maintainable finish.

Materials will be sourced in accordance with the project sustainable procurement plan. All timber and timber products used on the project will be legally harvested and traded timber with Chain of Custody certification (e.g. FSC, PEFC). All non-timber products will be sought to be from suppliers/manufacturers with Environmental Management System (EMS) certification (e.g. ISO 14001, BES 6001). Where appropriate, materials will be sourced that are made or supplied locally. The use of materials with a high recycled content will be considered where viable such as crushed concrete to be used for hardcore.

Resource Efficiency

The building will be designed to minimise operational energy demand and reduce carbon dioxide emissions by adopting the energy hierarchy of the Be Lean - Be Clean - Be Green approach as set out within the London Plan to achieve an overall 35% reduction in carbon emissions over the Building Regulations Part L 2013 and meet the minimum BREEAM requirements for Issue Ene01.

The consumption of potable water for sanitary use in buildings from all sources will be reduced through the use of water efficient components, including the specification of low flush toilets and low flow rates for taps/showers.

External landscaping and planting will be designed such that it relies solely on precipitation, during all seasons of the year.

Water consumption will be monitored and managed in order to encourage reductions in use. In order to reduce the risk of undetected leaks, a leak detection system will be installed on the mains water supply within the building and between the building and the utilities meter. Flow control devices will be fitted to the water supply to each sanitary area to minimise water loss from leaking taps or appliances.

The proposal will aim to minimise the materials needed in construction and the amount of demolition, excavation and construction waste to landfill through the promotion of resource efficiency via effective management and the reduction of waste. A pre-demolition audit will be prepared covering the existing buildings, structures or hard surfaces to be removed to determine if refurbishment, reuse or recycling is feasible. There is a target for diverting demolition waste from landfill of at least 80% by volume or 90% by tonnage.

A resource management plan will be prepared for the construction phase setting out targets and procedures for minimising waste and monitoring and recording site waste. Waste targets for non-hazardous construction waste (excluding demolition and excavation waste) are set at no more than 3.4m³ or 3.2tonnes per 100m² of GIFA. 70% by volume or 80% by tonnage of non-hazardous construction waste will be diverted from landfill. The waste contractor will be required to report monthly on the waste amounts, waste streams and recycling rates to enable site waste to be continuously monitored.

The 'Waste Hierarchy', as shown below, will be adopted to maximise the use of existing materials and resources and minimise waste generated:

- Reduce – first priority is to reduce the amount of waste produced through design, construction methods and minimising over ordering
- Re-use – any materials to be reused where feasible either on site (preferable) or offsite
- Recycle – where materials cannot be recycled on site, a suitable waste management contractor will be employed to ensure any waste which is able to be recycled, is recycled offsite. Suppliers with 'take-back' schemes will be selected where available.
- Resource Recovery – for energy generation processes – fuel, heat and power
- Disposal – will be limited to any hazardous waste or materials which cannot be recycled.

Waste minimisation will also be promoted during the use of the development through the provision of suitable recyclable and general waste storage areas. A minimum of 2m² per 1000m² of NIFA will be provided for the storage of recyclable waste to the commercial unit.

Health and Wellbeing

The commercial unit will be designed with the health and wellbeing of its occupants in mind. Daylight calculations will be completed to ensure all relevant areas are provided with a uniform and good standard of natural light and in addition, an adequate view out. This will improve the quality of life for occupants and reduce the reliance on artificial lighting.

A full dynamic thermal model analysis will be carried out using software in accordance with CIBSE AM11 Building Energy and Environmental Modelling to demonstrate that thermal comfort building design and services strategy can deliver thermal comfort in line with the criteria set out in CIBSE Guide A and TM52. This will be used to ensure that the building does not overheat or lose heat too quickly.

Measures will be included to prevent overheating over the scheme's lifetime. Commercial users will also be provided with a landscaped outdoor amenity area complete with seating and cycle storage and facilities in order to promote a healthier life style and sustainable modes of travel.

The development will endeavour to provide a safe and secure place to live and work. The local Designing Out Crime Officers have been consulted and their recommendations will be incorporated into the design.

6.9 Fire strategy

In general, the proposed development will follow the principles of current guidance and meet the functional requirements of Building Regulations 2010, as amended. Where an alternative approach to that recommended in guidance is proposed, this will be highlighted and adequately justified.

Residential premises will adopt a 'defend-in-place' evacuation strategy, where only the occupants of the apartment of fire origin will evacuate initially. Occupants in other apartments will remain in place, separated by a high level of compartmentation, unless advised otherwise by the fire service. The standalone office unit facing Edwin Road will adopt a simultaneous evacuation strategy. It is proposed to provide all habitable areas within the residential premises in Block F with a residential sprinkler system, which should be designed and installed in accordance with BS 9251:2014. It is not proposed to provide the remaining apartment buildings, Blocks A & E, with sprinkler protection on the basis that they are designed as small single stair buildings and are not open-plan design. Furthermore, the covered car park, dwelling houses and office premises are not proposed to be provided with sprinkler protection, as there is no recommendation in guidance to provide it.

Travel distances in a residential common corridor should be limited to 7.5m, extended to 15m via the provision of the residential sprinklers installed in each apartment in Block F, as per recommendations in BS 9991:2015. The travel distances from any apartment in Block F to the nearest protected escape stair will be limited to a maximum of 15m based on the provision of a residential sprinkler system and a 1.5m² free area natural shaft to provide smoke ventilation to the common corridor.

The individual apartments in Block F are designed to adopt an open plan design. If the apartments do not achieve the recommendations outlined in guidance, a fire engineered solution will be required, which may include Computational Fluid Dynamics (CFD) modelling. Blocks A & E are proposed to be designed as small single stair buildings as per standard guidance. The flats in this arrangement are designed as to have a protected entrance hall. The covered car park will be designed to achieve 2.5% minimum aggregate free vent area on the walls of the car park, split equally across two opposing walls. Travel distances within the car park should be limited to 18m and 45m for single direction and multiple directions respectively.

Final exits and protected escape routes should be located such that these distances are maintained. The standalone office building is proposed to be designed as a small two-storey premises, with an open accommodation stair. The recommendations in guidance are largely adhered to, however the floor area of the first floor is marginally exceeded compared to the maximum recommended in guidance. A fire engineered solution, including the provision of automatic fire detection and alarm system and limited travel distances, is proposed to justify the increase in floor area. This is subject to discussion and approval with the Statutory Authorities. As Blocks F, A & E in the proposed development are more than 5m but less than 18m in height loadbearing elements of structure are required to achieve 60 minutes fire resistance. Every wall separating individual dwelling houses should be separated by 60 minutes fire resistance.

The office building is less than 5m in height, therefore the loadbearing elements of structure are required to achieve 30 minutes fire resistance. Initial assessment of the external fire spread conditions of the proposed development appears to satisfy the necessary conditions. Where protection is required on external façades the protection should achieve the same fire resistance as the elements of structure. Façades that are adjacent to the site boundary should be constructed of fire resisting material achieving the same resistance as the elements of structure.

The buildings do not have a storey that exceeds 18m in height. Either the external walls should satisfy the performance criteria described in BRE report BR135 or the external wall surface should be in accordance with Diagram 40 of Approved Document B (Figure 17 of BS9991: 2015) for surface spread of flame classification, and cavity barriers in any external wall cavity are required in accordance with Section 9 of the Approved Document (Clause 19 of BS9991: 2015).

In practice, it may be necessary for external surfaces to achieve a Class 0 (National Classification) or Class B-s3, d2 or better (European Classification) surface spread of flame classification to avoid the walls contributing to the space separation (unprotected areas) calculations. As Block F is less than 18m in height it is not proposed to install a fire-fighting shaft, but to install a dry rising fire main in each of the staircases in Block F as to ensure all points on the floor plates are within 60m (increased due to provision of sprinklers), on a route suitable for laying hose. Where dry riser inlets are provided, the Fire Service should have access within 18m and sight of the inlet port.

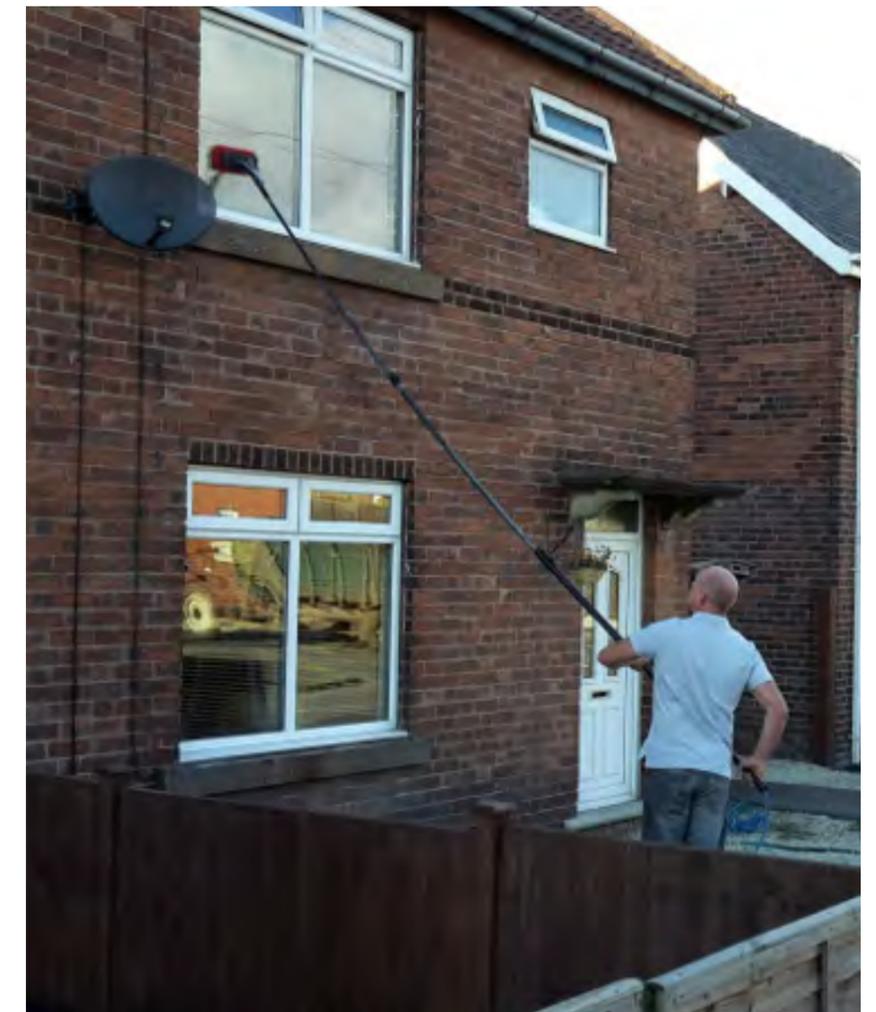
Blocks A & E, the car park, dwelling houses and the standalone office are proposed to be accessible by emergency service vehicle access. All points on the floor plates of the respective buildings should be maintained within 45m of pump appliance access or provide sufficient perimeter access. Existing hydrants should be available within 100m of the buildings or alternatively new ones should be provided within 90m of the development and located not more than 90m apart.

6.8 Cleaning and maintenance

The current proposal is for all windows and doors to be cleaned from ground or podium level via long reach pole, or cleaned by residents from the inside via balconies or tilt and turn openings. The maximum height of the buildings is below 25 meters, well inside the reach of a long reach pole system.

In the taller buildings large 13 person lifts are provided to facilitate plant replacement. Safe access is provided into the pitched roof of the taller building via a stair and coffin style hatch.

The health and safety aspects of maintaining the building will be planned to ensure the risks involved are managed from start to finish and this information is communicated effectively to those who need to know.



Example of long reach pole system

6.10 Acoustics

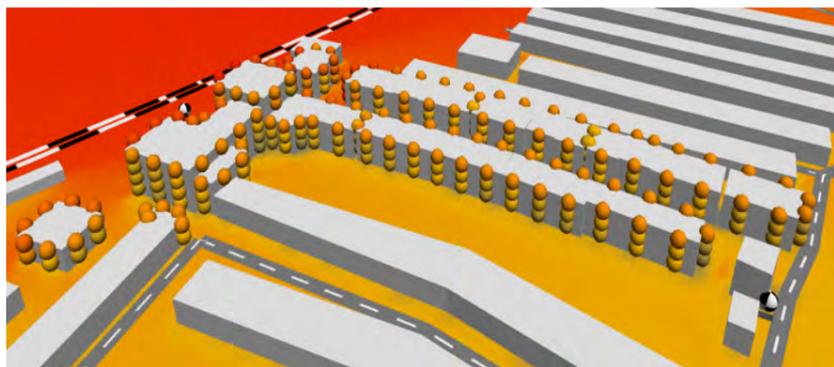
Environmental noise surveys have been undertaken at the site to allow the noise climate at the proposed new development due to transportation noise sources that include events such as train noise, aircraft overflights and vehicular traffic to be quantified.

Using the noise data acquired at the site an acoustic 3d model has been produced to allow quantification of the noise impinging on the façades of all proposed properties.

Internal noise criteria for the proposed dwellings has been established based on sources of guidance such as World Health Organisation (WHO) document "Guidelines for Community Noise" and BS 8233:2014: "Guidance on sound insulation and noise reduction for buildings" both for the daytime and the night time periods.

Using the predictions of noise impinging on the façades of proposed dwellings the façade broadband acoustic performance has been established for living areas and bedroom areas. In addition, the LAFmax events of transient noise during the night have been considered.

