

11.0

11.0 DESIGN STRATEGIES

11.1 PEDESTRIAN ACCESS & INCLUSIVE DESIGN

PEDESTRIAN ACCESS

The Site is accessible for pedestrian users with footways located on either side of the carriageway with sufficient dropped kerbs for crossing purposes. The footways located along Clarendon Road provide sufficient access to Hornsey Park Road which provides pedestrian access to the surrounding residential dwellings and the retail services located along Turnpike Lane.

SHARED ENTRANCE

Both tenures access to the north into a shared lobby which will have a desk for a reception desk. Following via separate doors to dedicated fob general access stairs and lift. Lift and escape strategy to allow for access to either lift in any case that is required via fob access.

RESIDENTIAL

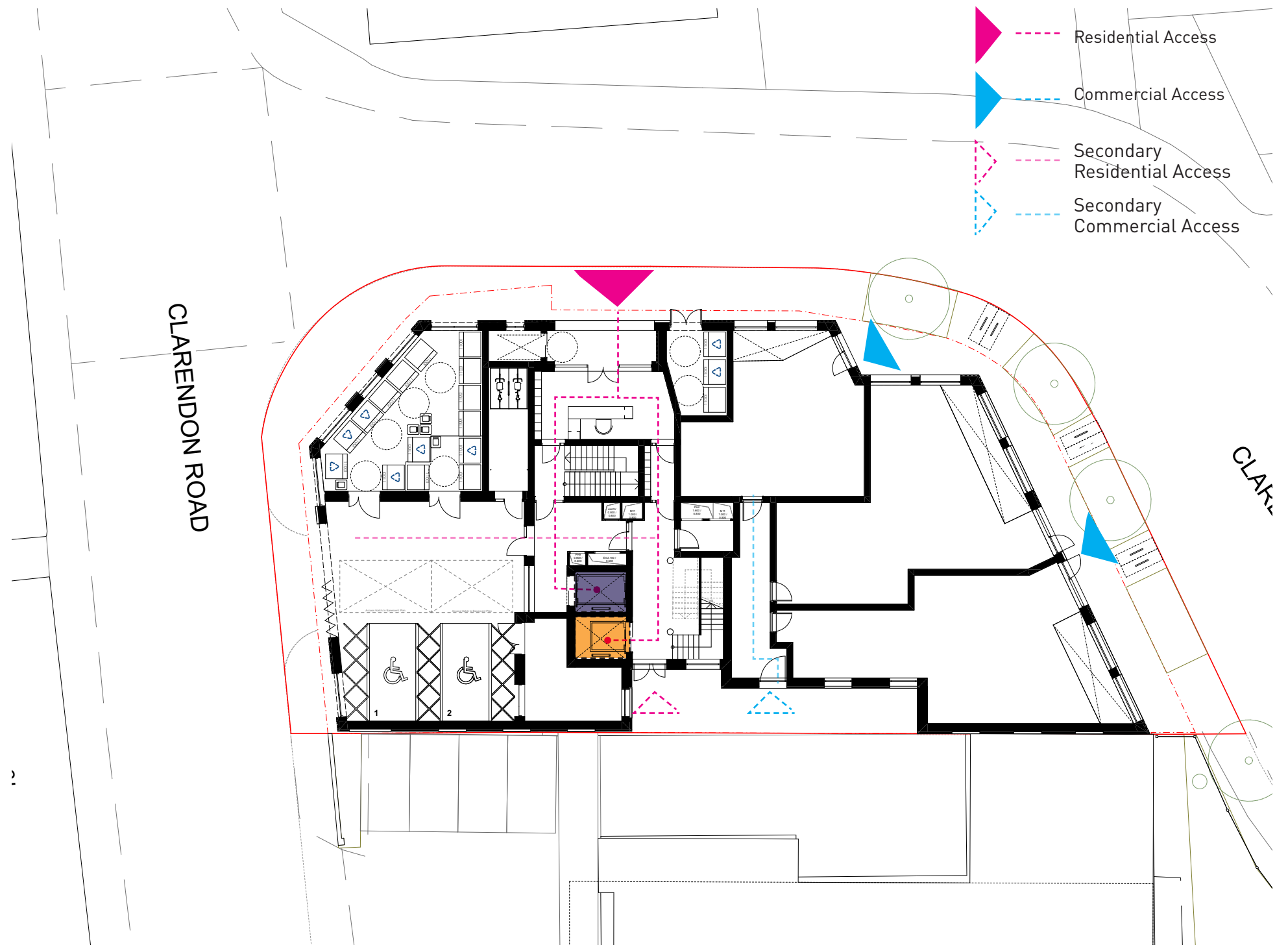
10% of the dwellings are designed to be wheelchair adaptable or accessible in accordance with Part M4(3). Balconies will have level thresholds.

SOURCES OF GUIDANCE

Building Regulations AD Part M4(2) or M4(3)
Supplementary Planning Guidance Accessible London: Achieving an Inclusive Environment.
The London Plan best practice guide: Wheelchair Accessible Housing.

GENERAL PRINCIPLES

- All lifts will be Part M compliant.
- Thresholds will be level and door opening widths will be in accordance with guidance.
- All communal stairs will be suitable for ambulant disabled users.
- Access to all residential amenity spaces, balconies, terraces and gardens will be step free.



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11.2 SERVICING, REFUSE & RECYCLING STRATEGY

Waste Storage and Collection
The development will be provided at ground floor, with separate stores for each of the uses. Each waste store is provided with direct and level access to either Clarendon Road or the disabled parking area to facilitate ready access for waste collection operatives.

Site management will ensure waste is accessible to the waste collection operatives shortly before collection.

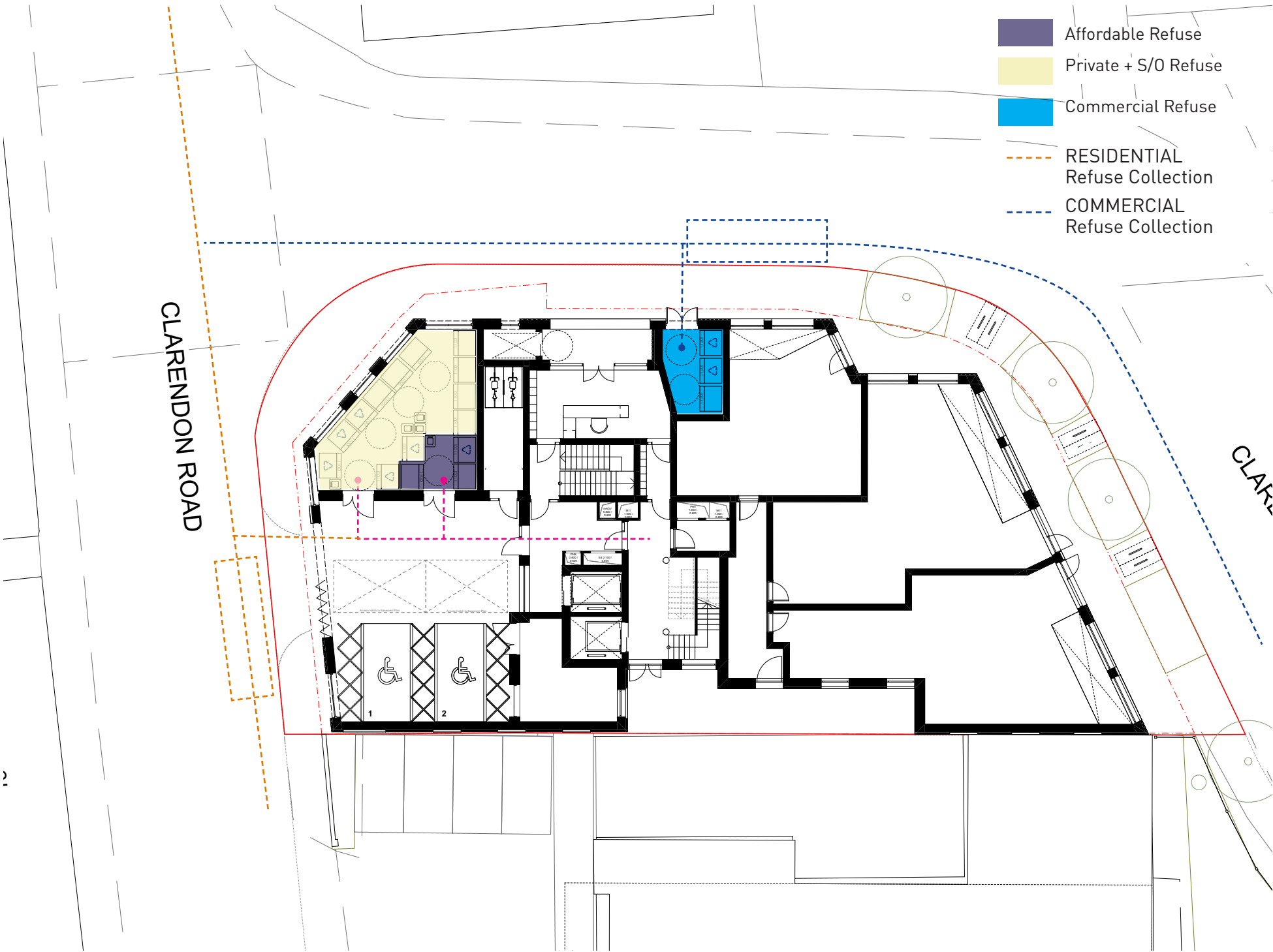
It is expected that all commercial waste collection will be undertaken privately which will enable a fully managed solution that can be timed outside of peak delivery times and in a way which optimises collection. This will also allow for multiple collections per week if such a demand for waste collection is required.

