

Summary of proposal

Design Brief

Our brief is to use the site efficiently to provide high-quality council housing on the site.

Our objective is to take the opportunity to contribute positively to the local setting and public realm through architecture and landscaping.

Summary of proposals

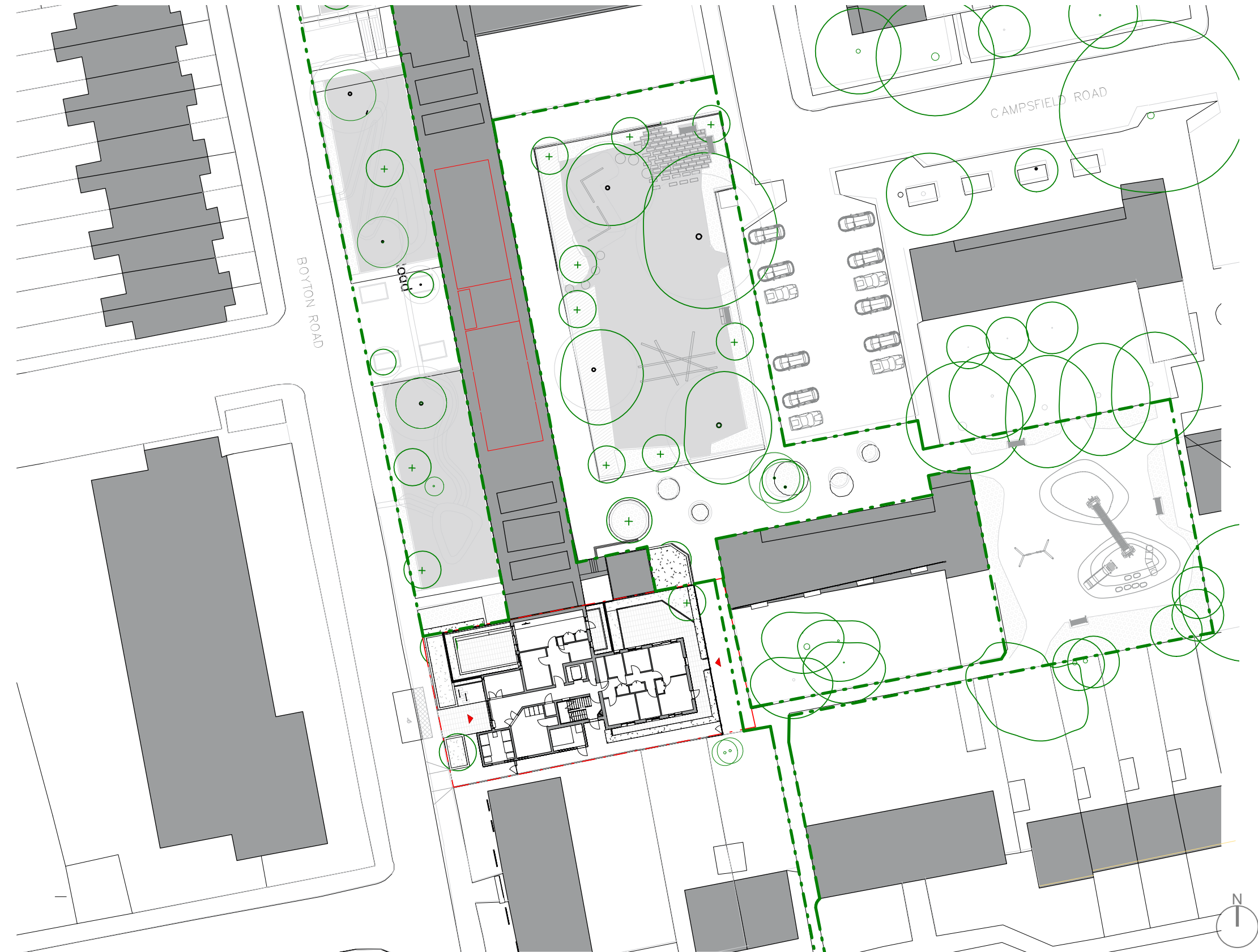
The proposal is to redevelop the car park adjacent Wat Tyler House to provide 15 new Council rent homes in a part 4, 5 and 7-storey building.

Associated amenity space, cycle and refuse/recycling stores will be provided along with a wheelchair parking space on Boyton Road.

Landscape improvements including new trees are proposed on Boyton Road and the existing communal areas and play space to the rear on the Campsbourne Estate will be enhanced.

- Accommodation:
- 6 x 1 Bed 2 Person
 - 5 x 2 Bed 3 Person
 - 3 x 2 Bed 4 Person
 - 1 x 3 Bed 4 Person
 - Total 15 dwellings (including 1 no. 1 bed Part M4(3) compliant flat)
- No. 28 secure internal bicycle spaces
- 2 Sheffield stands providing 4 visitor spaces
 - 2 no. secure 'bikehanger' type shelters providing 12 spaces.
 - Total: 44 spaces.

Potential for 1 no. on street wheelchair parking space.



Proposed Site Plan

Landscape strategy

The land subject to this application comprises two areas: the red line boundary area where the new building construction work will be undertaken, and the green line enhancement area where new and additional landscape enhancements will be undertaken. The red line site boundary area is approx. 0.06ha, and the enhancement area approx. 0.22ha.

The red line area will include new extensive green roofs, and private garden areas for the new housing development. New public realm and landscaping improvements will be concentrated within the green line site area, including 18 new trees, new planting areas and turf, and enhanced children's play spaces to the rear of Wat Tyler House and Gillett House.

These proposals also include both the retention and creation of new habitat areas and achieve an improvement in both urban greening and biodiversity described in further detail later in this report.