In addition to the noise of transportation noise impacting on the proposed development an assessment has been made of limiting noise levels that will be required for any new mechanical plant associated with the proposed site so as to protect the amenity of existing residential dwellings in the vicinity.



Example CadnaA Acoustic modelling software





Introduction

Context

Design process

Design response

Landscape

Technical design

7.0 Access

Appendices

7.1 Access principles

An inclusive environment does not attempt to meet every single need, but by considering people's diversity, inclusive environments can break down barriers and exclusion and will often achieve superior solutions that benefit everyone. Legislation and guidance tends to result in 'special' provision being made for disabled people rather than their needs being integrated with all other users. The term 'inclusive design' relates as much to the design process as to the final product and just as equally to management, operation and information, bonding user experience with professional expertise.

This section consists of the Access Statement that relates to the proposals for the Greggs Bakery site and supports the drawings prepared for this planning scheme. The aim is to provide a clear description of how the users of the proposed development will access, and be guided through the building and the site, without discrimination or limitation.

It considers, but is not limited to, the access and circulation needs of a wide range of people including parents with children, the elderly and the disabled.

An Access Statement is work in progress and as such evolves throughout the design and construction period. This Access section deals with the design, up to planning, and the aspirations of the design for its development and final realisation through the construction process.

13 of the residential units have been identified as Wheelchair M4(3) units in accordance with the requirement of a 10% provision. 6 of these are three bedroom houses along the mews street; the other 7 are apartment units at a variety of floor levels. All accessible apartments at first floor and above are served by two lifts. These units are designed specifically for ease of use for visually impaired, ambulant disabled and wheelchair bound residents, and provide a balanced mix of unit sizes and tenure.

7.2 Legislation, standards and guidance

Policies, legislation and guidance followed in the preparation of the Access Statement:

- London Borough of Richmond upon Thames planning policies on inclusive design and access and relevant housing policies including Design for maximum access (1999)
- Building Regulations, Approved Documents M 2015 and K 2013 (hereafter referred to as AD M and AD K)
- Part B/BS 9999:2017
- Draft London Plan 2017
- Mayor of London Plan 2016
- Supplementary Planning Guidance
- Technical Housing Standards- Nationally Described Space Standard March 2015
- Requirements and implications of the Equality Act 2010
- British Standards BS 8300-1:2018, BS 8300-2:2018, BS EN 81-70:2018
- CIBSE standards A3.1 - 7
- The Human Rights Act 1998
- Equality Act 2010

7.3 Consultation

A two-day public exhibition was held at the Crane Community Centre (3rd December) and the Twickenham United Reformed church (5th December). Members of the design team were present to discuss the proposals and answer any questions. This included both the architectural team and transport consultant who were able to advise on access requirements.

Across both days, 105 residents, stakeholders and interested parties attended. The scheme presented was a mixture of 118 private and affordable houses and apartments, including 52 three bed houses and 66 apartments. It included many of the features presented in the final design such as a shared surface approach and the same access points.

The access arrangements were generally well received with provision for lifts, accessible/adaptable houses and flats and a step free approach to all buildings highlighted as positive. It was also mentioned that the move from a industrial site to residential will improve the traffic issues within the area.

Some concern was raised on the traffic entrance points at Edwin road and Crane road and the potential for conflict with pedestrians. These have since been reviewed by our transport consultant and amendments have been made to ensure adequate visibility splays and change in surface textures to encourage traffic calming and a sense of pedestrian priority.

7.4 Access philosophy

7.4.1 Introduction

The development is easily accessible by foot, cycle, public transport and car.

Pedestrian approach:

Located at the site of the now-disused Greggs Bakery in Twickenham, the proposed scheme borders the River Crane and sits south of Craneford Way Playing Fields; it forms a backland commercial site behind houses on Crane Road, Gould Road and Norcutt Road.

The mixed-use scheme is composed of three character areas, with an entrance building and mews houses along a shared-surface avenue, leading to taller blocks of differing heights. Site access is maintained from existing access points, one from the junction of Crane Road and Gould Road, the other along the street frontage at Edwin Road. This principle allows for the creation of a new neighbourhood street, along which the 51 mews houses are aligned, providing individual street-level residential entrances and passive security along the proposal's principle entrance, with a small B1 commercial office unit benefitting from direct access off Edwin Road.

To the north of the site alongside the River Crane residential, entrances are located at the bases of Buildings E and F in prominent and obvious locations. The proposals include residents' cycle and refuse stores, located adjacent to cores.

The site is well served by good footpath connectivity to the The Green, Twickenham Railway Station and Twickenham Centre. In addition to a range of public transport options, the site is also within walking distance of several local amenities and services, thus reducing the need for residents to travel by private car. The southern entry treatment and kerb radii will allow for the footway on Edwin Road to continue across the access with pedestrians crossing holding right of way over vehicle traffic on the access or egress to the site. In this respect, the proposed configuration of the southern access will act more as a crossover than a formal junction.

Public Transport:

Strawberry Hill Rail Station is located approximately 950 metres to the south of the site (directly accessible on-foot) on the South Western line serving destinations on the Kingston Loop and Shepperton Branch. Situated close by, 1.2km to the north east is Twickenham station, also serving the Hounslow loop. Through these two stations, Hounslow, Kingston, Twickenham, Clapham Junction, Wimbledon, Vauxhall, and Waterloo can be reached directly.

The nearest bus stops to the site are located on both sides of Twickenham Green (circa 4- 6 minute walk) which provide frequent (every 10-13 minute services) to Heathrow Terminal 5, Hounslow, Richmond, Hammersmith, Hampton and Staines. The site has PTAL rating of 2/3.

Vehicle Access:

There are currently two vehicular access points to the site; one from Edwin Road to the south, and one to the north from the corner of Gould Road and Crane Road. The former was primarily used to accommodate larger operational HGVs associated with the site's former industrial use, with the latter generally used for staff and visitor parking.

The proposed scheme retains the two existing accesses in broadly the same locations, however these would be connected through a vehicular link allowing traffic to pass through the site. The link is expected to be a two-way access, although given the low speeds and residential nature of the site, a less formal shared-surface street

scene is proposed as opposed to a full suite of formal road markings and signage. The northern access will lead directly to an area of formal car parking and landscaping for residents within apartment type dwellings which are planned to the north of the site. The southern access will open onto a north-south orientated mews with a mix of driveway and garage parking serving the respective dwellings.

The scheme provides up to twelve accessible spaces. Six of these are located on the drive-way of the accessible houses, two are located below the podium and the other four are located within the public realm. These will be allocated to the accessible/adaptable apartments as required. One additional accessible parking space for staff of the commercial unit is provided behind the commercial unit.

Emergency Vehicles and Refuse Vehicles:

The scheme has been tracked by the transport consultant to ensure safe movement for a refuse and fire tender vehicle through the scheme. Entrances have been reviewed to ensure adequate splays are provided when turning into the site. The schemes design incorporates a through route which means large vehicles are not required to turn on site and perform difficult manoeuvres. This increases the sites usability and safety. Further, the landscaping design has incorporated traffic calming features such as the planting elements in the north of the scheme which create a gentle zig-zag in the road, forcing drivers of large vehicles to take extra care and drive slowly through the site.

Public Realm:

The public realm will be accessible to all as part of an inclusive design philosophy. Users with disabilities are not segregated and are able to move through the public realm and the buildings. They will use the same entrance, corridors and rooms as everyone else without detour.

Entrances

The entrances to all buildings and apartments have been designed and located in such a manner as to make them obvious and easily accessible from the public realm. This is the same for disabled access.

The main residential lobby entrances are designed to provide level access from the public realm, as required by Part M, with a clear open space in front of the doors. This accessible approach leads to a level entry threshold and to the internal lobby. A slip resistant material for this walkway will be provided. The routes to the entrance, from the public footpath, will be well lit. A similar approach is applied to the entrances of all non-residential uses.

Recessed doorways and timber panelling is used to denote entrances to the mews houses, with principle entrances to apartment blocks featuring recessed doorways. These easily read openings are designed to be obvious on the elevation to ensure they are easy to find and are further demonstrated by landscaping. The reception aesthetic is separated from the main body of the building by the use of contrasting materials, making identification easier for the visually impaired.

Hard and soft landscaping

The hard and soft landscape design is based on a strategy to ensure ease of long-term maintenance and management. Practical considerations will include the use of durable, non-slip hard landscape materials, benefitting not only disabled, but older people and children too.

The provision of direct routes between well-used locations, the utilising of the adjacent River Crane as an amenity for a riverside walk with regular placement of

seating and resting points, the use of quality tactile and textured surfaces, contrasting colours, appropriate lighting and signage will be utilised to aid navigation around the site. Visual clutter and obstructions will be minimised, where possible. See the Landscape section of this document for all details regarding hard and soft landscaping materials and design.

Surface materials

The entire public realm will be accessible as a shared surface with the pavement textures selected in order to balance the needs of wheelchair users (who require a low resistant surface) with the needs of crutch and stick users (who require more purchase during wet weather).

The key principles for the palette of considered surface materials will include the following:

- A visual contrast in colour between the pedestrian and vehicular access
- Tactile paving defining pedestrian and vehicular areas
- Surfacing designed to aid way-finding

Surface textures

Manual wheelchairs require smoother surfaces to move across. The more tactile the surface, the harder it is for the user. Counter to this is the need for ambulant disabled people to gain some purchase for their sticks or crutches.

Where footpaths and road surfaces are flush, careful consideration of the transition between the two needs to take place. Flush transitions cause guide dogs difficulty in sensing the change in condition.

Width/gradient to footways

Pedestrian routes will follow desire lines as much as possible; street furniture such as directional signs, lighting and seating will be located just off the perimeter of the access routes to minimise obstructions. All signage will be colour contrasted.

Where required, ramps have been used in favour of steps when changes in level are required, avoiding segregation of users with disabilities and allowing access for wheeled vehicles. All external ramps within the public realm are of a gradient no steeper than 1:30.

Landings will be provided along all long lengths of steps or ramps to allow resting points. Hand rails are provided to all ramps and steps where required to provide support and guidance. They will be colour-contrasted to make them easily visible, easy and comfortable to grip and they will have no sharp or protruding edges and will be located at the correct height (900mm) and will extend for 300mm.

Cross falls to footpaths

Cross falls are important on footpaths to move standing water to the edges, stopping ice from forming on cold days. The need for this surface drainage must be balanced with the difficulty a manual operated wheelchair has moving across a cross fall. The design of the footpaths around the site have minimal cross fall to balance both needs.

External street lighting & CCTV

A balanced level of lighting has been considered. This will be designed to avoid strong contrasting pools of light and silhouette. The lighting design supplied will be of a safe and comfortable illumination level, and in conjunction with SBD guidance

received, will assist access and improve security.

Routes across the site will be lit in accordance with BS 5489 and CIBSE Standards, subject to planning. The spread of light will be even and the lamp type chosen will provide a light with good colour rendering properties. Timing controls will be introduced to allow the switching off of certain parts of the lighting at key times to save energy and discourage use at night close to residential areas. Key entrances to the buildings will remain illuminated.

All open spaces on upper floors such as the podium and other accessible areas within the development will be illuminated at low levels at the appropriate lux figure for their contextual setting.

Access to roof terraces and podium amenity

All apartment buildings are provided with lifts and have direct level access to podiums at third floor level. Selected apartments have direct level access to the podium at first floor suitable for disabled users.

7.5 Building environment

The buildings are set within a landscaped environment at street level. There is a level change across the site of approximately 650mm from the highest point at the Edwin Road entrance to the lowest point at the River Crane riverside, 189m to the North. This will be accommodated at street level by stepping the first four houses closest to Edwin Road to adjust to the levels across the site, and using ramps of very shallow gradients integrated into the landscape design. A level threshold is provided to the commercial units.

Level access is provided to all residential apartments and each building has its own entrance with level access from the street. Podium and roof level external amenity space is provided, which is only accessible by residents. Level access is provided to the podium from all cores.

At the ground floor, both the car park and bicycle store are accessible from all cores via lobbied corridors from the two cores. The podium will include hard and soft landscaped environments that are fully accessible.

7.6 Building and structures

7.6.1 Materials

The proposed materials have been specified (using Part M specifications) to contrast tonally with the ground finishes, enabling people with visual impairments to identify building boundaries.

7.6.2 Construction

The design follows a simple concept based on the clarity of the overall structure of the building. Slab levels have been set to ensure that the structure will not impose restraints upon individuals using and moving through the building, including ensuring obstructions are avoided in pedestrian/common areas and that level access can be provided throughout.

7.6.3 Internal floor surfaces

The floor finishes will contrast tonally with the walls and will be of a non-slip material. Finishes will be contrasting in the vertical and horizontal situations. Floor surfaces will not be overly resistant to wheelchair users, but will aid crutch users in gaining purchase. As well as this, floor finishes will be of a robust and durable nature.

7.6.4 Entrances

Each building provides a correct transition from outer spaces to inner spaces to all users. The approach to the buildings will be well lit and obvious. Covered entrances are provided in accordance with building regulations M4(2) and M4(3).

7.6.5 Transition to internal

The entrances will be designed so as to be easily identifiable, and the frames will be of a strong tone or colour to visually separate them from the surroundings. Entrances will be appropriately lit. The main entrance doors are designed to comply with relevant legislation in terms of minimum width opening and closing and the thresholds will be level.