STORE
9 x 1100 litre refuse bins
6 x 1100 litre recycling bins
5 x 140 litre compost bins

Calculations are shown below.

REFUSE & RECYCLING PROVISION											
Studio	1B	2B	3B	TOTAL UNITS	Hab. Rms	REFUSE+Compost	RECYCLING	1100L Bins	1100L Bins	140L Bins	Bins
Affordable	5	2	3	10	28	1,923	1,100	1.7	1.0	0.6	4
Private + S/O	3	14	23	41	104	7,886	4,510	6.8	4.1	2.6	15
TOTAL	3	19	25	51	132	9,809	5,610	9	6	4	19

REFUSE CAPACITY GUIDELINES - RESIDENTIAL	
Source - Haringey Local Plan SPD adopted 2013. *min capacity per week	
REFUSE -	1x1100ltr Eurobin per 6 dwellings
RECYCLING -	1x1100ltr per 10 dwellings



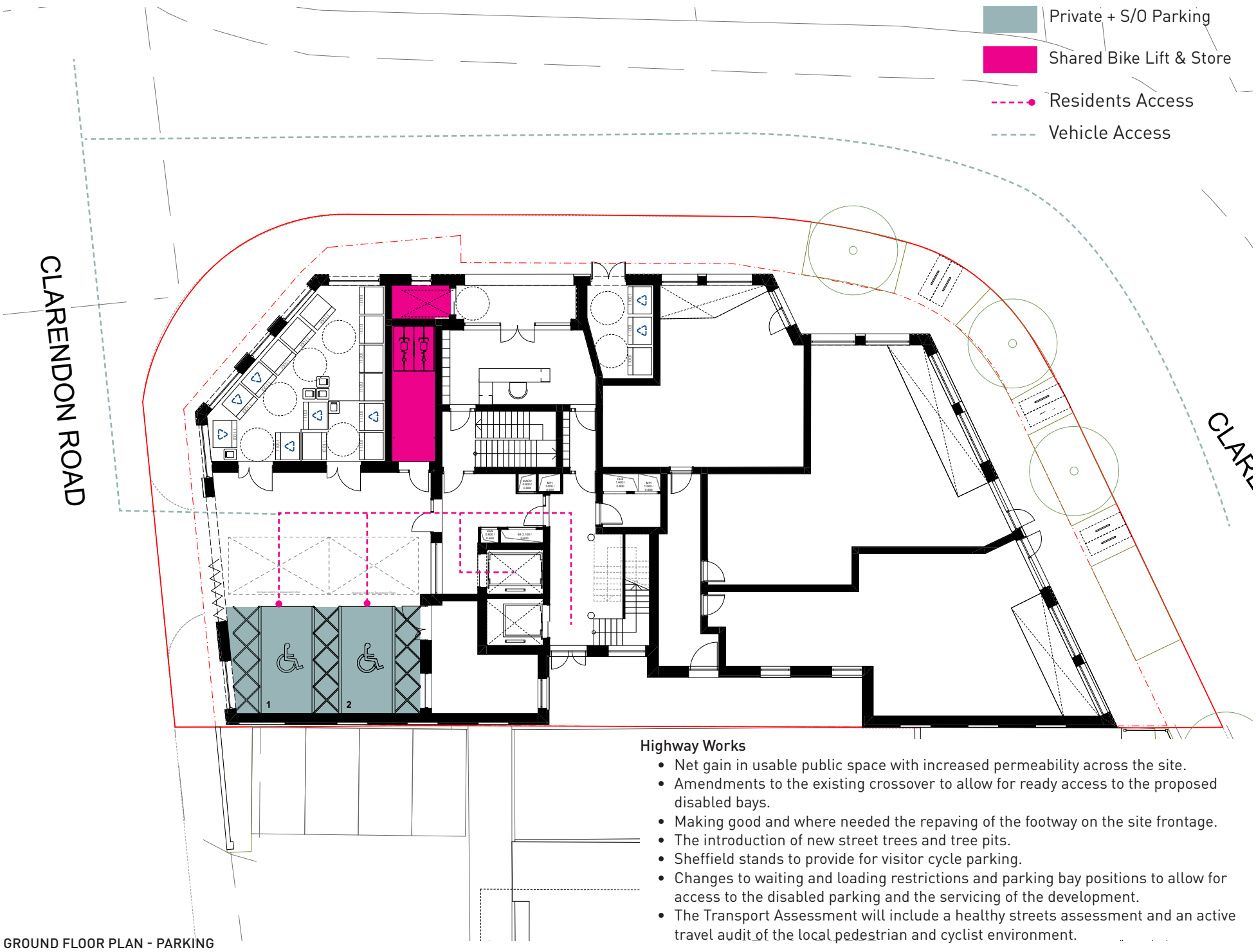
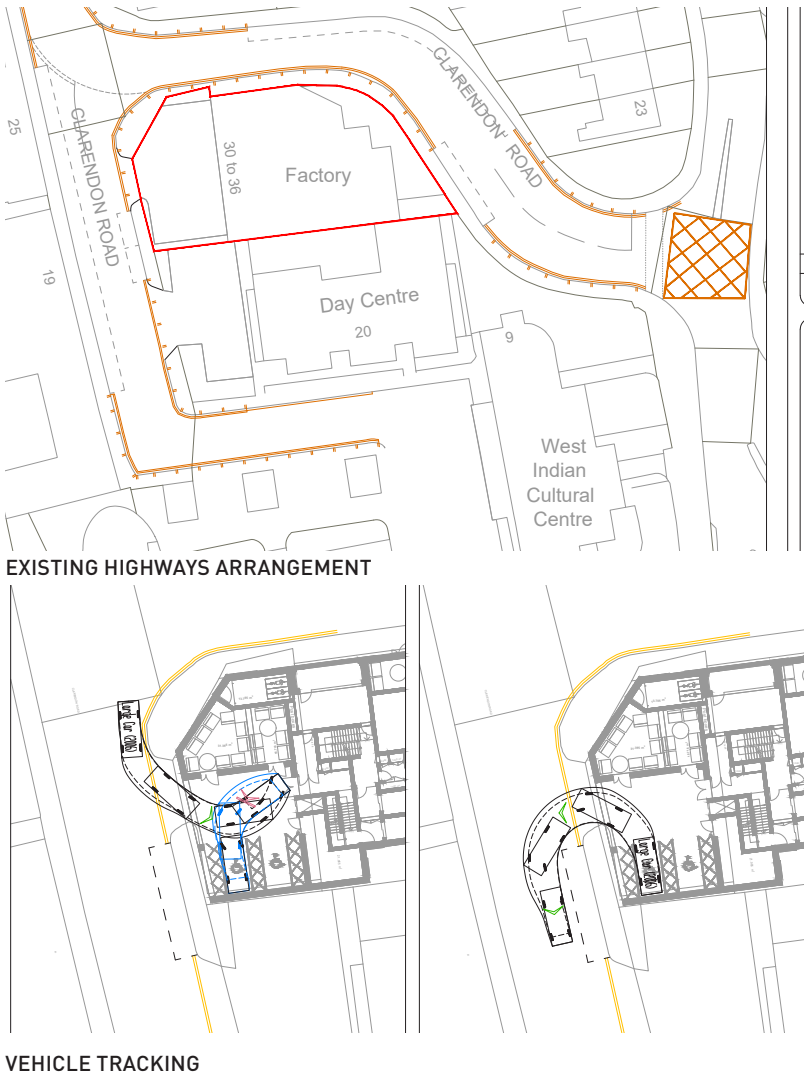
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11.3 HIGHWAYS & PARKING STRATEGY

- Site Context

 - PTAL rating of 5
 - Existing car park to the rear, which can accommodate 5 cars
 - Proposed Scheme
- Parking

 - Permit-free agreement secured via the Section 106 Agreement.
 - Two disabled car parking spaces (4%)
 - Minor changes to the existing car park access crossover.
 - Future additional disabled spaces will be accommodated on the public highway.
 - Parking surveys to be undertaken in September 2022.
 - Cycle parking in accordance with London Plan standards.