The landscape strategy comprises 4 key areas.

A. The Proposed Building Development within the red line boundary.

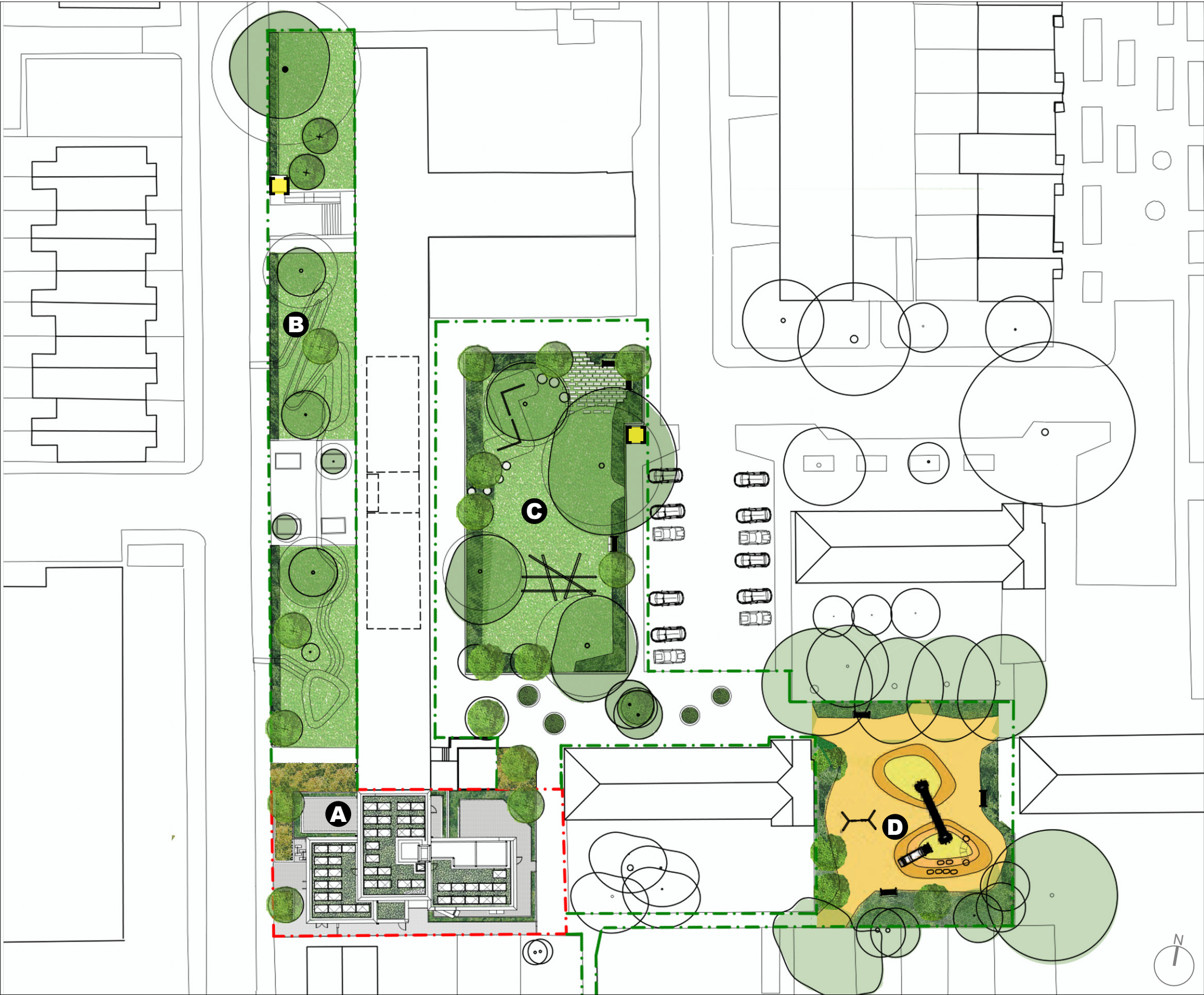
- Within this area proposals include:
- Enhanced biodiversity, with proposed new trees and shrub planting, and defensive evergreen hedge to secure boundaries to proposed private gardens.
 - Proposed CCTV/ Secured by Design strategy (described further later in this report)
 - Proposed Bird and Bat Boxes
 - Proposed SuDs including an attenuation tank.
 - Proposed green roofs.
 - New bikehanger (shown in yellow)

B. The Existing Frontage Area to Wat Tyler House.

- Within this area proposed enhancements to the landscape and public realm include:
- Existing implemented sustainable urban drainage system of swales to be retained and restored.
 - New trees to enhance the public realm and biodiversity
 - Existing boundary fence retained with new biodiverse boundary hedge
 - Dense evergreen shrub planting proposed to boundary with new lower private garden area.