7.6.6 Opening windows and projections on public routes

Obstructions at head height can be dangerous to the visually impaired. All opening windows and projections have been minimised within the design. Where they can't be removed completely, vegetation has been provided at ground floor to notify people of the potential for window opening. Where possible, outward swinging doors are avoided and, where required due to fire escapes, they will be marked by blistering, vegetation or bollards.

7.6.7 Steps and ramps

All steps, stairs and ramps have been designed to comply with Approved Document Part M 2015 and BS 8300:2009. This includes tread, risers, handrails, lighting and nosings.

7.6.8 Door design

All doors of the scheme, both manually operated or automated, are compliant with Approved Document Part M 2015 and BS 8300:2018 according to different uses and users of the buildings, specifically in relation to vision panels, weight, colour, door ironmongery and use of materials.

To meet the requirements of Approved Document Part M, door closer tensions will be set to a maximum of 20N. The clear opening widths of all doors in common areas are a minimum of 850mm and there will always be 300mm nib on the leading edge of a door.

7.6.9 Movement within buildings

This key subsection relates to the internal circulation within each building, considering specific needs of disabled people.

The buildings are accessed via horizontal corridors. Vertical circulation is via lifts in the cores, and ambulant disabled stairs.

Provision of lifts:

All lifts, in all buildings, are designed to comply with Approved Document Part M and BS 8300:2018, including size, internal materials, door opening width, and operating apparatus.

Stairs:

Stairs comply with Approved Document Part M and BS 8300:2018 in terms of widths, treads, risers, hand rails, nosings, top and bottom surfaces, landings and finishes.

They have also been designed for ambulant disabled, including the fire escape stairs.

Corridor and lobby design:

All corridors within the buildings comply according with their specific uses and with Approved Document Part M in terms of size, lighting, materials, signings, doors and colours etc.

There are no changes in level to any corridors and width is consistent. Vision panels in corridor doors will be designed to allow people both seated or standing to be seen.

Pull handles will only be fitted on the pull side of doors and fingerplates will be fitted on the push side. This assists all users, but especially people with learning difficulties and people with visual impairments. Handles will not extend down to floor level since this type of handle can become caught in the footplates or wheels of a wheelchair.

7.7 Means of escape

7.7.1 Design for independent means of escape

All features and materials comply with Approved Document Part B (2018). In addition, a management plan will be prepared for the evacuation of the buildings together with the preparation of a Personal Egress Emergency Plan.

With residential buildings, it is encouraged that, in the case of fire, inhabitants stay in their apartments. Each apartment has a 60 minute fire rated compartment surrounding it, to ensure that residents are protected from the source of the fire. Sprinklers are also provided to all residential units in block F.

7.7.2 Facilities for physical evacuation

The escape routes, horizontal and vertical, meet the minimum widths to comply with ambulant disabled requirements. Escape stairs meet ambulant disabled goings and risings. At upper residential levels no refuge has been allowed for, as the fire strategy is for people to remain in their apartments while the fire brigade deal with the fire.

Together with the Fire Alarm System, and the Personal Egress Emergency Plan, the buildings are designed to provide, according with their different uses, safe evacuation routes in the case of emergencies.

7.8 Signs and wayfinding

7.8.1 External signage

The signage strategy for the development will follow good practice guidelines, such as the "Sign Design Guide". All signage will be contrasting and designed for those with learning difficulties or visual impairments.

7.8.2 Internal signage

All the buildings according to their uses are designed to enable clear signposting and a messaging system complying with the Sign Design Society Guidance.

All internal signs to communal areas will be clear, with contrasting symbols, and with braille translations to help the visually impaired. All signage will be located in obvious locations and will be well lit.

7.8.3 The use of differing tactile materials

A palette of tactile handrails/support rails showing directions of travel to the nearest fire exit has been considered through the design of each building.

7.8.4 The layout of the buildings

The clear layout of each building, generally arranged with a sequence of entrance/lobby/lift/stair core/corridors, allows a simple circulation throughout and between the floors. The massing of each block has been designed to be distinguishable and readable, with shapes that provide an easy indication to distinguish different uses within the site.

7.9 Accessible and adaptable dwellings - Part M4(2) compliance

In accordance with the Draft London Plan 2017, 90% of the new dwellings are M4(2) compliant. The remaining 10% will be M4(3) compliant. The following section demonstrates compliance with the criteria set out by M4(2). Listed below are the criteria for compliance with Part M4(2) which is followed by supporting annotated drawings.

M4 (2) Section 2A: Approach to the Dwelling

7.9.1 Approach Routes

General

The approach route to all dwellings is level, gently sloping or ramped where necessary. Communal parts of the approach route (except communal stairs) have a minimum clear width of 1200mm. All parts of the external approach routes will have a suitable ground surface.

External and internal ramps forming part of an approach route

All ramps comply with diagram 2.1, have a top and bottom landing of the minimum width required and have a clear width of at least 1200mm.

7.9.2 External steps forming part of an escape route

All external steps will be uniform with a rise of between 150mm and 170mm and a going of between 280mm and 425mm, and a minimum clear width of 900mm. Landings are provided where required and are of the size required. Graspable handrails are provided to every flight of three or more risers and these extend beyond the top and bottom nosing of the steps.

7.9.3 Car parking and drop-off

Parking space

Parking spaces within the residential basement car park are a mix of standard bays and disabled parking bays. These disabled bays are located close to the entrance to the lift cores and have a minimum clear access zone of 1200mm to one side. The access to the lift is step free and the parking spaces are level with a suitable ground surface.

Drop-off point

Drop off points are located close to the principle communal entrance in building F and E, and are level with a suitable ground surface.

7.9.4 Communal Entrance

Principal Communal Entrances

The principle communal entrance has a level landing 1500mm x 1500mm directly outside and clear of any door swing. This will be covered to a minimum of 1200mm width and 900mm depth. Lighting will use fully diffused luminaires that are activated automatically by a dusk to dawn timer or a motion detector. The entrance door (including double doors) has a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door, in accordance with diagram 2.2. Door entry controls will be mounted 900-1000mm above finished ground level, and at least 300mm away from any projecting corner.

Other communal doors

All other communal doors have a minimum clear opening width of 850mm, and a 300mm nib will be provided to the leading edge of the door, in accordance with diagram 2.2. Door entry controls will be mounted 900-1000mm above finished ground level, and at least 300mm away from any projecting corner.

7.9.5 Communal Lifts and Stairs

Communal lifts

Lifts are provided to buildings A, F and G provided to all apartment buildings with a minimum car size of 1100mm wide and 1400mm deep. Each lift has a clear landing of at least 1,500mm x 1,500mm directly in front of the lift door at every floor level, a door clear opening width of at least 800mm and meet BS EN 81-70:2018. Landing and car controls will be 900-1200mm above the car floor and a minimum of 400mm from the inside of the front wall.

Communal stairs

Each building is served by 1 communal stair core which meets the requirements of Approved Document Part K for a general access stair.

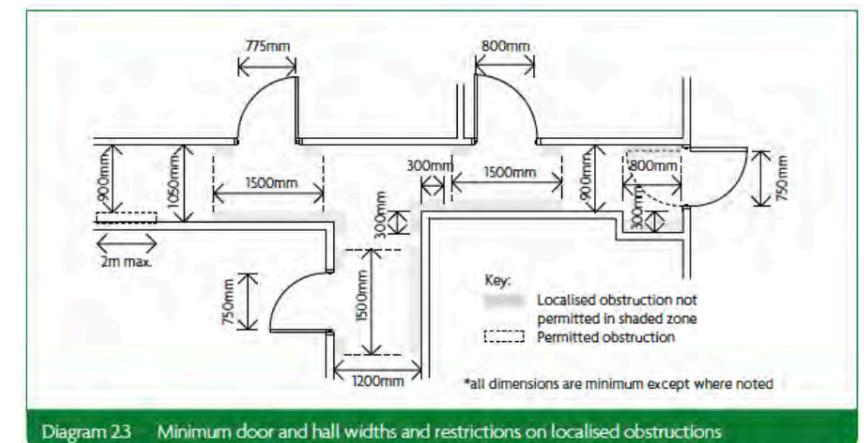
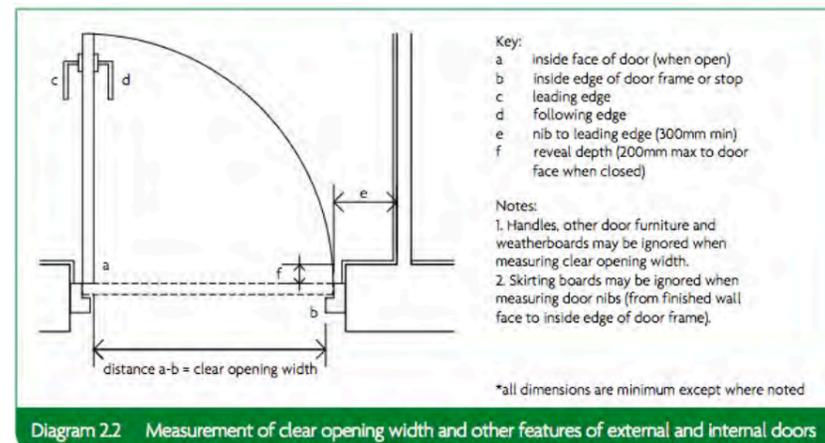
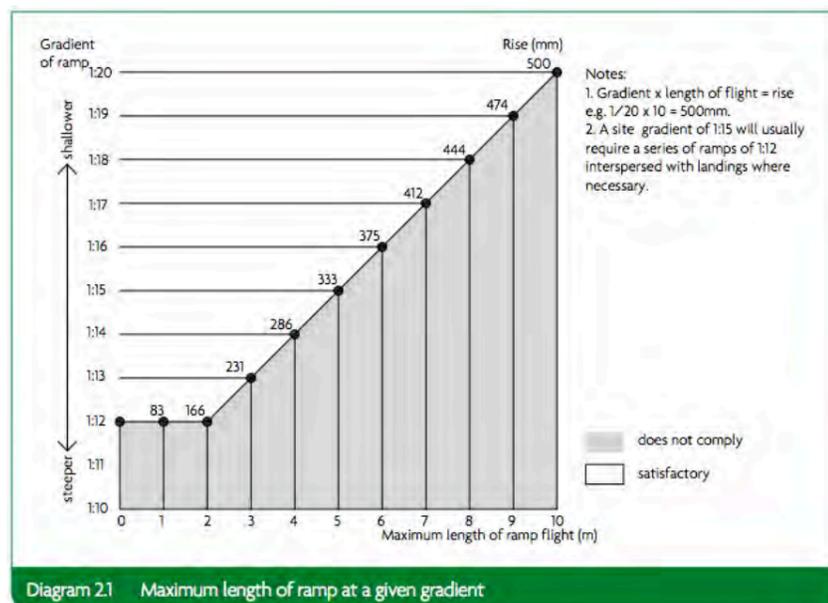
7.9.6 Private entrances

Principal private entrance and alternative entrance

The principle private entrance to each apartment will have a level landing 1200mm x 1200mm directly outside. This will be covered to a minimum of 900mm width and 600mm depth. Lighting will use fully diffused luminaires that are activated automatically by a dusk to dawn timer or a motion detector. The entrance door (including double doors) has a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door, in accordance with diagram 2.2.

Other external doors

All other doors connected to the dwelling will have a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door, in accordance with diagram 2.2.



7.9.7 Circulation areas and Doorways

Door and hall widths

The minimum clear width of every hall or landing is 900mm. Localised obstructions will not occur opposite or close to a doorway and the corridor will not be reduced below 750mm width at any point. The clear opening widths will conform to those set by Approved Document M and a 300mm nib will be provided to the leading edge of every door within the entrance storey.

Private stairs and changes of level within the dwelling

Access to all rooms and facilities within the entrance storey will be step-free, with no level changes. The stair from the entrance storey to the storey above will have a minimum clear width of 850mm when measured above the pitch line of the treads. All stairs meet the provisions of Part K for private stairs.

7.9.8 Habitable rooms

Living, kitchen and eating areas

There is a living area within the entrance storey of all units (which maybe a living room, dining room or a combined kitchen dining room). A minimum of 1200mm clear space is provided in front and between all kitchen units and appliances.

Bedrooms

Every bedroom has a clear access route, minimum of 750mm wide from the doorway to the window, and at least one double bedroom will provide a clear access zone a minimum of 750mm wide to both sides and the foot of the bed. Other double bedrooms have a clear access zone a minimum of 750mm wide to one side and the foot of the bed.

7.9.9 Sanitary facilities

General provisions

All walls, ducts and boxing to the WC/Cloakroom, bathroom and shower rooms will be strong enough to support adaptations that could impose a load of up to 1.5N/m².

WC facilities on the entrance storey

Every dwelling will have a room that provides a WC and basin on the entrance storey. In two storey dwellings, with one or two bedrooms, the WC meets the provisions of diagram 1.3 and the basin does not impede access to the WC.

In two storey dwellings with three bedrooms, the room with the WC and basin provides a potential level access shower.

The door to the WC will open outwards.