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11.4 CYCLE STORAGE STRATEGY

Cycle parking will be provided in line with the Intend to Publish London Plan (2019) cycle parking standards. Cycle storage for the Cultural Centre will be provided internal to its floorspace. Separate cycle stores are provided at basement level and ground floor for the residential, co-living, and co- working elements of the proposals. Visitor cycle parking is located external to the building to the south and east of the building as well as within the courtyard.

We have used the following mix for each use: 5% accessible, 20% Sheffield, 75% 2-tier.

CYCLE PARKING STANDARDS BLOCKS	CYCLE SPACES					
	1B	2B+	TOTAL	Larger	Sheffield	2 Tier
Affordable	4	6	Required 18	5%	20%	75%
				1	4	14
				6%	22%	78%
Private + S/O	15	26	Required 75	4	15	56
				4	10	60
				5%	13%	81%
TOTAL	19	32	93	5	14	74
	51			95		

*Requirements according to Draft New London Plan.

Table 2.1 Intend to Publish London Plan Car and Cycle Parking Standards		
Use Class	Minimum long stay cycle parking	Minimum short-stay cycle parking
B1 (Office)	1 space per 75 sqm (GEA)	first 5,000 sqm: 1 space per 500 sqm; thereafter: 1 space per 5,000 sqm (GEA)
C3 (Dwellings)	1 space per studio or 1 person 1-bedroom dwelling 1.5 spaces per 2 person 1-bedroom dwelling 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 dwellings
D1 Other (Community)	1 space per 8 FTE staff	1 space per 100 sqm (GEA)
Sui Generis	As per most relevant other standard	

*with the exception of disabled persons parking

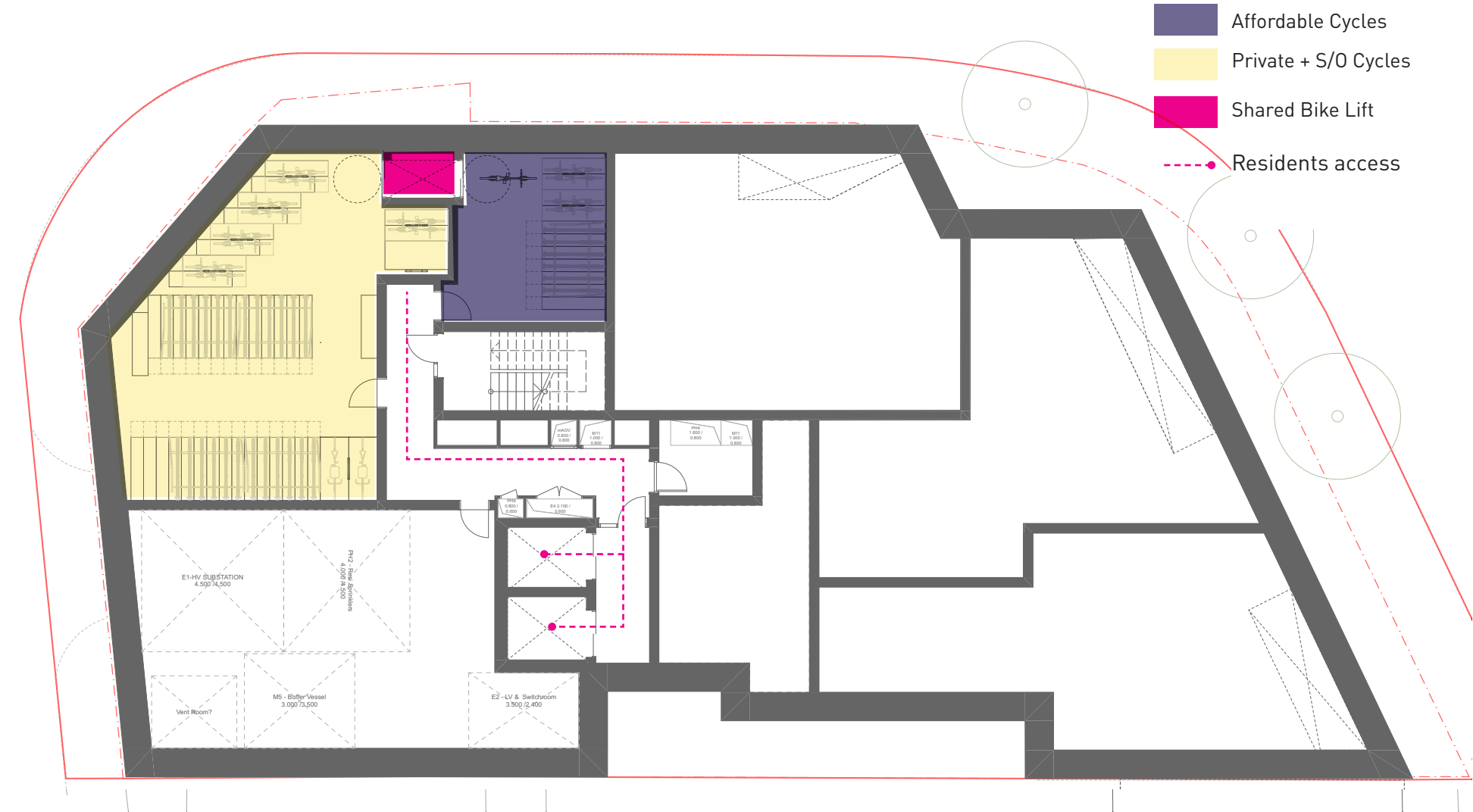
CYCLE STANDARDS - LONDON PLAN



SHEFFIELD STANDS



2-TIER CYCLE RACKS



BASEMENT PLAN - CYCLE STORES



SECTION THROUGH CYCLE STORE

11.0 DESIGN STRATEGIES

11.5 FIRE STRATEGY

Legislation and basis of design

This fire safety strategy is developed in cognisance of the fire safety expectations of the Building Regulations 2010 (as amended), including:

- Regulation 7 – Materials and workmanship
- Schedule 1, Part B1 – Means of warning and escape
- Schedule 1, Part B2 – Internal fire spread (linings)
- Schedule 1, Part B3 – Internal fire spread (structure)
- Schedule 1, Part B4 – External fire spread
- Schedule 1, Part B5 – Access and facilities for the fire and rescue service

Evacuation philosophy

3.1.1 The residential areas of the building will utilise a defend-in-place evacuation strategy, whereas the non-residential and ancillary areas will utilise a simultaneous evacuation strategy from the various demises.

Means of escape through common residential areas

The common corridor arrangements are based on the guidance in Section 7.4 and Figure 6(b) of BS 9991, though also including consideration for the incorporation of an evacuation lift (see Section 3.7). The affordable apartments are provided alternate access using a separate stair. This stair can be utilised as a secondary escape stair for the building as a whole, the stair continues to accessible roof level and provides access at every floor. A 1 m² AOV is to be provided at the head of stair. Means of escape from each of the residential floors will be via the main firefighting stair that serves each of the above ground floors. Means of escape from apartments will initially be via a mechanically ventilated common corridor, before reaching the protected lift lobby and firefighting stair as illustrated in Figure 8. Travel distances within the common corridor to the lift lobby (and common stair) are no greater than 15 m, meeting Figure 6(b) in BS 9991 for a sprinklered building. A firefighting lift will also be provided at the development, as discussed in Section 6.4. This may be required to support firefighting operations within the building and as such, cannot be relied upon for support of disabled evacuation. However, suitable controls to allow use as an evacuation lift are recommended to be provided within the firefighting lift such that this may also be utilised to support disabled egress until such time that it is required by firefighters. The evacuation lift (and firefighting lift) will be accessed from a common lobby that is protected from smoke, arranged to offer a similar level of protection to the lift waiting area as provided to ambulant residents escaping via the protected stair or via the secondary escape stair (see also Section 3.4 regarding smoke control).