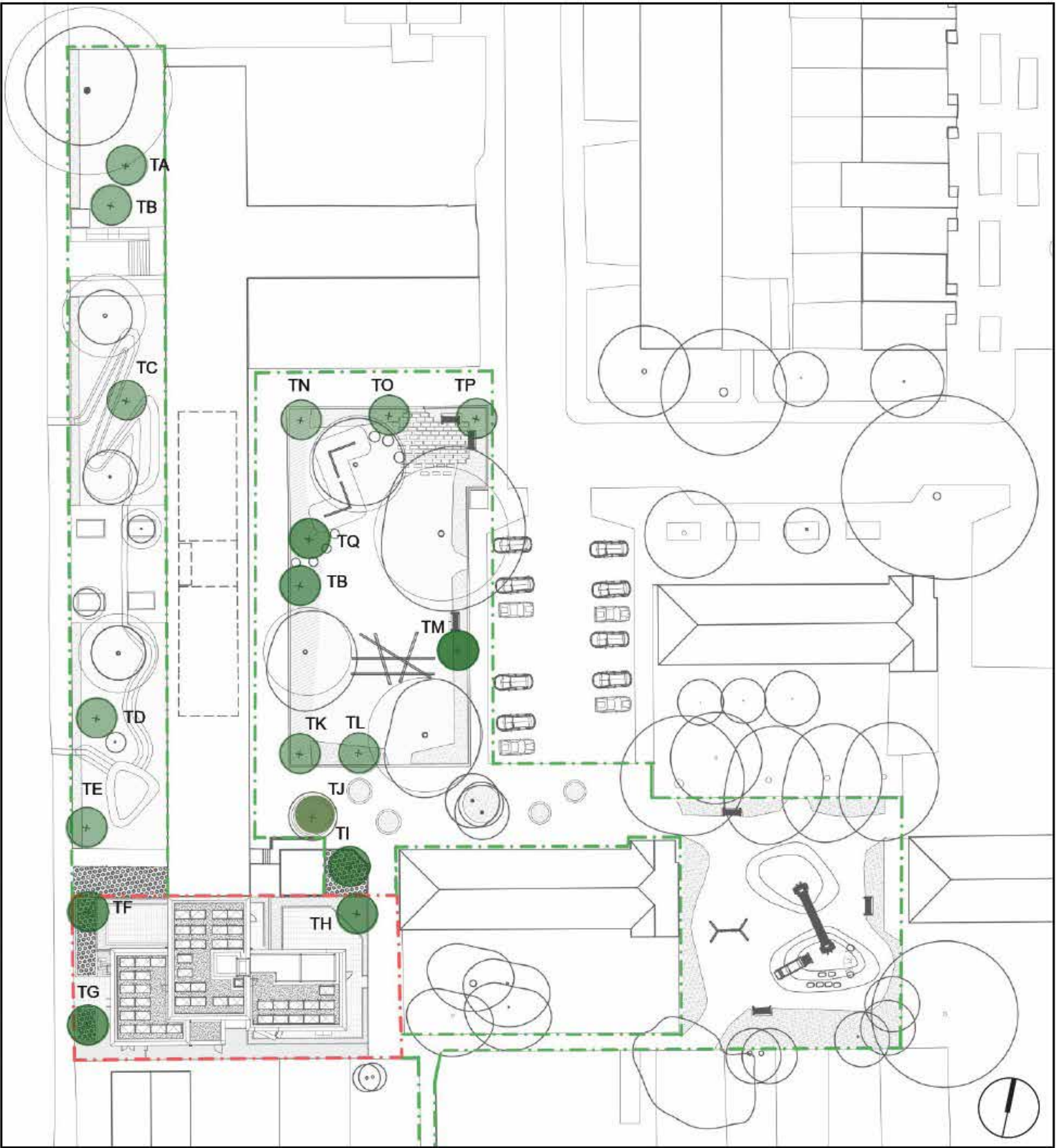
C. The Existing Communal Garden to the rear of Wat Tyler House.

- Within this area proposed enhancements to the landscape and public realm include:
- Retain and enhance the green character and improve appearance and biodiversity with new tree and boundary



Proposed Landscape Master Plan - by Remapp

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Tree planting strategy - by Remapp



- shrub planting for more seasonal colour, fragrance and structure.
- Improved planting to including the existing circular planters
- New evergreen shrub planting to also enclose and separate the communal garden from the adjacent car parking, whilst maintaining clear sightlines
- Reinstate grass area with a robust drought tolerant new turf, and maximise available area for flexible functions, like kickabouts and BBQs
- Replace poor condition timber balancing beams and stepping logs with new play equipment.
- Retain/ repair existing timber climbing structure which is widely used by all ages
- Provide 3 no. benches, with a small area of paving to north entrance which would also provide level access at ground level for prams & wheelchairs.
- New bikehanger (shown in yellow)

D. The Existing Play Area behind Gillett House

- There are a number of things that could be done to improve the existing play area which include:
- The surfaces are in very poor condition, and drainage could be improved.
 - The existing areas of planting could be enriched and improved.
 - The range of play equipment and quality of playable space can be upgraded.
 - Improved seating areas would also benefit the playground.

It is proposed to develop detailed proposals for the improvements in consultation with local residents.

Trees.

A full survey of the existing trees in the neighbourhood has been carried out by Arbtech. It is proposed to remove 3 existing trees in the communal garden area C, which are in poor condition. Two are category C and one is category U. Their removal will facilitate the proposed improvements to the garden area.

In total 18 new trees are proposed resulting in a net increase of 15 trees within the neighbourhood.