Bathrooms

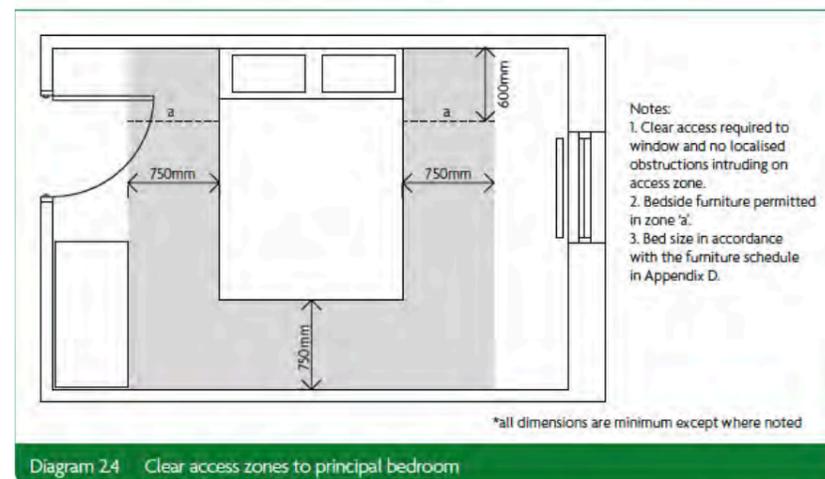
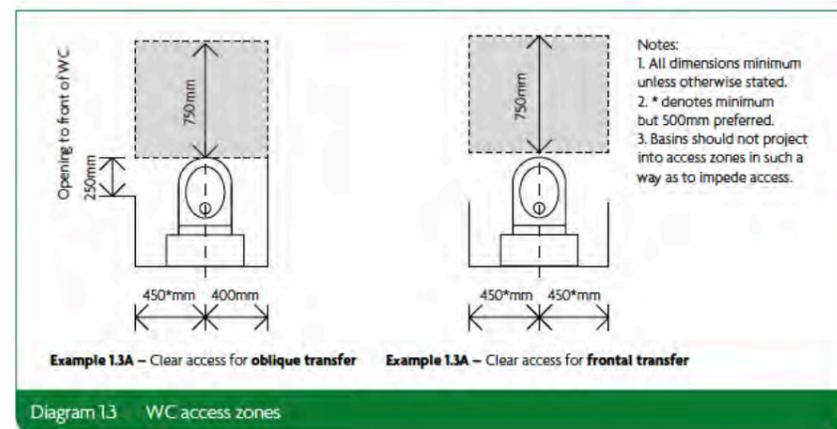
Every dwelling has a bathroom that contains a WC, a basin and a bath, that is located on the same floor as the double bedroom described as the principle bedroom above.

7.9.10 Services and controls

Consumer units will be mounted so that the switches are between 1350mm and 1450mm above floor level. Switches, sockets and controls will have their centre line between 450mm and 1200mm above floor level and a minimum of 300mm from an inside corner.

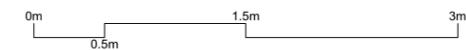
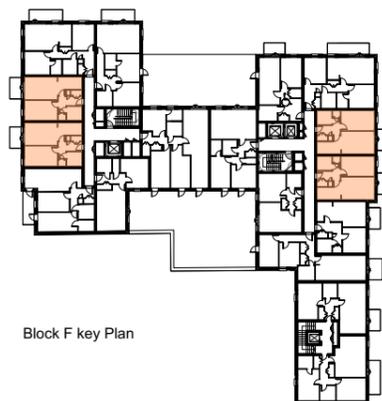
The handle to at least one window in the principle living area is located between 450mm and 1200mm, or a remote opening device will be fitted. Handles to other windows will be located between 450mm and 1400mm above floor level, or a remote opening device will be fitted.

Boiler controller will be mounted in an accessible location between 900mm - 1200mm above finished floor level.



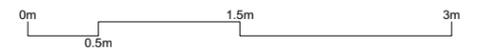
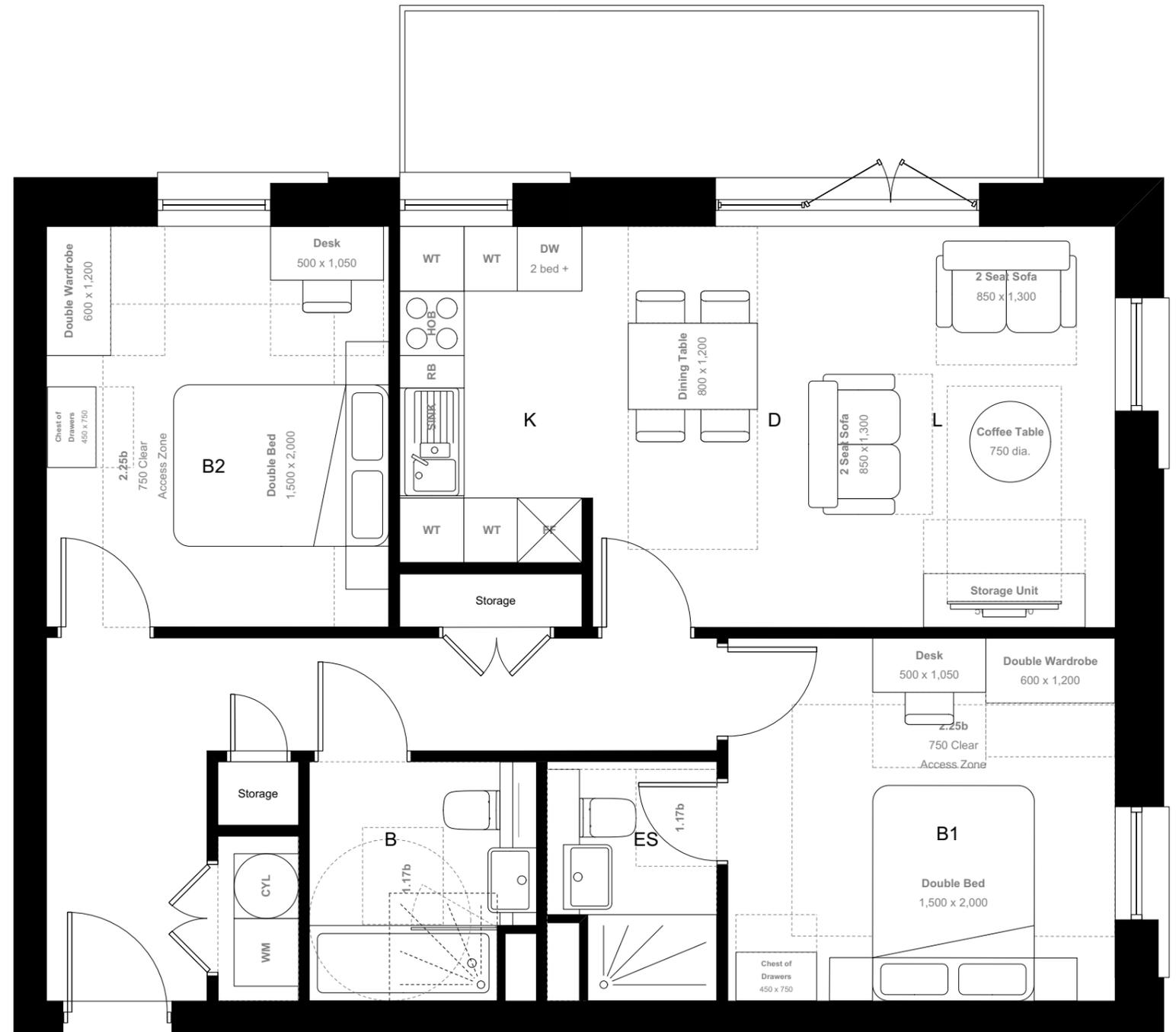
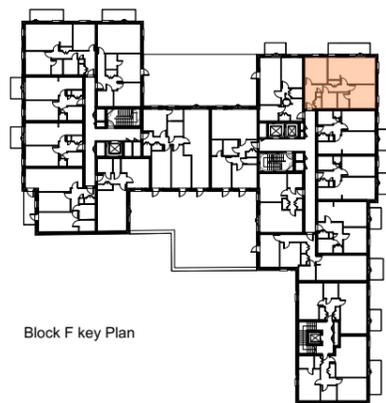
7.10 Part M4(2) compliance - sample of layouts

Typical M4(2) Accessible and Adaptable 1 Bed Apartments
 Total Area: 50 sqm / 538 sqft



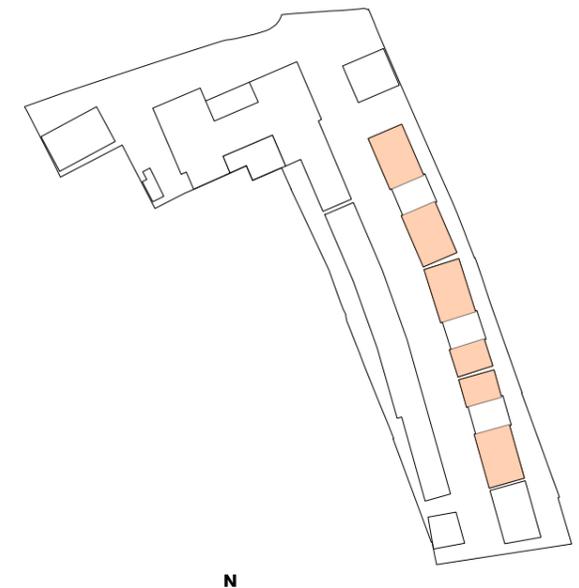
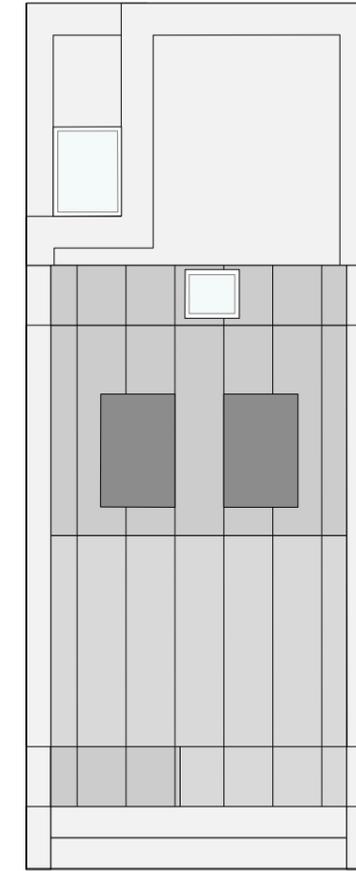
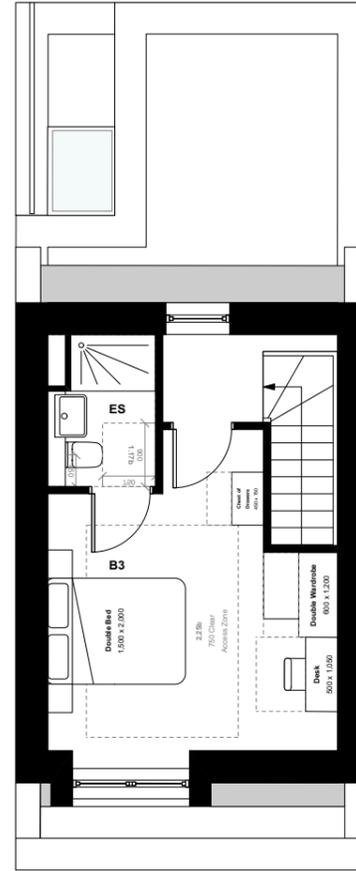
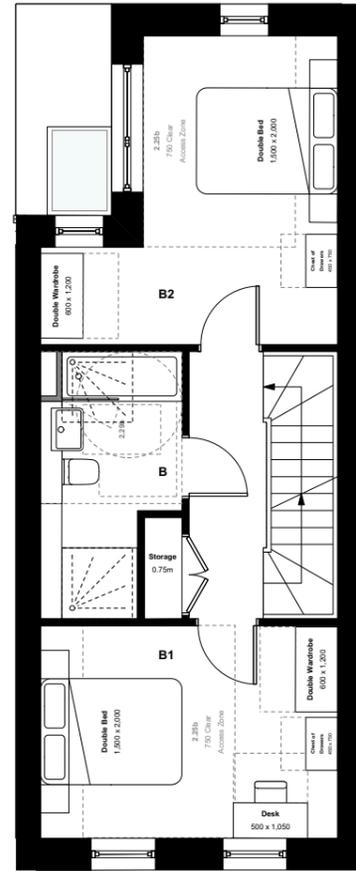
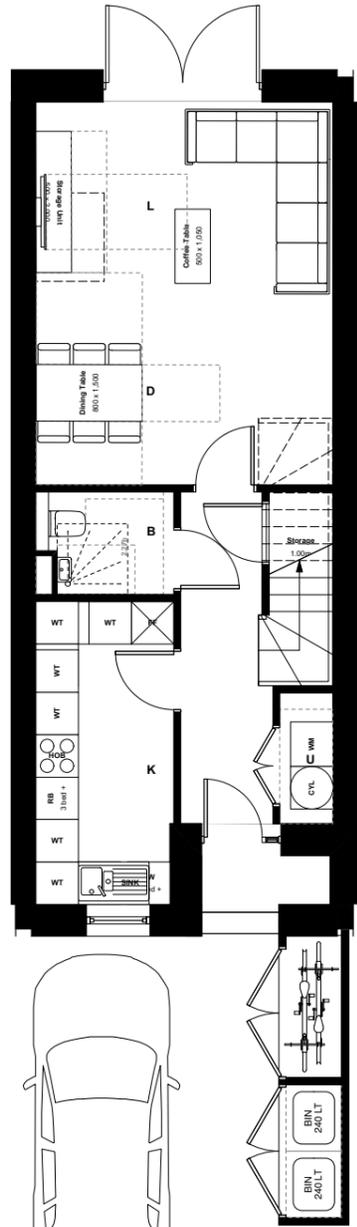


Typical M4(2) Accessible and Adaptable 2 Bed Apartments
 Total Area: 71 sqm / 764 sqft