Final exits and onward escape

The protected common escape stair and secondary escape stair are both provided with a protected escape route from the base of the stair and evacuation lift. The common stair is proposed to be open to the lift area at Ground floor only, where the lift lobby is not expected to form a protected waiting area or vented smoke lobby at this level. The shared entrance lobby is to be a minimally furnished area featuring post boxes and a concierge desk only. The post boxes are to be constructed using non-combustible material and integrated such that no objects can be stored or accumulate above or below these. Alternative escape from the base of the common stair via the car park area would also be available should escape through the shared entrance not be available. It is considered that a final exit width of 850 mm would be sufficient for the small number of occupants expected to escape at any one time, with this being the minimum width for unassisted use of the exit by wheelchair users. In the event of larger numbers escaping during the wider evacuation of the building, this door width would continue to be considered as sufficient, where simultaneous escape from a residential building is expected to occur over a prolonged period due to the large range of likely pre-movement times.

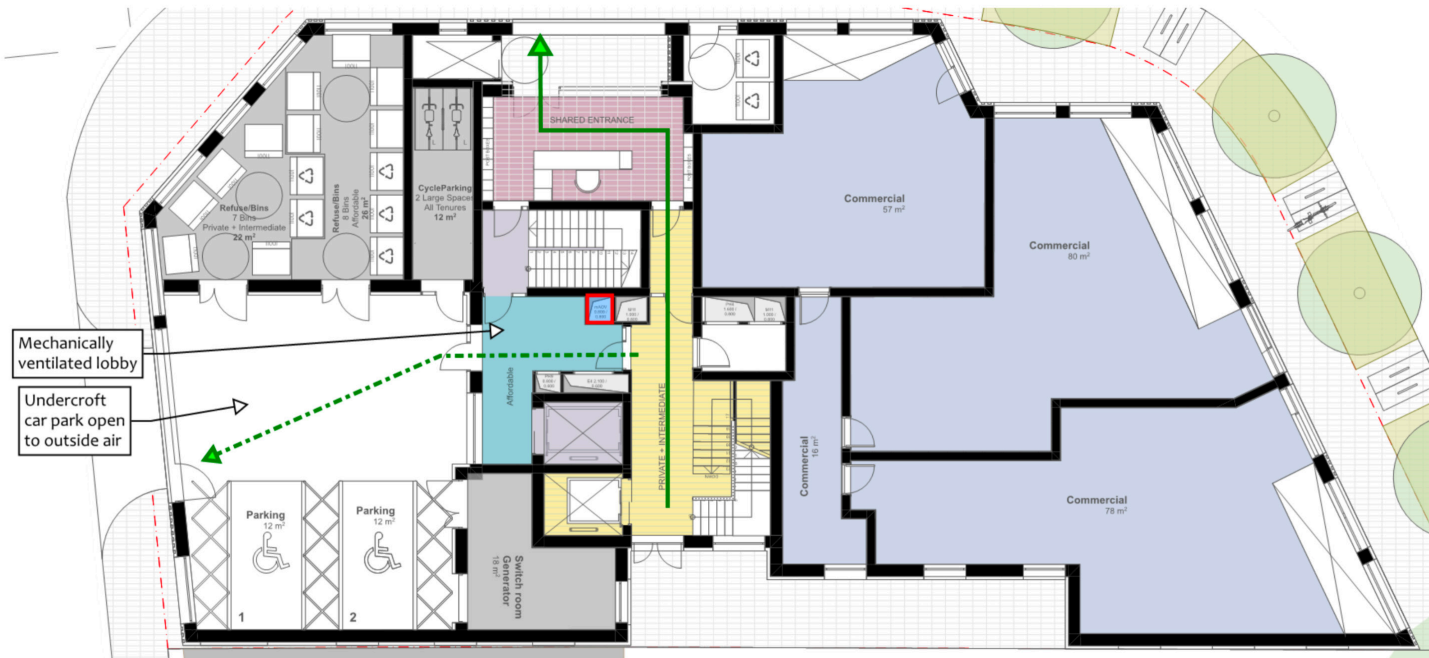


Figure 9 – Ground floor ancillary and non-residential areas

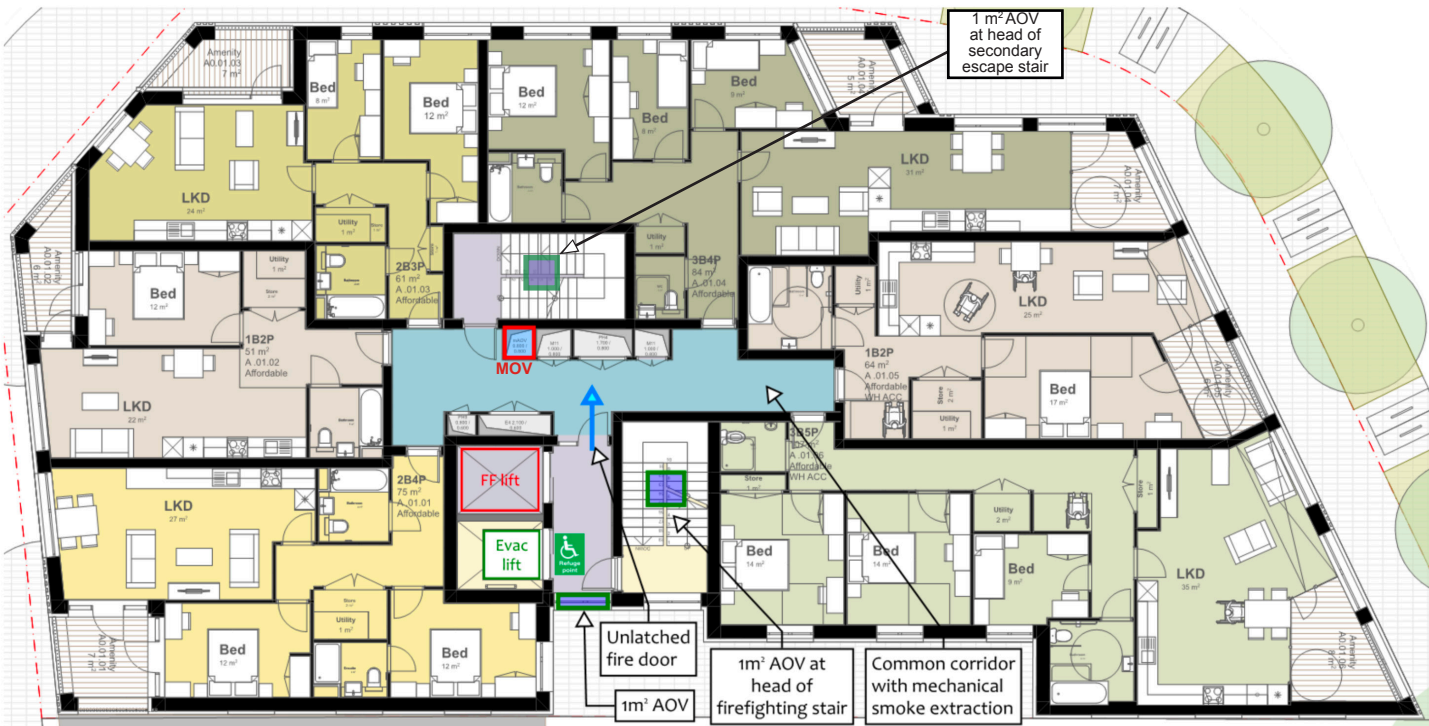


Figure 8 – Typical common area arrangement (1st floor shown)

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11.6 ENERGY STRATEGY - XCO₂

The energy strategy for the Jessica Buttons Development has been developed in line with the energy policies of the London Plan and of the London Borough of Haringey Local Plan policies. The three-step Energy Hierarchy has been implemented and the estimated regulated CO₂ savings on site are 70.7% for the domestic part and 57.7% for the non-domestic part of the development, against a Part L 2013 compliant scheme with SAP10.2 carbon factors.

This report assesses the predicted energy performance and carbon dioxide emissions of the proposed development at 30-36 Clarendon Road, located in the London Borough of Haringey.

The proposed development is a part two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace, with access, landscaping and car and cycle parking.