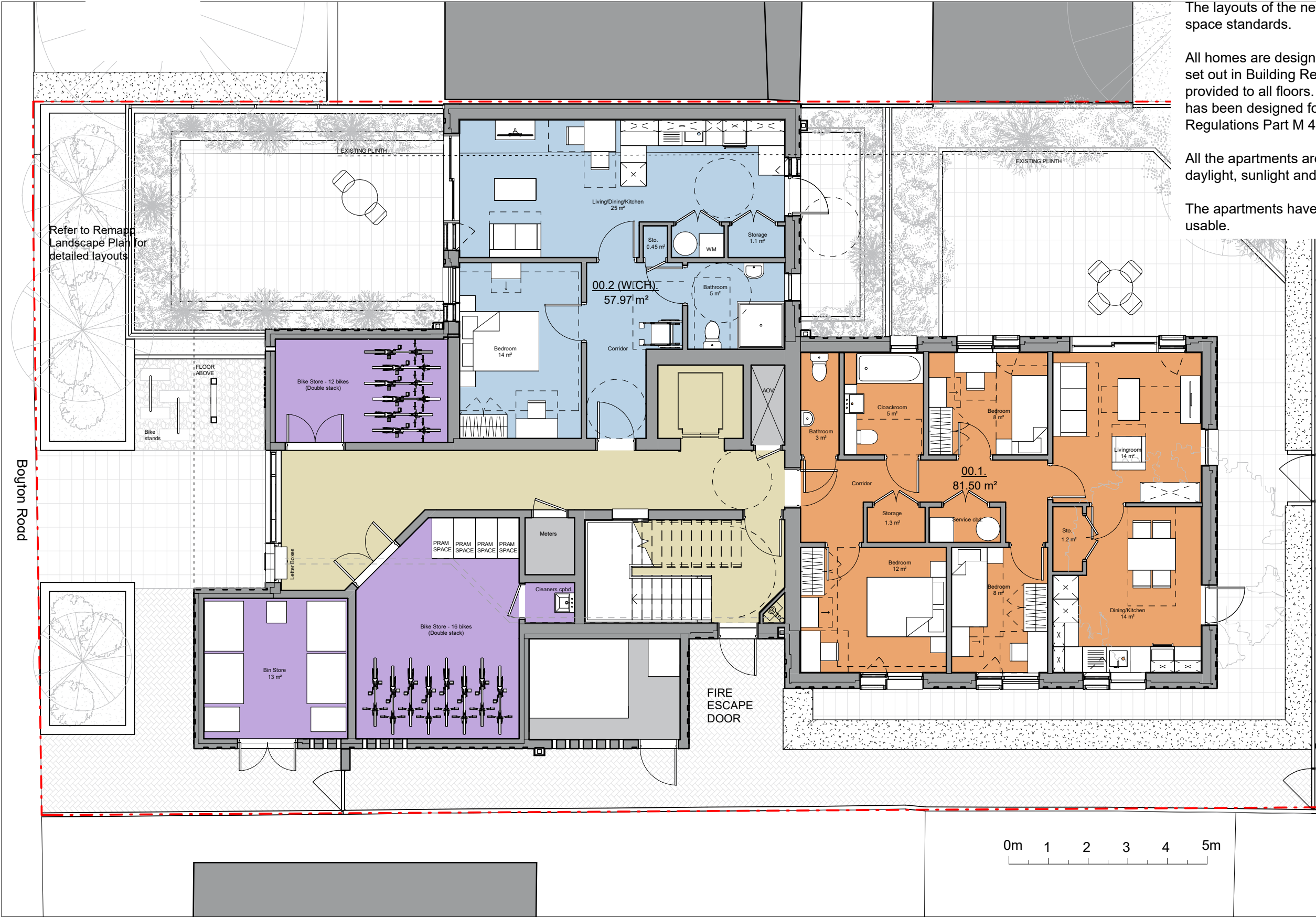
Please refer to the Landscape Design and Access Statement by Remapp for further information.

KEY

 Proposed New Tree



Floor plans - Ground floor



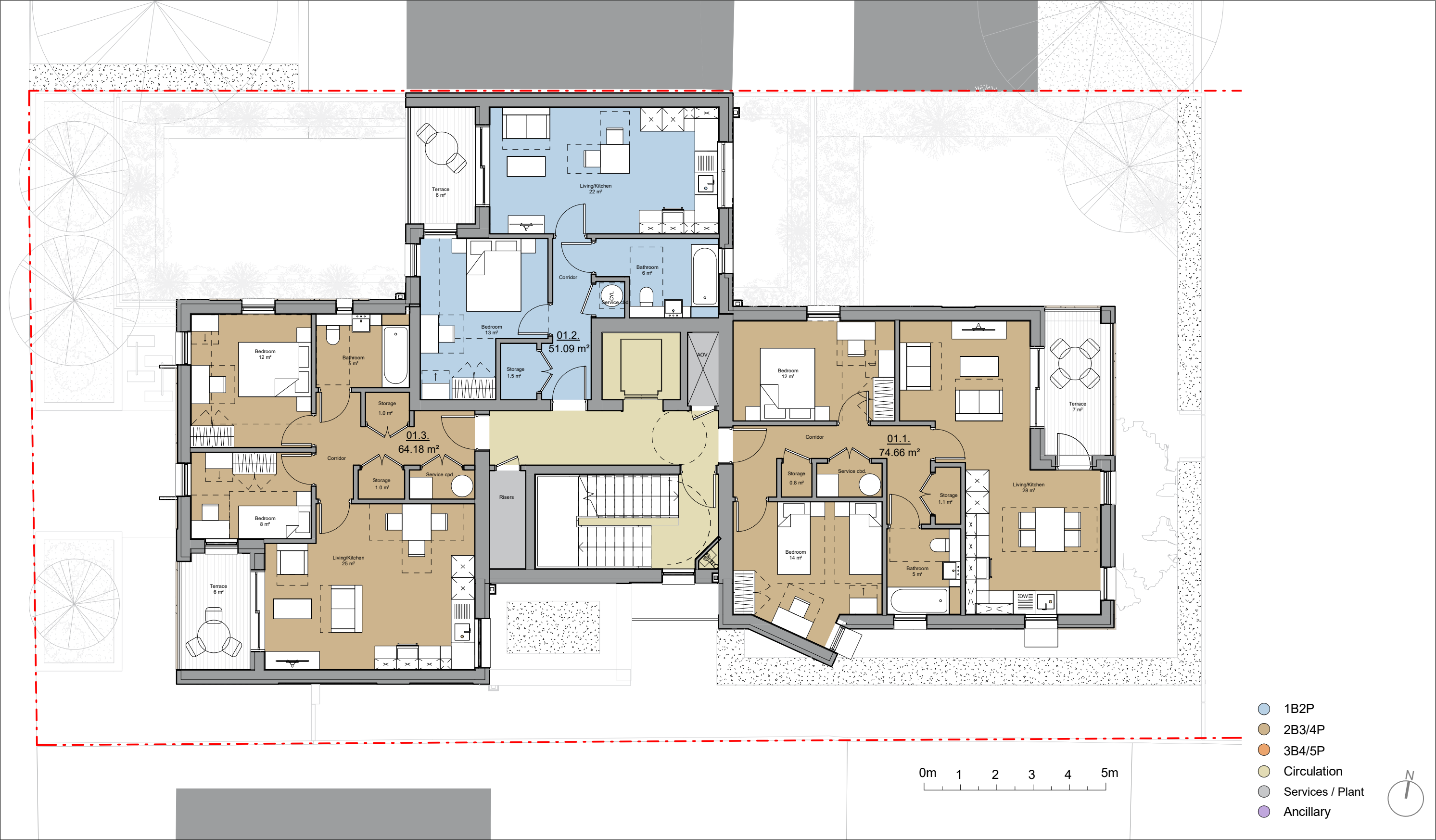
The layouts of the new homes meet the national planning space standards.