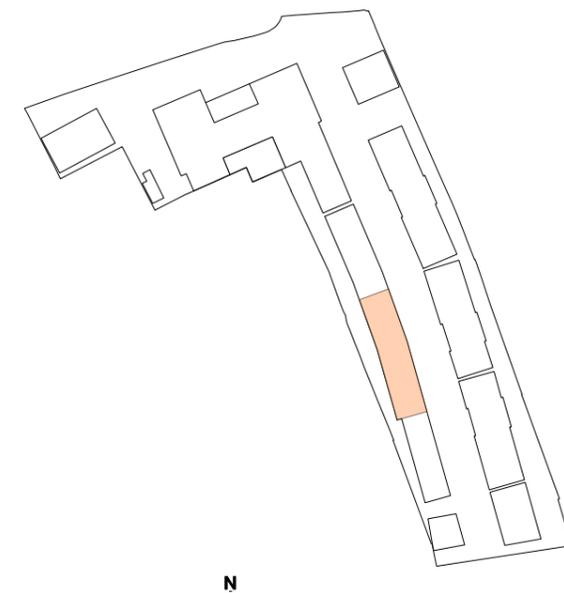
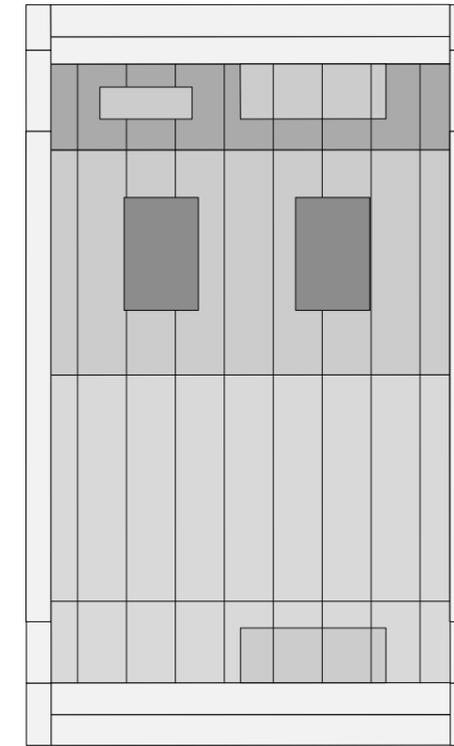
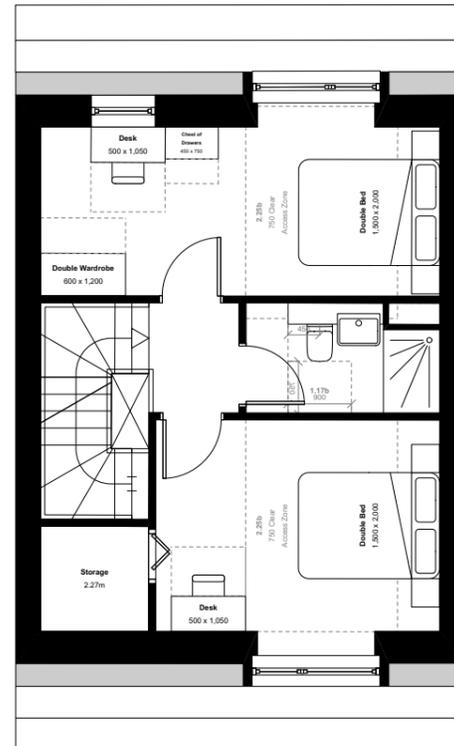
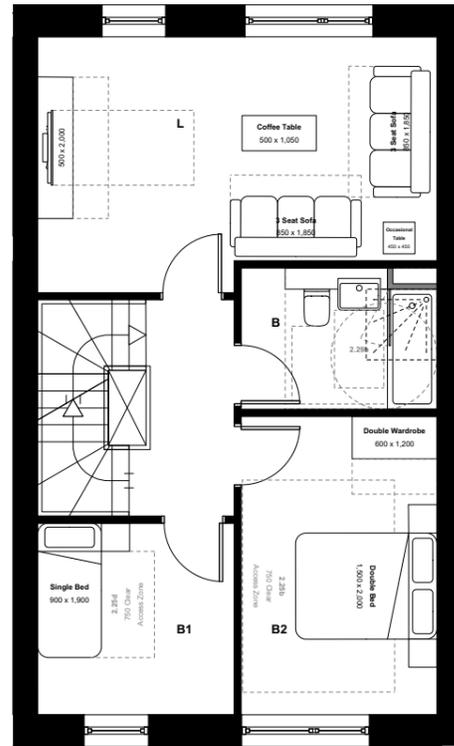
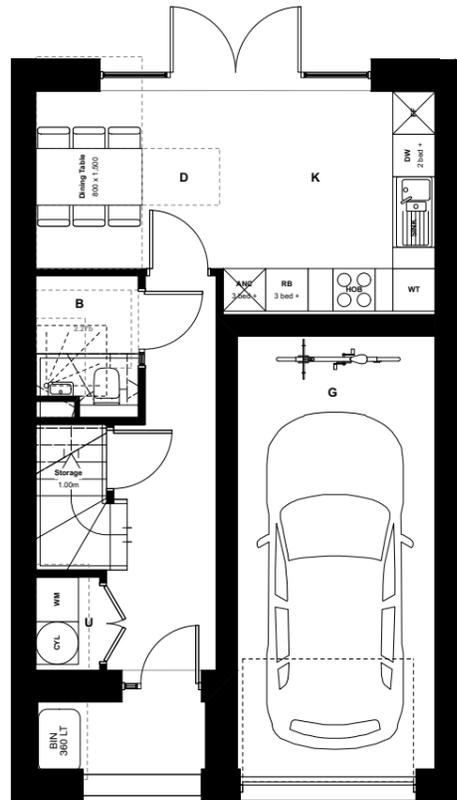


House Type 3 3B6P

Total Area: 113 sqm / 1216 sqft



House Type 5 (Affordable) 4B7P
 Total Area: 127 sqm / 1367 sqft



N

7.11 Part M4(3) Compliance

M4 (3) Wheelchair User Dwellings

10% of the residential dwellings will comply with Approved Document Part M4(3) of the Building Regulations.

The following section covers the specific requirements of M4(3).



Ground floor M4(3) house type and apartment locations



Typical floor M4(3) house type and apartment locations

Storage

Each wheelchair dwelling layout provides a wheelchair storage (1,100mm x 1,700mm) and transfer space with a clear width of at least 1,200mm. Storage is provided in accordance with the minimum areas given. Those M4(3)b units that are multi-story dwellings are provided with provisional through floor lifting devices.

Living, kitchen and eating area

All apartments are single storey therefore the principal living area is on the entrance storey and the minimum internal floor area of the living room, dining room and kitchen meets the figures in table 3.2. The glazing system features a transom that is no higher than 850mm above floor level.

Each wheelchair dwelling features an open plan living, dining and kitchen arrangement and the kitchen has a clear access zone of 1,500mm in front and between all unit and appliances.

The (adaptable) dwellings have worktop runs in accordance with table 3.3 and the layouts demonstrate how the kitchen could be easily adapted to meet the provisions of wheelchair accessible requirements at a future date without significant structural alterations or impact upon the rest of the dwelling.

The accessible dwellings have the full run of worktops required, as stated in table 3.4. The worktop incorporates a 2200 mm minimum continuous section which includes a combined sink, drainer unit and hob. This section is either a height adjustable worktop or a fixed section capable of being fixed at various heights as required.

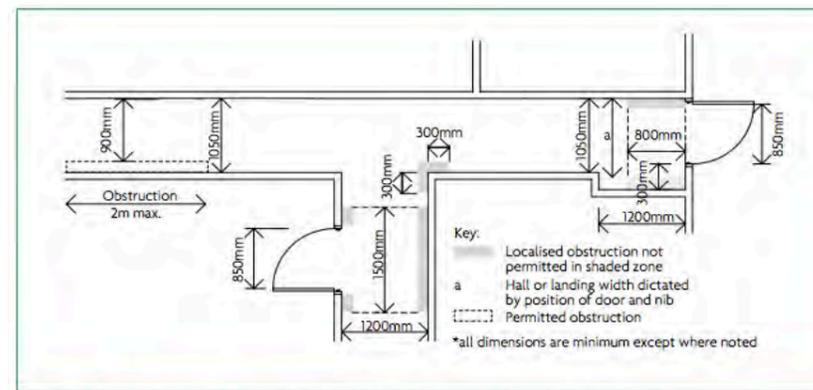


Diagram 3.4 Minimum door and hall widths and restrictions on localised obstructions

Table 3.2 Minimum combined floor area for living, dining, and kitchen space

Number of bedspaces	2	3	4	5	6	7	8
Minimum floor area m ²	25	27	29	31	33	35	37

Table 3.3 Minimum length of kitchen worktop, including fittings and appliances, to be fitted at completion for a wheelchair adaptable dwelling

Number of bedspaces	2	3 & 4	5	6-8
Minimum worktop length (mm)	4330	4730	5630	6730

Table 3.4 Minimum length of kitchen worktop, including fittings and appliances, to be fitted at completion for a wheelchair accessible dwelling

Number of bedspaces	2	3 & 4	5	6-8
Minimum worktop length (mm)	6130	6530	7430	8530

Bedrooms

Every bedroom provides a 1000mm wide clear access route from the doorway to the window. Every bedroom has a 1,200mm x 1,200mm manoeuvring space inside the doorway but clear of the bed and closed door. The principal double bedroom has a minimum floor area of at least 13.5 sq. m and a minimum width of at least 3m. The principal bedroom also has a clear access zone 1,000mm wide to both sides and the foot of the bed and 1,200mm x 1,200mm manoeuvring spaces on both sides of the bed.

Every other double bedroom has a minimum floor area of at least 12.5 sq. m, a minimum width of 3m and a 1,000mm clearance zone to one side of the bed and in front of all furniture. Every other single bedroom has a minimum floor area of at least 8.5 sq. m, a minimum width of 2.4m and a 1,000mm clearance zone to one side of the bed and in front of all furniture.

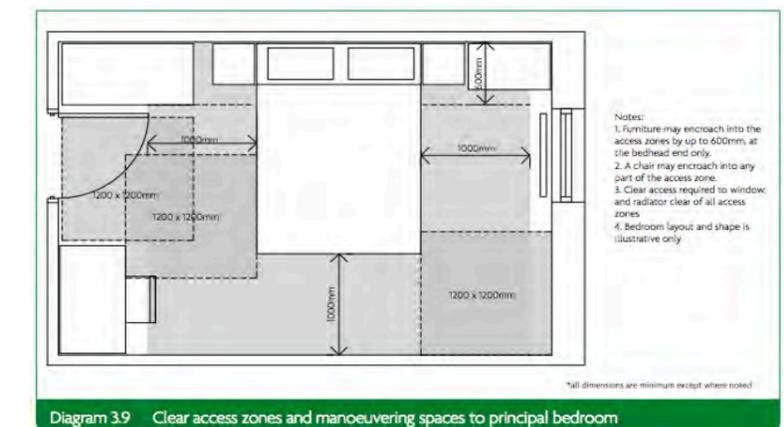


Diagram 3.9 Clear access zones and manoeuvring spaces to principal bedroom

Sanitary facilities

All wheelchair dwellings meet the requirements of table 3.5.

Every wheelchair dwellings provides a wet room on the entrance storey which contains a WC, wash hand basin and installed level access shower and features an outward opening door.

The (adaptable) dwellings have bathrooms which comply with diagram 3.10 and can be easily adapted in future to become wheelchair accessible.