In line with London Plan policy SI2 and the Haringey Local Plan policy (Development Management DPD) the residential part of the development would need to achieve a 'zero carbon' target for regulated CO₂ emissions; and a zero carbon for non-domestic in regulated CO₂ emissions against a Building Regulations (Part L 2013) compliant scheme.

Due to the current software issues of SAP10, the energy strategy outlined in this report has been developed using the FSAP2012 software with SAP 10.2 emissions factors to ensure the most accurate and reliable results are being produced. As a result, and for consistency, the SBEM has also been assessed against Part L 2013. Increased savings have been targeted for both the Be Lean and Be Green stages to account for the uplift between Part L 2013 and Part L 2021. Please refer to the methodology section for additional information.

The methodology used to determine the expected operational CO₂ emissions for the development is in accordance with the London Plan's three-step Energy Hierarchy (Policy SI2) and the CO₂ savings achieved for each step are outlined below:

BE LEAN – USE LESS ENERGY

The first step addresses reduction in energy demand, through the adoption of passive and active design measures.

The proposed energy efficiency measures include levels of insulation beyond Building Regulation requirements, low air tightness levels, efficient lighting as well as energy saving controls for space conditioning and lighting.

By means of energy efficiency measures alone, regulated CO₂ emissions are shown to reduce by:

Regulated CO ₂ Savings at Be Lean Stage (SAP2012)		
	%	t/yr
Domestic	18.4	9.6
Non-domestic	52.6	3.0
Site wide	21.7	12.6

At the 'Be Lean' stage, the proposed development meets the GLA target of 10% regulated CO₂ emission reductions for the residential portion of the scheme, and a 15% reduction for the non-domestic portion of the scheme using SAP10.2 carbon figures.

BE CLEAN – SUPPLY ENERGY EFFICIENTLY

The application site is located in an area where district heating is not expected to be implemented in the immediate future. Wood Green is a proposed network that will be the first phase of the DEN, focusing on developments at Clarendon Square, the Chocolate Factory and other nearby sites potentially including a

new Council office on Wood Green High Road. There is roughly an 8-10-year window for the connection to become available. Due to this, a connection at this point was not found to be feasible.

A site wide communal heating system is proposed for the residential portion of the scheme with the aim to connect to a future network if it becomes available and individual heating to the non-domestic areas. Based on the strategy proposed, no savings are achieved at the Be Clean stage.

BE GREEN – USE RENEWABLE ENERGY

The renewable technologies feasibility study carried out for the development identified photovoltaics and air source heat pumps as suitable technologies for the development.

A fully electric communal ASHP system is proposed for the residential part of the development to provide heat to the dwellings, with individual ASHP feeding the non-domestic areas. Photovoltaics will also provide electricity to the non-domestic areas.

The incorporation of renewable technologies will reduce CO₂ emissions by a further:

Regulated CO ₂ Savings at Be Green Stage (SAP2012)		
	%	t/yr
Domestic	52.3	27.4
Non-domestic	5.1	0.3
Site wide	47.7	27.7

CUMULATIVE ON-SITE SAVINGS

The overall regulated CO₂ savings on site against a Part L 2013 compliant scheme, are therefore:

Cumulative Regulated CO ₂ Savings (SAP2012)		
	%	t/yr
Domestic	70.7	37.0
Non-domestic	57.7	3.3
Site wide	69.4	40.3

CARBON OFF-SETTING

The proposed development complies with the London Plan CO₂ savings target of 35% overall.

With the SAP10.2 carbon factors, to achieve 'zero carbon' for the residential portion of the scheme, 15.3 tonnes per annum of regulated CO₂, equivalent to 460.4 tonnes over 30 years, from the new-build domestic portion should be offset offsite. The shortfall to a zero-carbon reduction from baseline for the new build non-domestic portion of the scheme would be 2.4 tonnes per annum of regulated CO₂, equivalent to 71.6 tonnes over 30 years, to be offset offsite. The equivalent payments would be £43,736 and £6,803 for the domestic and non-domestic portions of the scheme respectively.

It should be noted that these are based off the results from the scheme being assessed against Part L 2013 and therefore could slightly differ when assessed against Part L 2021.

Any carbon offset contributions will be subject to viability discussions and detailed design stage calculations.

BE SEEN

Following the implementation of the three previous stages of the hierarchy, a monitoring strategy will be put in place to ensure that the actual energy performance of the development can be monitored and reported post-occupation.

The relevant parties will also be made aware of their responsibilities at subsequent reporting stages.



11.0 DESIGN STRATEGIES

11.7 SUSTAINABILITY STATEMENT - XC02

The sustainability strategy for Clarendon Road has been developed with the design team to comply with the relevant environmental policies from the London Borough of Haringey and the London Plan. Relevant energy policies have been addressed in the accompanying Energy Statement. The proposed development is targeting the achievement of BREEAM ‘Very Good’ and expected to reduce on-site regulated carbon emissions by 41.8% with SAP10 emission factors.

This report outlines the sustainability strategy for the proposed development at Clarendon Road, in line with the requirements set out by the London Plan and the London Borough of Haringey.

This sustainability statement is divided into three parts:

- Planning Policies;
- Sustainability Measures; and
- Sustainability Standards.

The first part provides an overview of the site and planning policies applicable to this development in accordance with the London Plan and relevant London Borough of Haringey policies.

The second part then outlines the sustainability strategy that has been employed to address the relevant planning policies.

The third part of this report outlines how the proposed development aims to achieve a BREEAM New Construction ‘Very Good’ rating for the non-domestic areas.

The key sustainable design and construction measures incorporated in the proposals are summarised below, following the London Plan Sustainable Design and Construction SPG and London Borough of Haringey local policies:

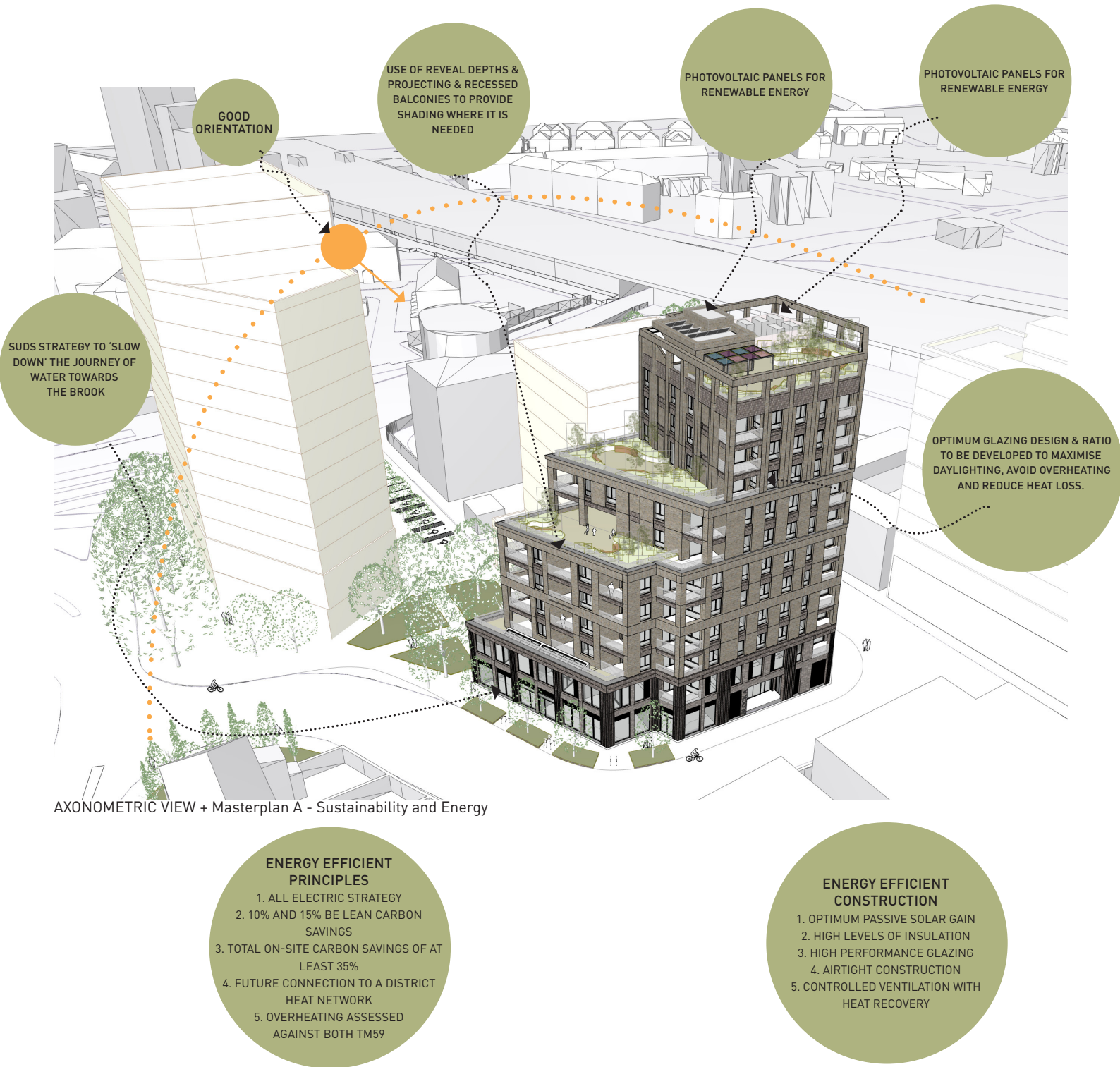
- Effective re-use of previously developed land;
- The specification of water fittings with the aim of reducing water consumption by more than 40%;
- Specification of high-performance fabric and glazing to minimise heat losses;
- Insulated pipework and efficient lighting will minimise heat generated internally;