All homes are designed to meet the accessibility standard set out in Building Regulations Part M 4 2 and lift access is provided to all floors. On the ground floor one apartment has been designed for a wheel chair user meeting Building Regulations Part M 4 3 standards.

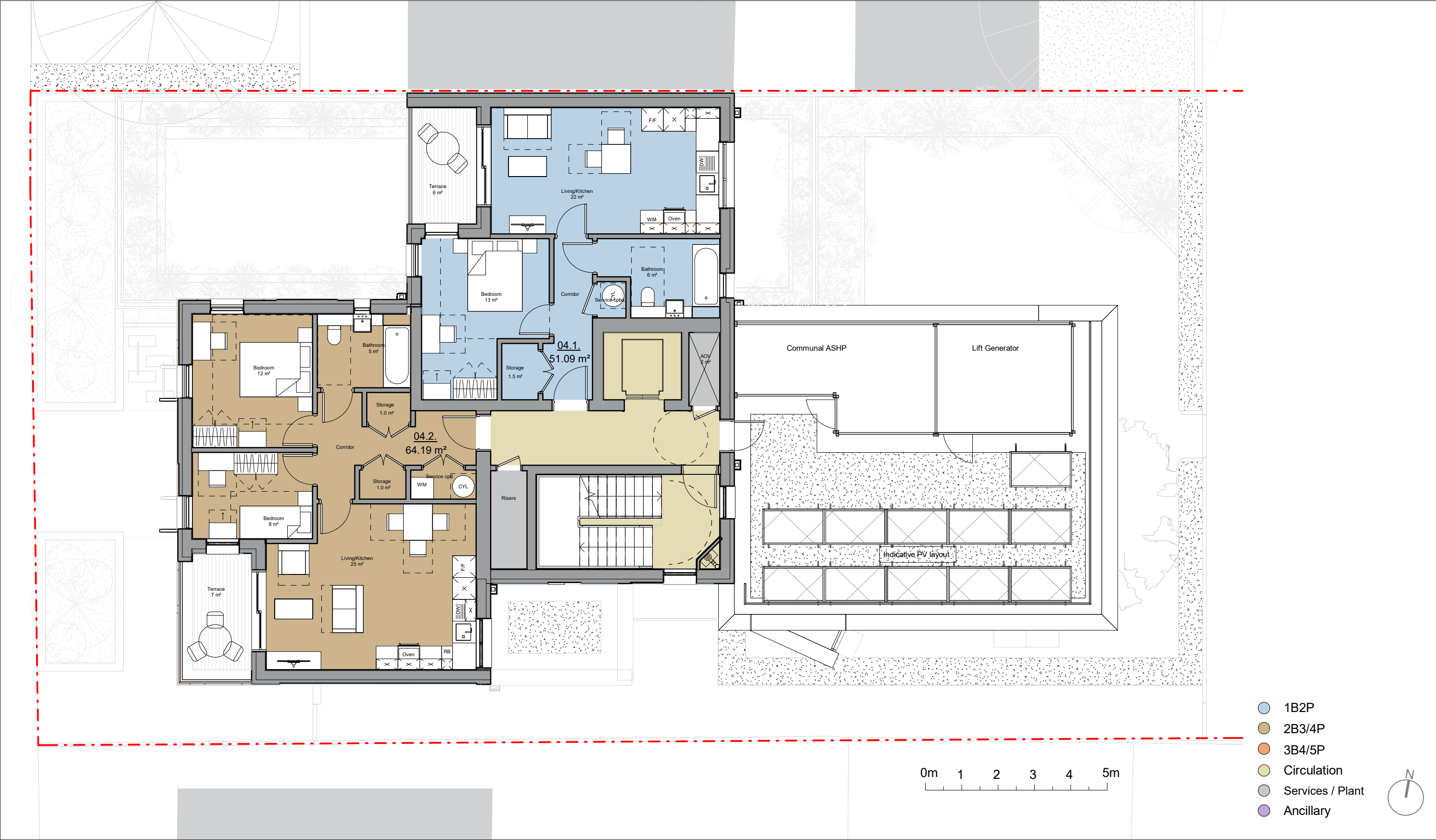
All the apartments are dual aspect to provide access to daylight, sunlight and the opportunity for cross ventilation.

The apartments have been designed to be functional and usable.