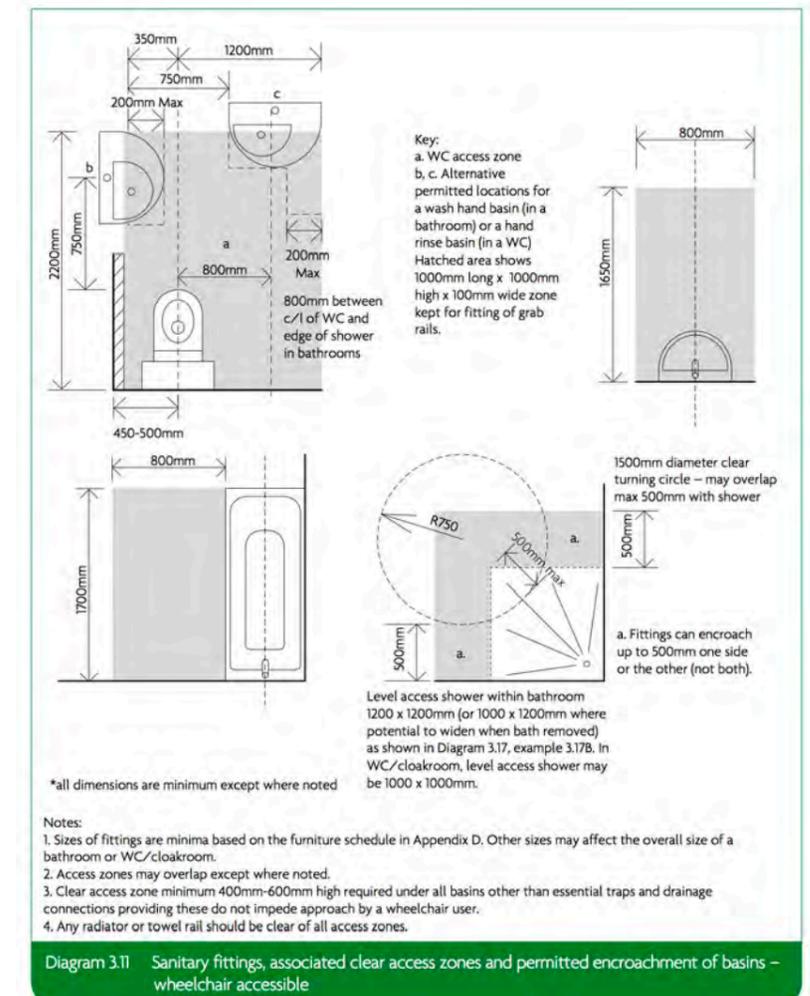
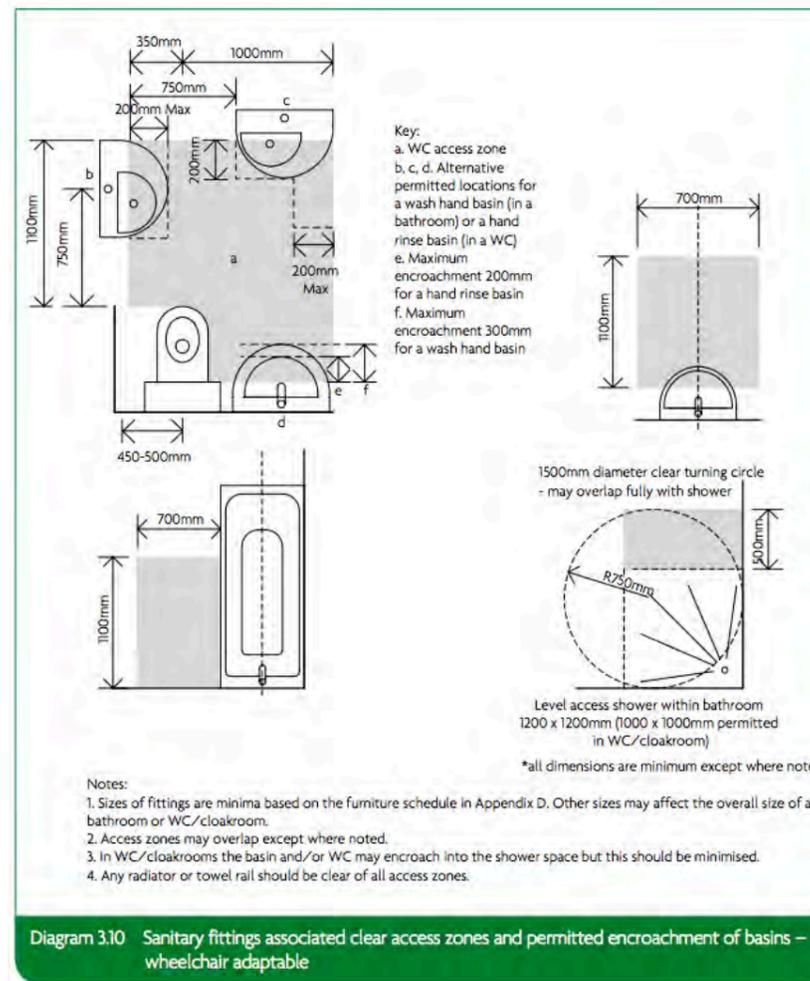
The (accessible) dwellings have bathrooms which comply with diagram 3.11.

All 2 and 3 bedroom apartments have a compliant compliant bathroom and a seperate compliant en-suite for the master bedroom, with outward opening doors.

All principle bathrooms and en-suites provide a minimum 1500mm clear wheelchair turning circle. This applies to both adaptable and accessible units.

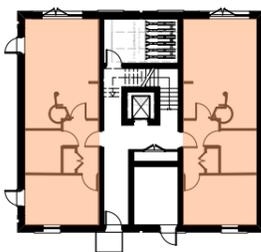
Table 3.5 Summary of minimum requirements for sanitary provision in typical dwelling types (dwellings should also comply with relevant detailed requirements set out in paragraphs 3.36-3.43)

Single storey dwelling (typically a flat or bungalow)	
Occupancy	Typical minimum sanitary provision
2 or 3 bedspaces	Bathroom with level access shower
4 bedspaces	Bathroom with level access shower and separate WC/cloakroom
5 bedspaces or more	Bathroom with level access shower and separate WC/cloakroom (or second bathroom). Wheelchair accessible dwellings must also provide both a level access shower and a bath
Two or three storey dwelling (typically a house or maisonette)	
Occupancy	Typical minimum sanitary provision
2 or 3 bedspaces	Bathroom with level access shower on same level as principal bedroom + entrance storey WC/cloakroom (where bathroom not on the entrance storey)
4 bedspaces	Bathroom with level access shower on same level as principal bedroom and entrance storey WC/cloakroom or second bathroom
5 bedspaces or more	Bathroom with level access shower on same level as principal bedroom and entrance storey WC/cloakroom or second bathroom. Wheelchair accessible dwellings must also provide both a level access shower and a bath

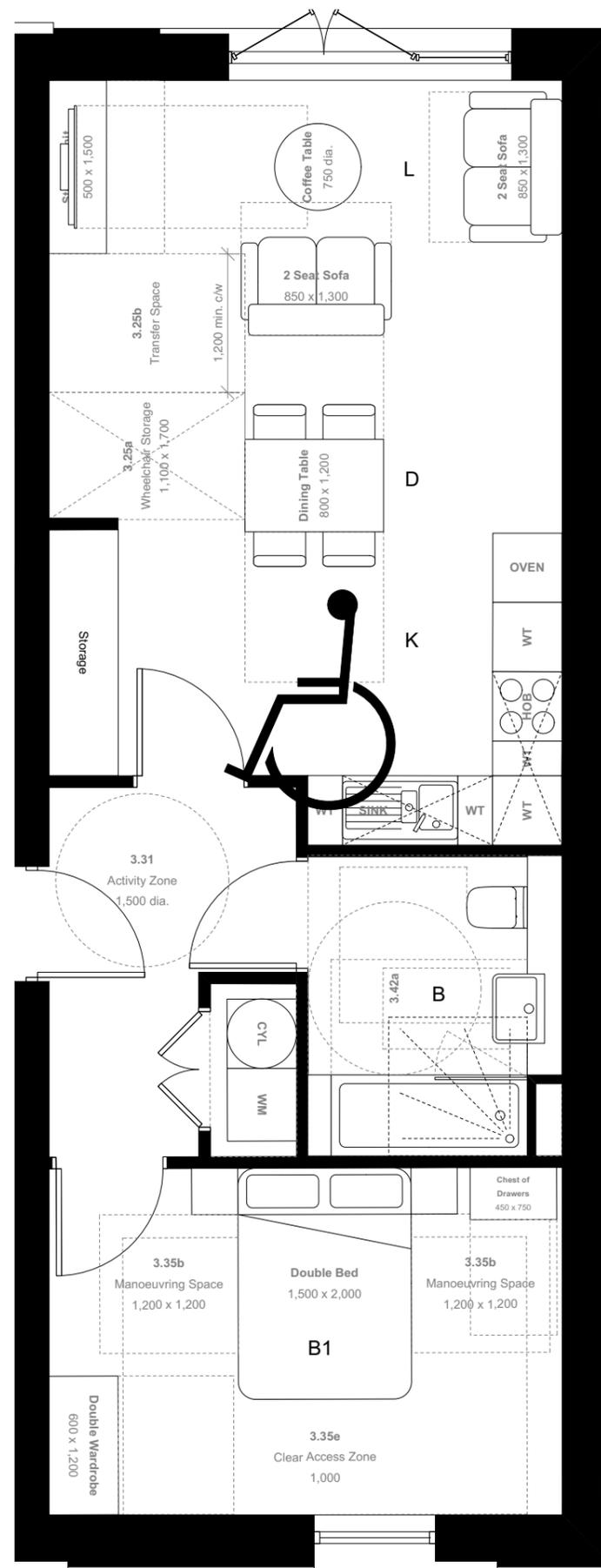


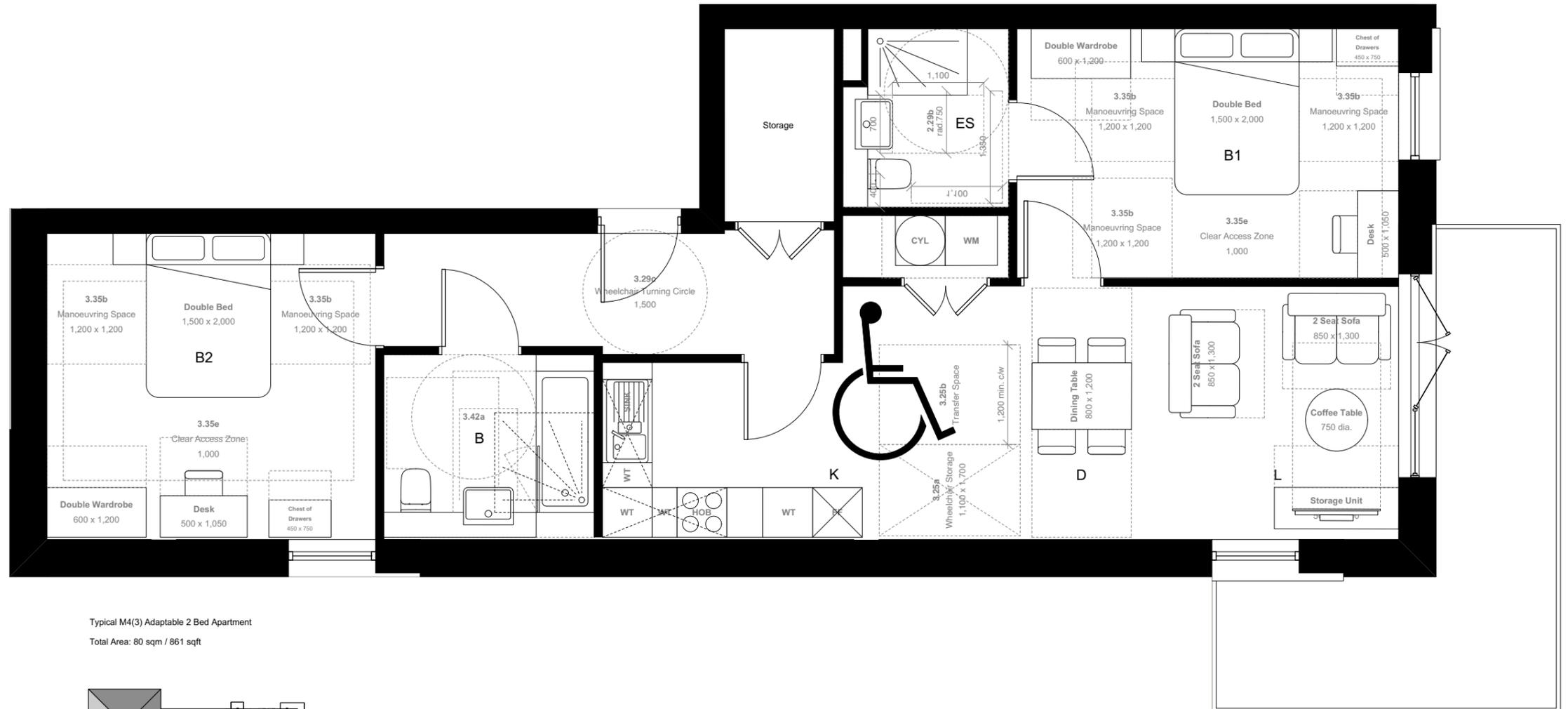
7.12 Part M4(3) compliance - sample of layouts