- Energy efficiency will be maximised through passive and active measures such as optimising daylight;
- The development has been designed to encourage cycling via dedicated cycle parking;
- Providing a mixed-use scheme to maximise how the land is utilised;
- The development will achieve an efficient building fabric with thermal mass, air tightness levels and u-values/y-values below the Building Regulation standards;
- NOx emissions will be minimised as far as possible through a predominantly electric-led energy system;
- The landscape proposals which aim to increase the green cover of the site will seek to include heat and drought resistant species.

In summary, the proposed development at Clarendon Road meets the targets set out by London Borough of Haringey and the Greater London Authority (GLA).

The commercial areas of the scheme could achieve a BREEAM score of 58.55% for the Community Centre and 58.27% for the Co-working space, exceeding the BREEAM ‘Very Good’ target of 55%.

The number of credits obtained in the BREEAM pre-assessment/sustainability measures incorporated reflect the client and design team’s aspirations in integrating sustainability measures and demonstrates that the project is designed to exceed the planning policy sustainability requirements.



11.0 DESIGN STRATEGIES

11.8 OVERHEATING STRATEGY - XC02

07/10/2022 by AM, reviewed by LW

All habitable residential rooms assessed at the proposed development at 30-36 Clarendon Road were found to meet the Part O overheating risk criteria for the London Weather Centre DSY1 future weather data set (2020 High 50 Percentile) when incorporating a combination of natural ventilation and solar control techniques in the design. Due to noise restrictions, an analysis has also been undertaken assuming windows are not able to open overnight. As a result, the provision of trim cooling as part of the MVHR system is recommended to mitigate overheating risk in bedrooms. The non-residential spaces were found to require an element of comfort cooling due to lack of natural ventilation at basement. The design incorporates natural ventilation, solar control glazing, external shading and efficient lighting to ensure cooling need only be used during the hottest periods.

EXECUTIVE SUMMARY

An overheating risk analysis has been conducted for the proposed development at 30-36 Clarendon Road at the old Jessica Buttons factory, located in the London Borough (LB) of Haringey. The purpose of this analysis is to test the design of the proposed scheme and ensure the mitigation of overheating risk as far as possible within the occupied zones across the development. This will ensure the comfort of the occupants as well as future-proof the scheme by taking into account projected increased ambient air temperatures resulting from climate change.

In order to assess the thermal performance of the development, models were constructed using thermal simulation software. The internal temperature was estimated for all the habitable internal spaces. Lighting, occupancy and ventilation conditions were input based on Part O methodology.

With the aim of giving the most robust consideration, performance of the various occupied rooms was compared with Approved Document Part O of the Building Regulations, which relies on the CIBSE Technical Memorandum 59¹ performance recommendations, with some further added restrictions. These are rigorous targets that determine the acceptability of overheating based on the temperature differential between the internal and the external environment (ΔT), considering the frequency of high temperature difference beyond which the level of overheating is considered unacceptable. Specifically, for bedrooms, the methodology further aims to evaluate comfort during the sleeping hours by setting a maximum number of hours for which the operative temperature can exceed 26°C. Part O is part of the Building Regulations 2021 and is currently the most appropriate assessment methodology for assessing overheating risk in residential properties in the UK.

CIBSE Technical Memorandum (TM52) is the recommended methodology assessing overheating risk in non-domestic developments. Guidance from LB Haringey's Key Overheating Planning Application Requirements was followed as well.

The thermal simulations indicate that the dwellings are predicted to satisfy the overheating risk criteria for the probabilistic Design Summer Year (DSY1 – 2020 High emissions 50 Percentile) for the London Centre weather file through a combination of natural ventilation, solar control strategies and external shading across the scheme.

proposed solution for these has been to test a scenario where bedroom windows are closed, and the mechanical ventilation from the proposed MVHR with a proportion of pre-tempered intake air is applied as per the specification. This does not amount to full comfort cooling, rather it is a 'trim cooling' provision, expected to be capable to reducing the incoming air temperature by approx. 8°C. A test of the sample units against the 'predominantly mechanically ventilated' criterion confirm that the bedrooms are expected to meet the Part O criteria with the as-designed MVHR running in cooling mode. XC02 would also recommend that:

- It should be ensured that all residential windows and glazed doors can be fully openable (side hung by 90 degrees) and provide minimum equivalent free areas as described in the 'Ventilation section' within this report;
- It should be ensured that all external windows can be open inwards;
- For solar control, glass of low g-value (0.50) for all residential windows and glazed doors will be specified to avoid solar transmittance during summer, but allow for passive heating in the winter;
- Use of internal shading devices e.g., curtains or blinds of low shading coefficient will be recommended to the future tenants for controlling solar gains. The impact of internal shading devices is not accepted by the Part O methodology, thus, is not included in our assessment;
- On Level 1, provision of external vertical fins on top of full height openable glazing behind will be recommended for controlling solar gains, for protection from falling and for privacy (please refer to window types WT9 and WT12 in the ventilation section), and;
- MVHR with integrated cooling coil is required for all bedrooms' compliance due to noise restrictions stated by the Part O methodology and confirmed by the acoustic analysis. Detailed information can be found in the 'Ventilation section' within this report.
- In case of overheating, residents are encouraged to make use of their private amenities, in the form of balconies, provided to all residential units across the scheme. A communal outdoor space (e.g., play space/communal terrace) has also been provided at level 6 for the residents to cool down during extreme weather conditions.

The proposed non-residential spaces are predicted to satisfy the overheating risk criteria for the probabilistic Design Summer Year (DSY1) 2020's weather data for London Weather Centre through the use of mechanical cooling, after passive design measures have been maximised (energy efficient lighting, insulated pipework, deeper window reveals for shading, and solar control glazing with g-value of 0.5).

The above measures incorporated as part of the proposed scheme are not seen to suffice for compliance with the 2050's weather file. While it is aspired to, but not a requirement that Part O risk criteria is met for future weather files, the below measures are being considered for future retrofit plans.

- For better overheating risk mitigation performance, 800mm deep external shading (to achieve 1m depth in conjunction with the window reveals) to enable compliance in the future due to the rising temperatures. The shading device is proposed as a horizontal feature directly above south and southwest facing glazing and as a vertical for the full height of the glazing (on the southern edge) of all east and west facing window assemblies. This option provides solar shading without relying on occupants to control shading devices and the shading does not interfere with the air flow. It does of course have aesthetic and cost implications however.
- A lower g-value of 0.4 would be recommended to reduce solar gains if this can be accommodated whilst also meeting light transmittance targets for the daylight analysis. It is expected such a reduction would reduce energy and carbon emission reductions slightly due to a loss of beneficial solar gains in winter.
- Due to the acoustics restrictions on the opening of windows at night, higher flow rates from the MVHR with incorporated cooling coil would be required in bedrooms and KLDs. Based on the limits and constrains from the trim cooling provided by the MVHR, apartments with 3 bedrooms may have to consider active cooling to provide sufficiently comfortable conditions in these more extreme weather situations, and comply with the Part O requirements.