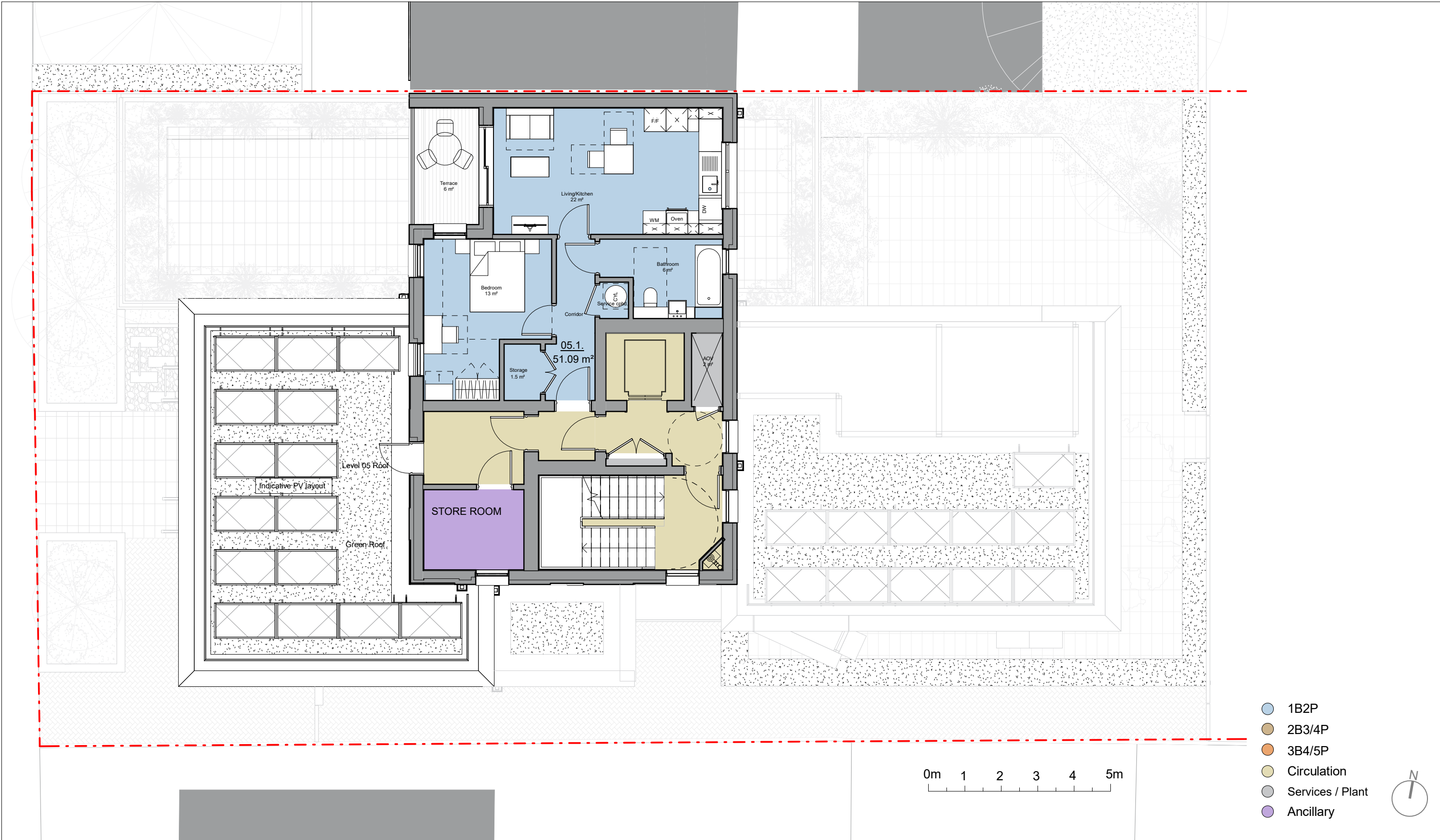
Proposed Ground Floor Plan 1:100 @ A3



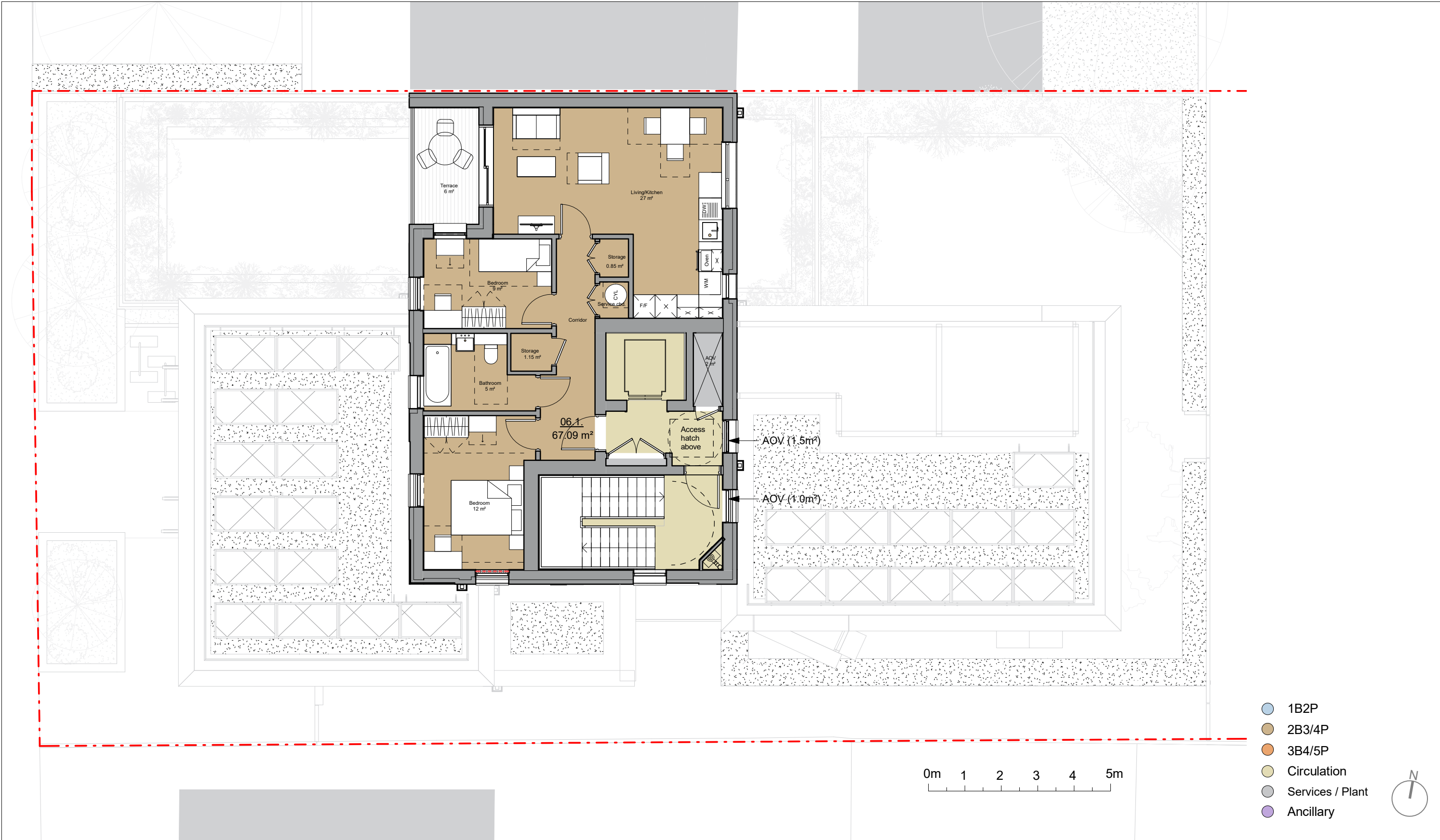
Typical Floor Plan 1:100 @ A3



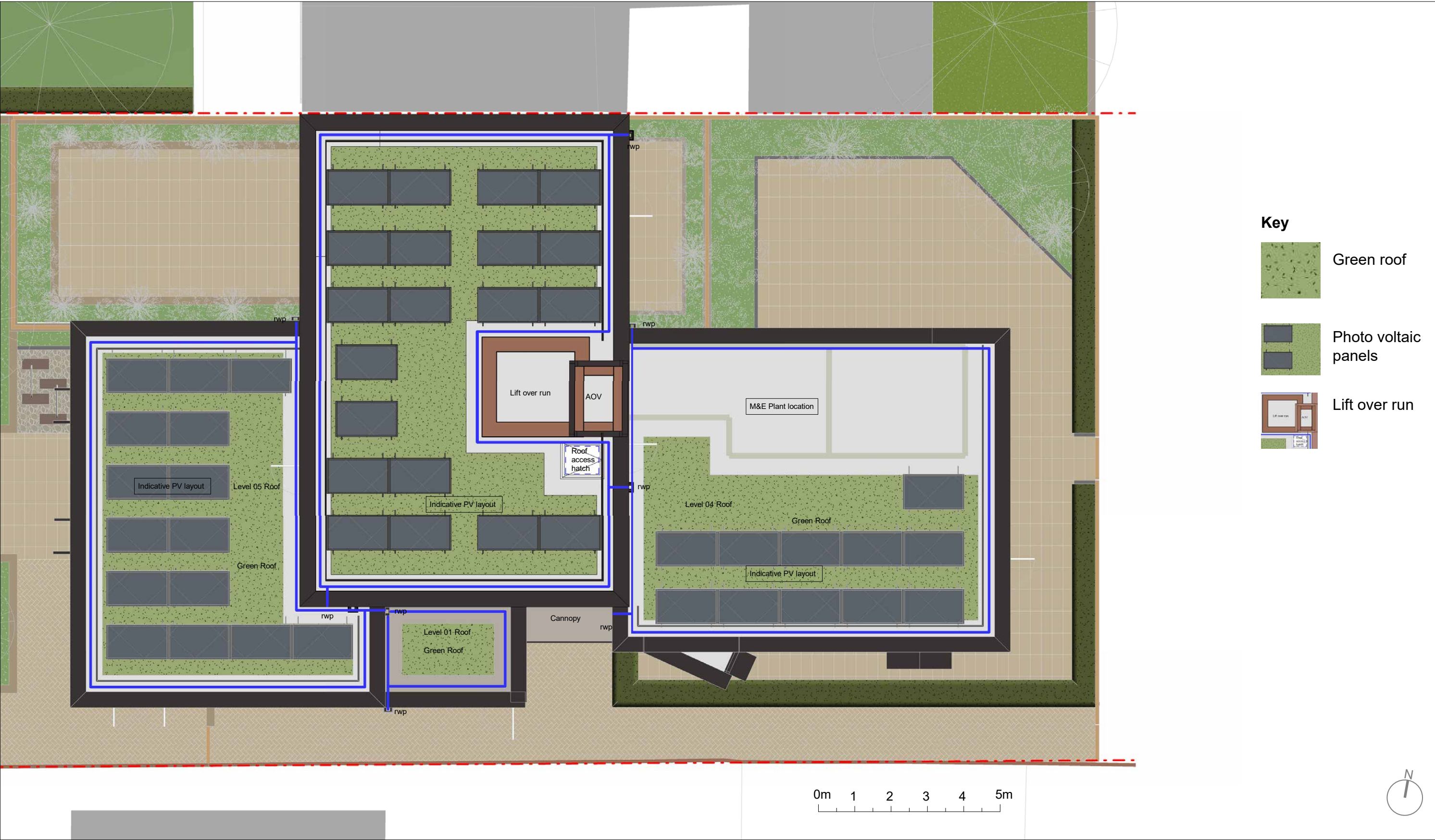
Proposed Fourth Floor Plan 1:100 @ A3



Proposed Fifth Floor Plan 1:100 @ A3



Proposed Sixth Floor Plan 1:100 @ A3



Proposed Roof Plan 1:100 @ A3

Height and massing



Aerial view looking North-East

The development will be part 4, part 5 part 7-storeys.