Typical M4(3) Adaptable 1 Bed Apartment
 Total Area: 55 sqm / 592 sqft

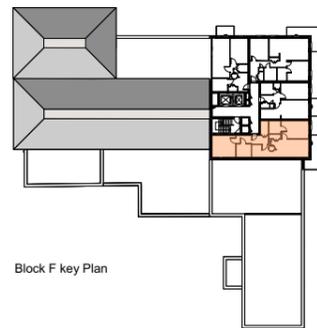


Block E key Plan

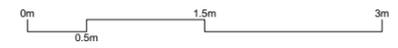




Typical M4(3) Adaptable 2 Bed Apartment
Total Area: 80 sqm / 861 sqft

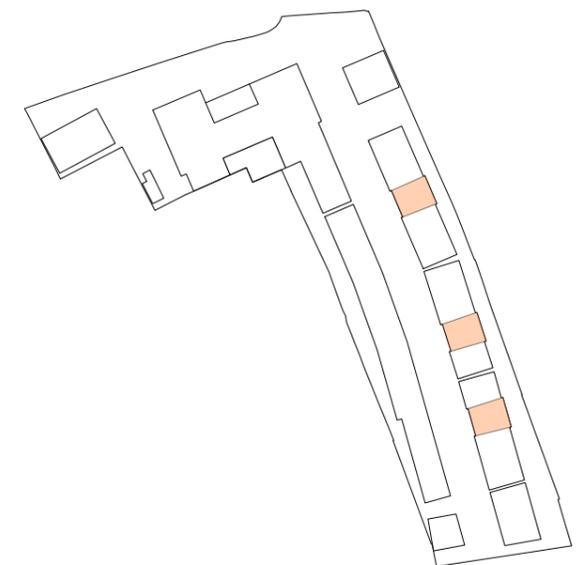
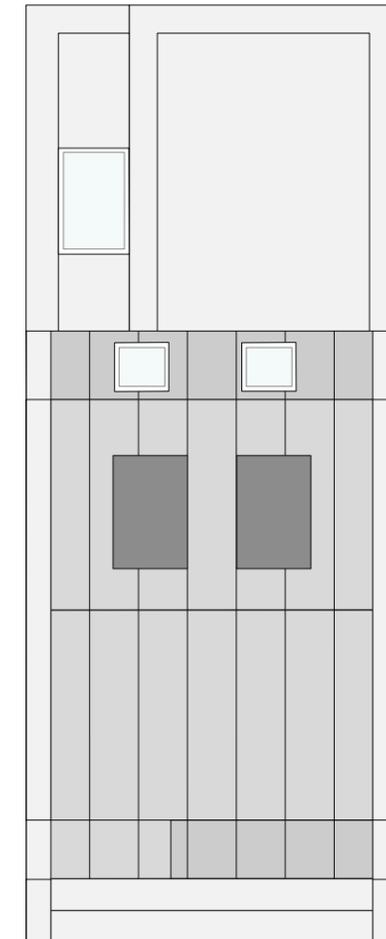
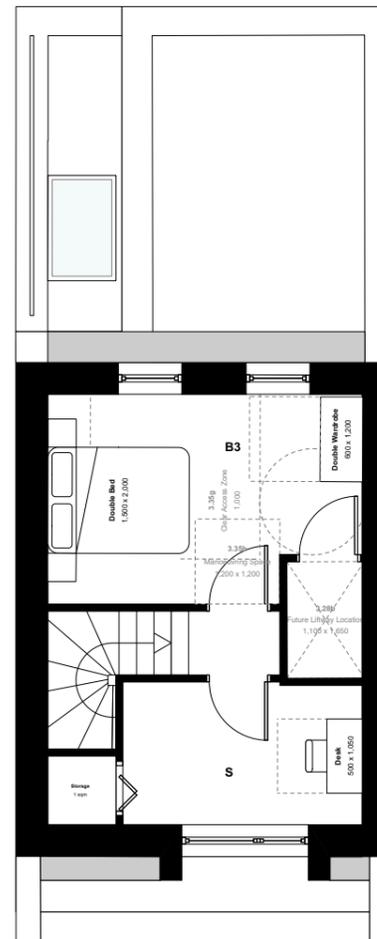
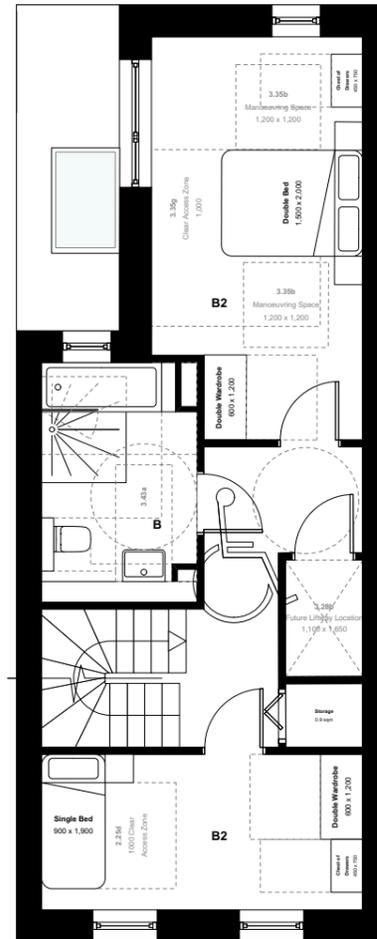
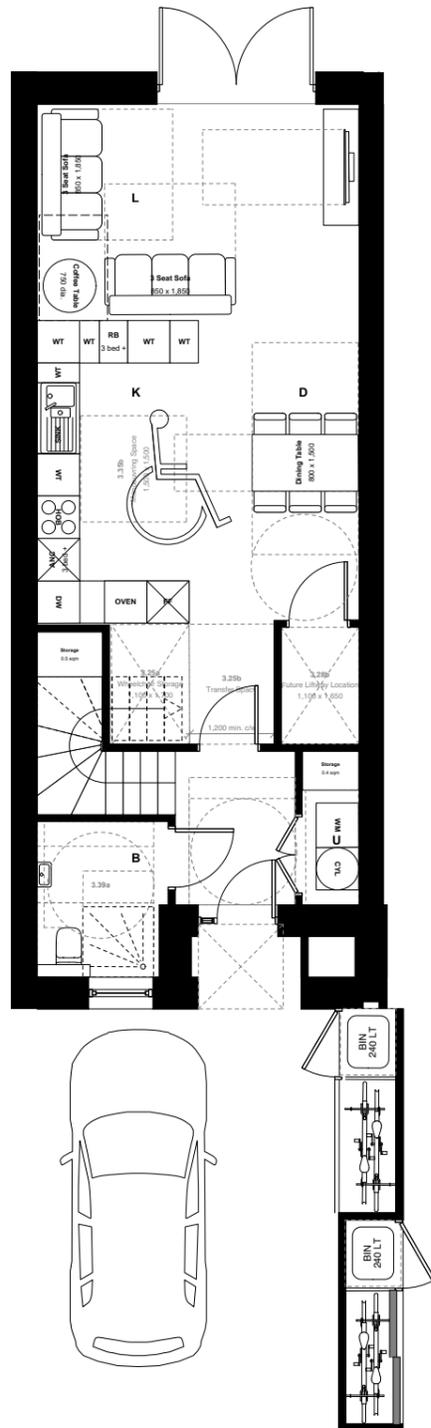


Block F key Plan



House Type 4 (Accessible M4[3]) 3B5P

Total Area: 129 sqm / 1389 sqft





17

19

EVERMOTION



Introduction

Context

Design process

Design response

Landscape

Technical design

Access

8.0 Appendices

8.1 Planning Drawing list

Assael

CLIENT
LONDON SQUARE

PROJECT TITLE
GREGGS BAKERY, TWICKENHAM

DRAWING TITLE
PLANNING DRAWING LIST

DRAWING NO. REVISION
A2871 750 R20

REV DATE
R20 Planning Submission 15.01.19

Drawing Series	Drawing Title	Drawing Scale (@ A1)	Drawing No.	Revision	
Key Documents	Design and Access Statement	-	-	R1	
Area Schedule	Proposed Area Schedule	-	A2871 700-710	R20	
Site Location Plans	Site Location Plan	1/1250	A2871 001	R20	
	Site Plan	1/500	A2871 002	R20	
Existing Drawings	Existing Ground Floor Plan	1/500	A2871 100	R20	
	Existing First Floor Plan	1/500	A2871 101	R20	
	Existing Second Floor Plan	1/500	A2871 102	R20	
	Existing Roof Plan	1/500	A2871 103	R20	
	Proposed Alterations Plan	1/500	A2871 105	R20	
	Existing House	1/100	A2871 106	R20	
	Existing Sections / Elevations Site wide - Sheet 1	1/200	A2871 120	R20	
	Existing Sections / Elevations Site wide - Sheet 2	1/200	A2871 121	R20	
	Existing Sections / Elevations Site wide - Sheet 3	1/200	A2871 122	R20	
Proposed Site Wide GA Plans	Proposed Plan - Ground Floor	1/500	A2871 200	R20	
	Proposed Plan - First Floor	1/500	A2871 201	R20	
	Proposed Plan - Second Floor	1/500	A2871 202	R20	
	Proposed Plan - Third Floor	1/500	A2871 203	R20	
	Proposed Plan - Fourth Floor	1/500	A2871 204	R20	
	Proposed Plan - Roof Plan	1/500	A2871 205	R20	
Proposed Site Wide Elevations	Proposed Elevations - Sheet 1	1/500	A2871 401	R20	
	Proposed Elevations - Sheet 2	1/500	A2871 402	R20	
Proposed House Types (Plans sections and elevations all on one sheet)	Existing House - Proposed (Block H)	1/100	A2871 601	R20	
	House Type 1 (Block G)	1/100	A2871 602	R20	
	House Type 2 (Block C)	1/100	A2871 603	R20	
	House Type 2a (Block C)	1/100	A2871 604	R20	
	House Type 3 (Block C)	1/100	A2871 605	R20	
	House Type 4 (Block C)	1/100	A2871 606	R20	
	House Type 5 (Block D)	1/100	A2871 607	R20	
	House Type 6 (Block D)	1/100	A2871 608	R20	
Proposed Apartment Types	Apartment Building E (Plans sections and elevations all on one sheet)	1/100	A2871 610	R20	
	Buildings A & F - Ground Floor Plan	1/100	A2871 612	R20	
	Buildings A & F - First Floor Plan	1/100	A2871 613	R20	
	Buildings A & F - Second Floor Plan	1/100	A2871 614	R20	
	Buildings A & F - Third Floor Plan	1/100	A2871 615	R20	
	Buildings A & F - Fourth Floor Plan	1/100	A2871 616	R20	
	Buildings A & F - Roof Plan	1/100	A2871 617	R20	
	Buildings A & F - Sections Sheet 1	1/100	A2871 620	R20	
	Buildings A & F - Sections Sheet 2	1/100	A2871 621	R20	
	Buildings A & F - Elevations Sheet 1	1/100	A2871 630	R20	
	Buildings A & F - Elevations Sheet 2	1/100	A2871 631	R20	
	Buildings B Commercial	1/100	A2871 640	R20	
	Proposed Ladder Sections . Elevations	Ladder Section & Bay Elevation 1 - Building F	1/50.	A2871 650	R20
Ladder Section & Bay Elevation 2 - Building F		1/50.	A2871 651	R20	
Ladder Section & Bay Elevation 3 - Building F		1/50.	A2871 652	R20	
Ladder Section & Bay Elevation 4 - House Type 3		1/25.	A2871 653	R20	
Ladder Section & Bay Elevation 5 - House Type 5		1/25.	A2871 654	R20	
Landscape Drawings	Proposed Ground Floor Landscape General Arrangement	1/500	A3164 1000	P1	
	Proposed First Floor Landscape General Arrangement	1/100	A3164 1001	P1	
	Proposed Third Floor Landscape General Arrangement	1/100	A3164 1002	P1	

8.2 Accommodation Schedule

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 700** SUBTITLE: **Summary schedule** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, Integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.
Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

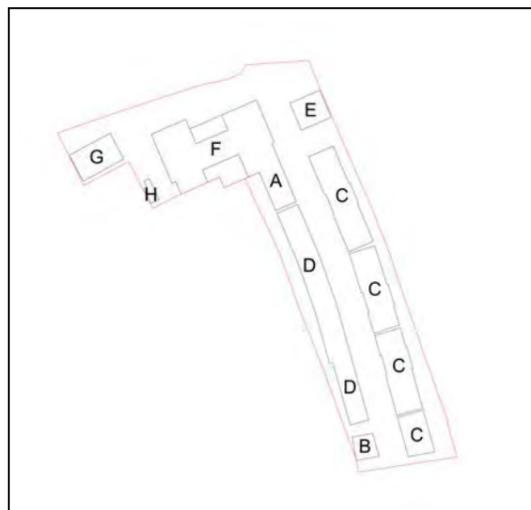
*denotes a handed house type
* denotes wheelchair M4(3) unit

DESCRIPTION	NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY		
	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants
Building A (Apartments)	369	3,972	115	1,238	467	5,027	529	5,694	3	3				6	15	17
Building C (Townhouses)	3,471	37,363	853	9,182	3,718	40,022	4,299	46,276			30			30	133	174
Building D (Townhouses)	2,000	21,529	494	5,318	2,460	26,480	2,781	29,935			5	11		16	91	107
Building E (Apartments)	390	4,198	53	571	495	5,328	566	6,093	2	4				6	16	20
Building F (Apartments)	3,313	35,662	512	5,511	4,183	45,027	4,508	48,525	27	23	3			53	138	161
Building G (Townhouses)	324	3,488	36	388	342	3,681	392	4,220			4			4	12	16
Building H (Townhouse - existing)	73	786	30	323	75	807	85	915			1			1	4	4
Residential Summary (C3)	9,940	106,997	2,093	22,530	11,740	126,372	13,160	141,658	32	35	38	11	116	409	499	
									28%	30%	33%	9%				
Building B - Commercial (B1/2/8)					175	1,884	208	2,239								
Ancillary - Commercial					20	215	25	269								
Below Podium Car Park					463	4,984	480	5,167								
Ancillary - Residential					419	4,295	465	4,769								
Site Wide Total	9,940	106,997	2,093	22,530	12,817	137,750	14,338	154,101	32	35	38	11	116	409	499	
									28%	30%	33%	9%				

Parking Summary	
Parking Space Type	Number
Private Driveway	29
Integrated Garage	16
Allocated Below Podium	20
Allocated surface	50
Commercial	1
Car Club	1
Total	117.00

TOTAL DENSITY		
	Area HA	Density
Hab Rooms	409	1.13
UNITS	116	1.13

Key Plan:



PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 701** SUBTITLE: **Building A - Residential Apartments** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, Integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.
Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION	NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY				
	Floor	Flat No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants
G			Entrance / Core (C3)	-	-	-	-											
G	A0-1		1 Bed	50	538	42	452					1				1	2	2
G	A0-2		2 Bed	61	657	49	527						1			1	3	3
				111	1,195	91	980	149	1,604	167	1,798	1	1	-		2	5	5
1	A1-1		1 Bed	57	614	5	54									1	2	2
1	A1-2		2 Bed	72	775	7	75						1			1	3	4
				129	1,389	12	129	159	1,712	181	1,948	1	1	-		2	5	6
2	A2-1		1 Bed	57	614	5	54					1				1	2	2
2	A2-2		2 Bed	72	775	7	75							1		1	3	4
				129	1,389	12	129	159	1,712	181	1,948	1	1	-		2	5	6
Residential (C3)				369	3,972	115	1,238	467	5,027	529	5,694	3	3	-	-	6	15	17
Commercial (B1/2/8)				-	-	-	-	-	-	-	-							
Car Park				-	-	-	-	-	-	-	-							
Ancillary								21.0	226	27.0	291							
Building A Total				369	3,972	115	1,238	488	5,253	556	5,985	3	3	-	-	6	15	17
												50%	50%	0%				

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 702** SUBTITLE: **Building B - Commercial** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately.