11.0 DESIGN STRATEGIES

11.9 SUNLIGHT, DAYLIGHT & OVERSHADOWING - XC02

DAYLIGHT, SUNLIGHT & OVERSHADOWING OF NEIGHBOURING PROPERTIES

EXECUTIVE SUMMARY

The daylight, sunlight and overshadowing analysis indicates that there will not be a significant impact on surrounding properties arising from the proposed development at 30-36 Clarendon Road, London N8 0DJ.

Daylight and Sunlight analysis was carried out for the proposed development at 30-36 Clarendon Road, London N8 0DJ, located within the London Borough of Haringey. This report outlines the results of the analysis for the planning application, assessing the daylight and sunlight impacts on surrounding developments.

The methodology set out in this report is in accordance with BRE's "Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice" by PJ Littlefair et al. (2022) which is accepted as good practice by Planning Authorities.

The following assessments were carried out:

- Daylight: 25 Degree Line
- Daylight: Vertical Sky Component
- Sunlight: Sunlight Access
- Sunlight: Sunlight Overshadowing

Computer modelling software was used to carry out the assessments. The model used was based on drawings and a 3D model provided by the design team together with desktop research on neighbouring properties.

DAYLIGHT ASSESSMENT

A total of 336 windows from buildings surrounding the site were highlighted as being in close proximity to and facing the proposed development. Daylighting levels for potentially affected windows of surrounding developments by the proposed development at 30-36 Clarendon Road were found to be acceptable considering their individual contexts.

In summary,

- 63 out of 336 windows passed the 25-degree line test;
- 135 windows achieved VSCs greater than 27%;

- 56 windows achieved relative VSCs over 0.8 of their former values;
- 21 windows achieved relative VSCs slightly below of 0.8 of their former values;
- 4 windows achieved VSCs greater than 20% which is deemed good for a city environment;
- 14 windows are located beneath a recessed balcony which reduces the access to daylight more significantly than the development due to sky being almost three times brighter at the zenith than the horizon in the calculations in line with BRE's methodology;
- 42 windows belong to non-residential spaces where artificial lighting is expected and requirement for daylight levels are not as that of a residential development;

As the site currently consists of a two-storey building and the windows have been facing an underdeveloped site, the remaining 1 window is considered to be receiving higher than typical levels of daylight within a city environment.

Overall, the development is not anticipated to a significant impact on the daylight received by neighbouring properties

SUNLIGHT ASSESSMENT

A total of 103 windows from buildings surrounding the site were assessed for sunlight access. The analysis indicated that 6 of the 103 windows passed the 25-degree line test. 82 windows achieved annual probable sunlight hours (APSH) greater than 25% and winter probable sunlight hours (WPSH) greater than 5% or at least 80% of their former value.

The remaining 15 windows, achieved APSHs and/or WPSHs marginally below the BRE recommendations. 11 out of 15 windows are located beneath a recessed balcony 11 windows were located within a recessed

SITE

The proposed development comprises the demolition of the existing building and construction of a part two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace, with access, landscaping and car and cycle parking.

Site analysis was carried out to identify any potential daylight and sunlight impacts on the surrounding development. Relevant properties tested in this report and near the proposed development are annotated in the figure below.

The following neighbouring buildings were tested in detail:

- Westpoint Apartments
- 19-27 Clarendon Road
- 50A Clarendon Road
- Katerina House Apartment Building
- 23,25,27,27A,29,31,31C Hornsey Park Road
- 2 The Avenue
- 8 Hornsey Park Road
- 10 Hornsey Park Road
- 141-159 Turnpike Lane
- West India Cultural Centre
- Clarendon Recovery College

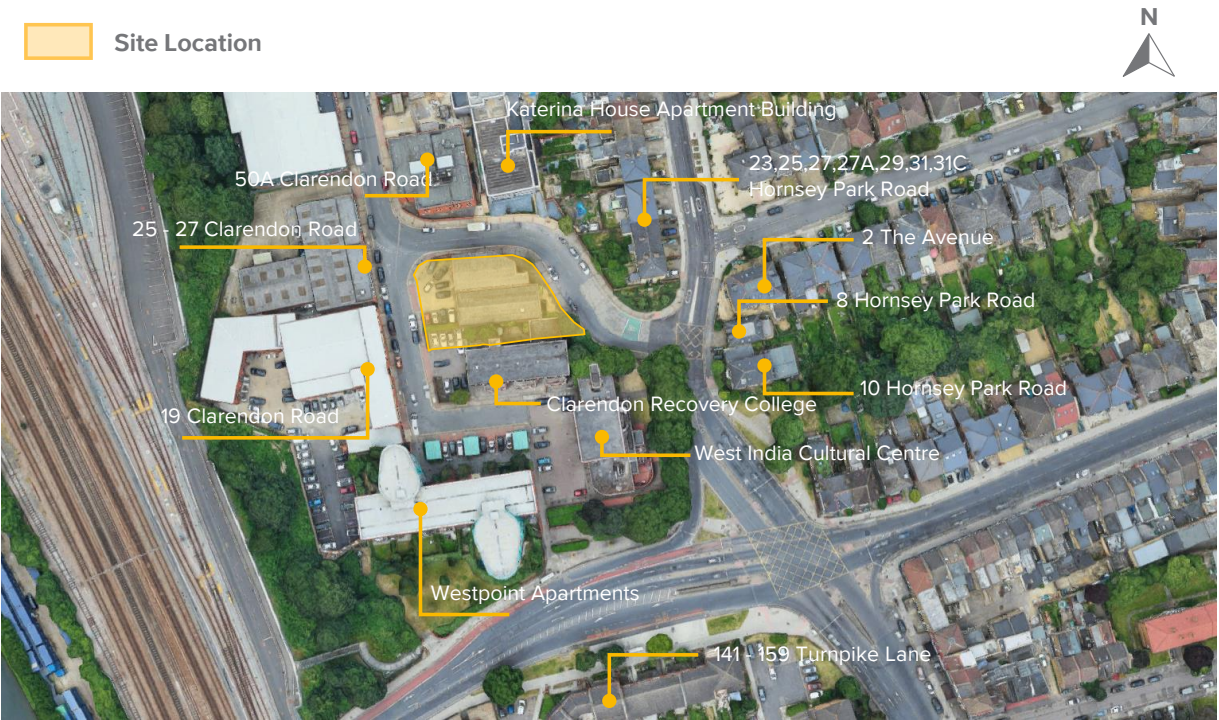


Figure 1: Site location and neighbouring buildings assessed

11.0 DESIGN STRATEGIES

11.9 PROPOSAL SUNLIGHT, DAYLIGHT - XC02

PROPOSED SCHEME DAYLIGHT, SUNLIGHT & OVERSHADOWING

EXECUTIVE SUMMARY

The daylight, sunlight and overshadowing analysis indicates that the habitable rooms of the proposed development at 30-36 Clarendon Road, London N8 0DJ will achieve adequate levels of daylight and sunlight.

Daylight and Sunlight analysis was carried out for the proposed development at Clarendon Road, located within the London Borough of Haringey. This report outlines the results of the analysis for the planning application, assessing the daylight and sunlight received by the habitable spaces of the proposed development.

The methodology set out in this report is in accordance with BRE's "Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice" by PJ Littlefair et al. (2022) which is accepted as good practice by Planning Authorities.

Computer modelling software was used to carry out the assessments. The model used was based on drawings and a 3D model provided by the design team.

DAYLIGHT ASSESSMENT

The rooms evaluated in the internal daylight assessment include open plan kitchen, living room, dining spaces, and bedrooms within the proposed development.

The assessment was carried out for 17 no. dwellings considered to be the worst-case units in terms of daylight access across the scheme. All habitable rooms within these dwellings have been included in the assessment.

The analysis results indicated that 37 out of 49 rooms satisfy the recommendations set out by the BRE's "Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice" by PJ Littlefair et al. (2022), which is accepted as good practice by Planning Authorities.

Of the remaining 12 rooms, half are kitchen/living/dining rooms while the other half are bedrooms. 5 of the 6 remaining kitchen/living/dining (KLD) rooms meet within 80% or above of the BRE recommendations, and the remaining 1 meets within 70% of the BRE recommendations. 2 of the 6 remaining bedrooms fall within 80% of the BRE

recommendations as well, while the remaining 4 are located on the first floor of the building and have greater obstructions.

Overall, the proposed development as a whole is anticipated to achieve adequate levels of daylighting to all dwellings and habitable spaces, and is therefore considered to provide good quality of accommodation to the future occupants in terms of daylight.