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA			
Floor	Unit No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)
		Commercial (B1/2/8)	-	-	-	-	175.0	1,884	208.0	2,239
		Car Park - 1 Accessible Space	-	-	-	-				
		Ancillary / Plant	-	-	-	-	20.0	215	25.0	269
		Building C Total	-	-	-	-	195	2,099	233	2,508

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 703** SUBTITLE: **Building C - Residential Townhouses** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately.

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY	
Floor	Unit No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants
	C-1	HT 2a 3 Bed	113	1,216	54	581	116	1,249	146	1,572			1		1	5	6
	C-2	HT 2 3 Bed	108	1,163	39	420	114	1,227	137	1,475			1		1	4	6
	C-3	HT 2 3 Bed	108	1,163	40	431	114	1,227	137	1,475			1		1	4	6
	C-4	HT 2 3 Bed	108	1,163	44	474	114	1,227	137	1,475			1		1	4	6
	C-5	HT 3 3 Bed	113	1,216	43	463	121	1,302	140	1,507			1		1	4	6
	C-6	HT 3* 3 Bed	113	1,216	36	388	121	1,302	140	1,507			1		1	4	6
	C-7	HT 3 3 Bed	113	1,216	35	377	121	1,302	140	1,507			1		1	4	6
	C-8	HT 3* 3 Bed	113	1,216	32	344	121	1,302	140	1,507			1		1	4	6
	C-9	HT 4** 3 Bed	129	1,389	27	291	140	1,507	157	1,690			1		1	6	5
	C-10	HT 4** 3 Bed	129	1,389	26	280	140	1,507	157	1,690			1		1	6	5
	C-11	HT 3 3 Bed	113	1,216	29	312	121	1,302	140	1,507			1		1	4	6
	C-12	HT 3* 3 Bed	113	1,216	34	366	121	1,302	140	1,507			1		1	4	6
	C-13	HT 3 3 Bed	113	1,216	32	344	121	1,302	140	1,507			1		1	4	6
	C-14	HT 3* 3 Bed	113	1,216	25	269	121	1,302	140	1,507			1		1	4	6
	C-15	HT 4** 3 Bed	129	1,389	20	215	140	1,507	157	1,690			1		1	6	5
	C-16	HT 4** 3 Bed	129	1,389	19	205	140	1,507	157	1,690			1		1	6	5
	C-17	HT 3 3 Bed	113	1,216	23	248	121	1,302	140	1,507			1		1	4	6
	C-18	HT 3* 3 Bed	113	1,216	24	258	121	1,302	140	1,507			1		1	4	6
	C-19	HT 3 3 Bed	113	1,216	23	248	121	1,302	140	1,507			1		1	4	6
	C-20	HT 3* 3 Bed	113	1,216	30	323	121	1,302	140	1,507			1		1	4	6
	C-21	HT 3 3 Bed	113	1,216	29	312	121	1,302	140	1,507			1		1	4	6
	C-22	HT 3* 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	C-23	HT 3 3 Bed	113	1,216	23	248	121	1,302	140	1,507			1		1	4	6
	C-24	HT 3* 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	C-25	HT 4** 3 Bed	129	1,389	17	183	140	1,507	157	1,690			1		1	6	5
	C-26	HT 4** 3 Bed	129	1,389	17	183	140	1,507	157	1,690			1		1	6	5
	C-27	HT 3 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	C-28	HT 3* 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	C-29	HT 3 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	C-30	HT 3* 3 Bed	113	1,216	22	237	121	1,302	140	1,507			1		1	4	6
	Residential (C3)		3,471	37,363	853	9,182	3,718	40,022	4,299	46,276			30		30	133	174
	Commercial (B1/2/8)		-	-	-	-	-	-	-	-							
	Car Park		-	-	-	-	-	-	-	-							
	Bike and Refuse Stores		-	-	-	-	90.0	969	113.0	1,216							
	Building C Total		3,471	37,363	853	9,182	3,808	40,990	4,412	47,492			30		30	133	174
											0%	0%	100%				

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 704** SUBTITLE: **Building D - Residential Townhouses** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY		
Floor	Unit No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants	
	D-1	HT 7 4 Bed	125	1346	22	237	153	1647	175	1,884				1	1	6	7	
	D-2	HT 7 4 Bed	125	1346	26	280	153	1647	175	1,884				1	1	6	7	
	D-3	HT 7 4 Bed	125	1346	30	323	153	1647	175	1,884				1	1	6	7	
	D-4	HT 7 4 Bed	125	1346	33	355	153	1647	175	1,884				1	1	6	7	
	D-5	HT 5 4 Bed	125	1346	22	237	154	1658	173	1,862				1	1	6	7	
	D-6	HT 5 4 Bed	125	1346	25	269	154	1658	173	1,862				1	1	6	7	
	D-7	HT 5 4 Bed	125	1346	29	312	154	1658	173	1,862				1	1	6	7	
	D-8	HT 5 4 Bed	125	1346	32	344	154	1658	173	1,862				1	1	6	7	
	D-9	HT 5 4 Bed	125	1346	33	355	154	1658	173	1,862				1	1	6	7	
	D-10	HT 5 4 Bed	125	1346	35	377	154	1658	173	1,862				1	1	6	7	
	D-11	HT 5 4 Bed	125	1346	35	377	154	1658	173	1,862				1	1	6	7	
	D-12	HT 6 3 Bed	125	1346	35	377	154	1658	174	1,873		1			1	5	6	
	D-13	HT 6 3 Bed	125	1346	33	355	154	1658	174	1,873		1			1	5	6	
	D-14	HT 6 3 Bed	125	1346	33	355	154	1658	174	1,873		1			1	5	6	
	D-15	HT 6 3 Bed	125	1346	35	377	154	1658	174	1,873		1			1	5	6	
	D-16	HT 6 3 Bed	125	1346	36	388	154	1658	174	1,873		1			1	5	6	
	Residential (C3)		2000	21529	494	5318	2460	26480	2781	29,935	-	-	5	11	16	91	107	
	Commercial (B1/2/8)		-	-	-	-												
	Car Park		-	-	-	-												
	Ancillary / Plant		-	-	-	-												
	Building D Total		2,000	21,529	494	5,318	2,460	26,480	2,781	29,935	-	-	5	11	16	91	107	
											0%	0%	31%	69%				

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 705** SUBTITLE: **Building E - Residential Apartments** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY		
Floor	Flat No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants	
		Entrance / Core (C3)			-	-												
	G	E0-1*	1 Bed	55	592	12.0	129				1				1	2	2	
	G	E0-2*	1 Bed	55	592	9.0	97				1				1	2	2	
				110	1,184	21.0	226	149	1,604	170	1,830	2	-	-	2	4	4	
	1	E1-1	2 Bed	70	753	8.0	86					1			1	3	4	
	1	E1-2	2 Bed	70	753	8.0	86					1			1	3	4	
				140	1,507	16.0	172	173	1,862	198	2,131	-	2	-	2	6	8	
	2	E1-1	2 Bed	70	753	8.0	86					1			1	3	4	
	2	E1-2	2 Bed	70	753	8.0	86					1			1	3	4	
				140	1,507	16.0	172	173	1,862	198	2,131	-	2	-	2	6	8	
	Residential (C3)		390	4,198	53.0	571	495	5,328	566	6,093	2	4	-	-	6	16	20	
	Commercial (B1/2/8)		0	-	-	-												
	Car Park		0	-	-	-												
	Ancillary / Plant		0	-	-	-	24	258	28	301								
	Building E Total		390	4,198	53	571	519	5,587	594	6,394	2	4	-	-	6	16	20	
											33%	67%	0%					

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 708** SUBTITLE: **Building G - Residential Existing Townhouse** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY		
Floor	Flat No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants	
H	I-H-1	Existing 2 Bed	73	786	30	323	75	807	85	915	0	1	0	0	1	4	4	
Residential (C3)			73	786	30	323	75	807	85	915	0	1	0	0	1	4	4	
Car Park			-	-	-	-												
Building G Total			73	786	30	323	75	807	85	915	-	1	-	-	1	4	4	
											0%	100%	0%	0%				

PROJECT TITLE: **Greggs Bakery, Twickenham** SCHEDULE TITLE: **A2871 709** SUBTITLE: **Accessible and Adaptable Schedule** MEASURED FROM DRAWINGS: **A2871 200 Series Plans** ISSUE DATE: **R20 - Planning Submission 15/02/2019** **Assael**

Definition of Areas for Schedule of Areas
Floor areas are generally calculated in accordance with the current Code of Measuring Practice published by the RICS with the exception of residential property when the following definitions are used:

Net Internal Areas (NIA)
Net internal area shall be the sum of all habitable areas within the dwellings, and measured within the internal face of the enclosing walls. Includes areas occupied by partitions, columns, chimney breasts, internal structural walls, internal service ducts, cupboards, kitchen units and sanitaryware within the habitable space. Excludes balconies, terraces, verandas, garages and parking areas.

Circulation
Total area of all enclosed common or shared spaces forming entrance halls, corridors, staircases, lift wells, connecting links and the like.

Gross External Area (GEA)
Garages, bin stores and bike stores have been included in the GEA of townhouses unless stated separately

Ancillary
Total area of all enclosed common or shared spaces for sanitary accommodation, cloakrooms, kitchens, cleaners' rooms, lift, staircases, plant, bike stores, tank rooms and storage rooms etc.

Internal Divisions
The area occupied by partitions, columns, chimney breasts, internal structural or party walls, service ducts, not within the Net Internal, Circulation, and Ancillary Areas defined above.

Gross Internal Area (GIA)
The sum of the areas falling into the categories defined as Net Internal Area, Circulation, Ancillary, integrated garages, and Internal Divisions will equal the Gross Internal Area (GIA). Half of the neighbouring party walls has been included.

Excluded balconies, terraces, verandas, parking areas, separate bin and bike stores and areas which are not enclosed spaces (e.g.) open ground floors, open covered ways and the like). These should each be shown separately.

Habitable Rooms
Includes all separate living rooms, offices and bedrooms, plus kitchens with a floor area of 13sqm or more. An additional hab room has been counted if the living/kitchen/dining room is over 30 sqm.

Internal Face
This means the surface of plasterwork applied to the masonry or studwork construction and not the surface of internal linings installed for or by the occupier, for example ceramic tiling or timber panelling.

Areas
These are measured 1.5m above finished floor level (FFL). Storage areas within eaves are counted to 1.2m. This is the top of the screed or floorboards not underlays, carpets, ceramic tiled or vinyl coverings. All dimensions must be checked on site.

This drawing must not be used for land transfer purposes.

Calculated areas in accordance with Assael Architecture's Definition of Areas for Schedule of Areas. Subject to survey, consultation and approval from all statutory authorities.

Revision Status: P = Planning T = Tender

*denotes a handed house type
* denotes wheelchair M4(3) unit



DESCRIPTION			NET AREA		AMENITY SPACE		GROSS AREA				UNIT MIX					OCCUPANCY		
Floor	Flat No	Unit Type	NIA (sq.m)	NIA (sq.ft)	(sq.m)	(sq.ft)	GIA (sq.m)	GIA (sq.ft)	GEA (sq.m)	GEA (sq.ft)	1 Bed	2 Bed	3 Bed	4 Bed	Total Units	Hab Rooms	Occupants	
	C-9	HT 4*	129	1,389	27	291							1		1	5	5	
	C-10	HT 4**	129	1,389	26	280							1		1	5	5	
	C-15	HT 4*	129	1,389	20	215							1		1	5	5	
	C-16	HT 4**	129	1,389	19	205							1		1	5	5	
	C-25	HT 4**	129	1,389	17	183							1		1	5	5	
	C-26	HT 4**	129	1,389	17	183							1		1	5	5	
G	E0-1*	1 Bed	55	592	12.0	129					1				1	2	2	
G	E0-2*	1 Bed	55	592	9.0	97					1				1	2	2	
1	F1-8*	1 Bed	54	581	14	151					1				1	2	2	
2	F2-8*	1 Bed	54	581	5	54					1				1	2	2	
3	F3-7*	1 Bed	54	581	5	54					1				1	2	2	
4	F4-1*	1 Bed	54	581	5	54					1				1	2	2	
4	F4-4*	2 Bed	80	861	12	129							1		1	3	4	
Building G Total			1,180	12,702	188	2,024	-	-	-	-	6	1	6	-	13	45	46	
											46%	8%	46%	0%				

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Document Control Form

Project number	A2871
Project title	Greggs Bakery, Twickenham
Document title	Design and Access Statement
Client	London Square
Document status	Planning Submission
Date of issue	15 February 2019
Prepared by	Ed Sharland, Associate
Checked by	Emily Newton, Associate Director

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Status	Revision	Date issued	Prepared by	Checked by
R20	Planning Submission	15/02/2019	ES	EN