SUNLIGHT ASSESSMENT

The assessment was carried out for 17 no. dwellings considered to be the worst-case units in terms of sunlight access across the scheme.

A total of 17 living spaces were assessed for solar access.

The analysis has shown that 14 rooms will achieve adequate annual and winter sunlight based on the BRE Guide.

The remaining 3 living rooms fall short of the BRE criteria however are located at the north/north-west façades which allows for a reduced amount of sunlight exposure. The number of dwellings with living rooms facing solely north, northeast, or northwest has been minimised in this scheme.

Overall, it can be concluded that the proposed design offers adequate accessibility to sunlight in living spaces considering the context and limitations of the site.

OVERSHADOWING ASSESSMENT

A solar access analysis was undertaken for a total of 3 amenity spaces for the full 24 hours on 21st of March in line with the BRE guidance.

DESIGN DEVELOPMENT

The findings presented in the following sections are the result of an iterative design process in which discussions were held between XC02 and Stockwool Architects in order to optimise the scheme's performance in terms of daylight levels given the context of the site.

Initial drawings from the architect were received where the original internal room layouts and glazing specifications were outlined. From these, baseline assessments were carried out on a worst-case scenario basis following the methodology highlighted in the previous section. This first stage of assessment allowed underperforming rooms to be identified in order for appropriate mitigation measures to be decided and agreed with Stockwool Architects to aid in meeting the recommendations.

Some examples of measures that have been implemented into the proposal in order to improve the levels of natural daylight within the dwellings are outlined below.

REVISION OF ROOM LAYOUTS

A number of KLDs that were performing below recommended lux levels, mainly because of their adjacency to balconies, were redesigned. The design layout was enhanced by changing room uses, allowing for the KLDs to have more windows that are not overshadowed by balconies. In addition, 2 bedrooms were falling short of the recommended lux levels and were thus pushed towards the spaces that are more daylight/less obstructed by surroundings by rearranging the bathrooms locations on the southern façade, increasing their area that meets the BRE recommendations.

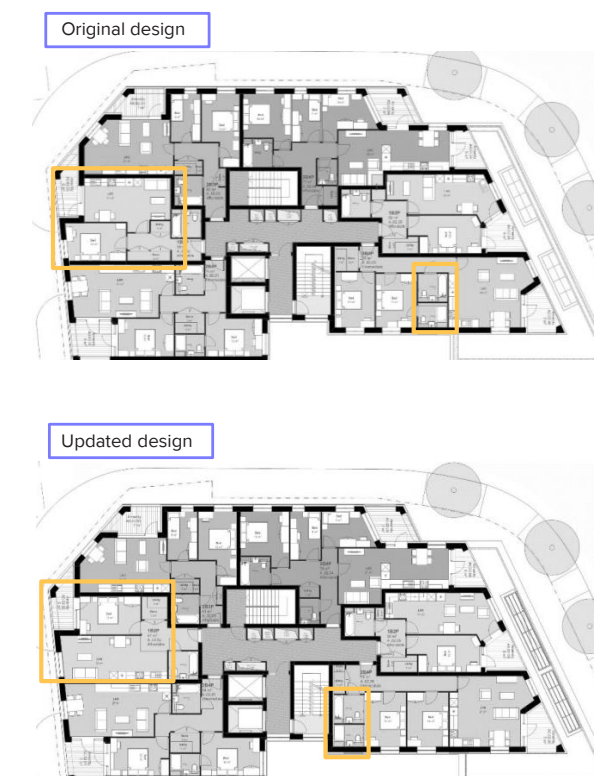


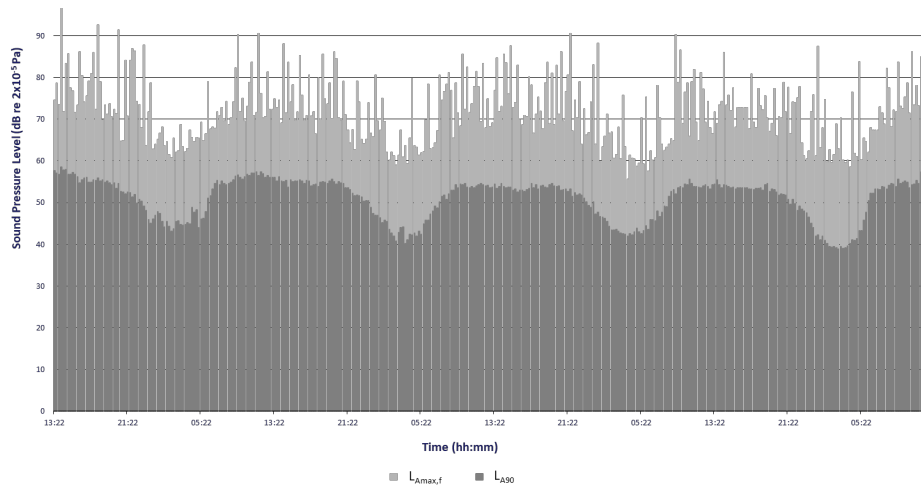
Figure 2: Demonstration of change in layouts to allow for better daylight penetration

11.0 DESIGN STRATEGIES

11.12 ACOUSTIC ASSESSMENT

SUMMARY OF RBA ACOUSTIC REPORT
RBA Acoustics have undertaken noise monitoring at the proposed development site at Clarendon Road in the London Borough of Haringey. The measured noise levels are presented within this report. The resultant noise levels have been used in the assessment of the glazing requirements to ensure suitable internal noise levels are achieved at the proposed development with reference to BS 8233 and WHO. General guidance configurations have been suggested for the glazing constructions that should be capable of achieving the sound insulation performance requirements. A worst case performance of R_w 33 dB is required to the noisiest façades. Limits are provided for noise emissions from fixed external plant associated with the development, following the anticipated requirements of the Local Authority London Borough of Haringey.

Based on the above we do not considered that planning permission should be withheld on the basis of noise.



11.0 DESIGN STRATEGIES

11.13 MICROCLIMATE

Hilson Moran has been appointed by Paul Simon Magic Group to provide a wind microclimate assessment for the proposed development. Levels of pedestrian comfort and distress were quantitatively assessed against the widely used Lawson Criteria (LDDC method), as set out in Building Aerodynamics by Tom Lawson, [Imperial College Press (2001)]. The assessment used Computational Fluid Dynamics (CFD) to simulate wind from 36 wind directions, and combined the results with meteorological data to assess the conditions against the quantitative thresholds. As a conservative measure, the simulations did not include the effect of the many proposed and existing trees and other soft landscaping.

The results show that in most regions, the conditions continue to be milder than the required threshold. The two regions in which the criteria are not met, are the pedestrian region within the southwest angle/ corner of the site. The mottled nature of the results suggest that the conditions are close to the threshold, and the presence of trees in this region and around the southern tower (which were removed from the simulations) would successfully mitigate this issue. The more significant issue occurs on the lower level roof terrace between the two towers. It is recommended that this region is provided with additional local shelter, in the form of porous structures, and soft landscaping (particularly evergreens). We also recommend using this space for activities other than those in the lowest two categories (Pedestrian sitting & pedestrian standing)



Comfort category	Colour	Location examples
Pedestrian sitting	Blue	Cafés, Outdoor Auditoria
Pedestrian standing	Cyan	Bus stops, Main entrances, Playgrounds, Park Benches, Markets
Pedestrian walking	Green	Retail Areas, Parks, Canals
Business walking	Yellow	“Busy” getting from A-to-B (i.e. not necessarily financial)
Roads and Car Parks	Red	Roads and Car Parks

12.0

12.0 SUMMARY 12.1 KEY BENEFITS

Benefits of the Scheme

- The scheme brings forward the Jessica Button Factory site independently
- The Master Plan allows for the future development of the Cultural Centre and Clarendon Road Recovery College
- The scheme respects the design principles previously agreed and the detailed design comments of the DRP
- 51 new homes will be created, including 35% affordable
- Around 570 sqm of employment space will be created
- There will be a net gain in biodiversity
- Sustainable principles are incorporated



13.0

13.0 APPENDIX

13.1 EXISTING CONTEXT ELEVATIONS : NORTH ELEVATION



13.0 APPENDIX

13.1 EXISTING CONTEXT ELEVATIONS : EAST ELEVATION



13.0 APPENDIX

13.1 EXISTING CONTEXT ELEVATIONS : SOUTH ELEVATION



13.0 APPENDIX

13.1 EXISTING CONTEXT ELEVATIONS : WEST ELEVATION