The design rationale section earlier in this report explained how the layout along with the form and height of the building has been arrived at taking into account the neighbouring townscape and residential amenity.

The plan diagrams showed how the new building foot print is composed of three elements where each part relates to the plan depth of the neighbouring buildings.

Facing Boyton Road the building takes on the building line of Wat Tyler house and Tennyson House creating a step in the street frontage.

The footprint extends to the rear where it references the orientation and plan depth of Campsfield House which faces Campsfield Road.

The following pages present further aerial views showing the proposed building in context.

These aerial views show the form and massing of the proposed building and how it is composed of three elements each part directly responding to the adjoining context.

On Boyton Road a 5-storey section follows the building line set by Tennyson House and steps up towards Wat Tyler.

The tallest section of the new building is 7-storeys as a result of current standards in ceiling heights rises above the roof level of Wat Tyler House which is also 7-storeys in height.

This taller element is however placed in such a way that is has no impact upon neighbouring amenity and acts as a book end to the long frontage of Wat Tyler House.

At the rear a subservient 4-storey section responds to Campsfield House which is 3-storeys.

These visualisations show how the proposed building, along with new street tree planting and the other landscape improvements proposed, will be a beneficial enhancement to the local street scene.

Further local street views and longer views from neighbouring conservation areas are presented in the assessment section of this report which demonstrate that the impact of the building's height and massing upon neighbouring amenity is acceptable.

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Aerial view looking North-West



Aerial view looking South-East



Aerial view looking North

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Visualisation



Street view looking North-East on Boyton Road

Sustainability - Energy and Life cycle carbon



Daylight - Window design

Energy efficiency : Air source heat pump and Mechanical Ventilation with Heat Recoverv



Renewable energy via photo voltaic panels



Energy

Taking a fabric first approach in line with Passivhaus principles the design proposals have been developed in order to optimise the orientation, glazing proportion and to minimise heat loss and maximise passive heat gain.

In addition, the thermal efficiency (expressed as 'U' values) and air tightness specified for the building envelope have been maximised within the constraints of the development. The scheme will incorporate triple glazing. Also, the air permeability of the envelope will be reduced to a 3 m3/hm2@50 Pascal which is significantly lower than the minimum value of 8 set by the Building Regulations. All these factors have been carefully balanced and optimised within the particular constraints relevant to this site.

To supplement the fabric first approach energy from space heating will be recycled using efficient mechanical ventilation with heat recovery (MVHR) systems within each apartment. In reviewing clean and green energy strategies we have worked with the sustainability, energy and MEP consultants to review options for low carbon technologies.

Options such as ground source heat pumps were reviewed assessed against the energy demands of the scheme and viability. Air source heat pumps (ASHP) have been chosen to meet the schemes hot water and space heating demands, duct lengths to external walls have been minimized. These will be supplemented with Photo Voltaic panels as a more effective use of roof space than solar hot water. Heat pumps will be located at roof level within acoustically treated enclosures.

The development exceeds the targets set by the London Plan achieves 11.6% CO2 reduction through energy efficiency measures, 'Be Lean' stage using SAP 10.2.

District energy or heating is not feasible and so there are no savings form the 'B Clean' stage.

Savings achieved through renewable technologies as part of the 'Be Green' stage yield a further CO2 reduction of 72.3%. The technologies proposed are Air Source Heat Pumps and Photo Voltaic panels.

As a result of these sustainable strategies an on-site CO2 reduction of 83.9% beyond Building Regulations through energy efficiency measures and maximised of renewable technologies (Air Source Heat Pumps and Photo voltaic panels).

Whilst a significant improvement upon Building Regulations and the minimum on site target of 35% set by the London

plan, it has not been possible within the constraints of the site to reach net Zero Carbon on site. However, the Zero-carbon target can be achieved through a cash in lieu contribution to the borough's carbon offset fund.

For a detailed analysis please refer to the Energy Statement report and SUDs Strategy, as carried out by Eight Versa.

Life cycle Carbon

A Whole Life Carbon Assessment (WLCA) has been carried out by JAW Sustainability to demonstrate the embodied and operational carbon emissions for the proposed development.

The aim of the life cycle carbon assessment is to estimate the carbon emissions resultant from the redevelopment of the land fronting Boyton Road, adjacent to Wat Tyler House, including those emissions embodied within building materials and those resultant from the construction and operation of the proposed building.

Whole life-cycle carbon emissions are the total greenhouse gas emissions arising from a development over its lifetime, from the emissions associated with raw material extraction, the manufacture and transport of building materials, to installation/construction, maintenance, and eventual material disposal. The assessment models the whole life carbon impact of the proposed design in accordance with RICS Guidance and GLA Sustainability Guidance, using SAP and OneClick LCA software.

The Benchmark set by the GLA for the embodied carbon of a residential building including life cycle stages A - C (excluding B6 and B7) is 1200 kgCO2e/m2. The total embodied carbon for lifecycle stages A – C for the proposed design is 826654 kgCO2e. As a result the total embodied carbon for the proposed design per m2 is 721.8 kgCO2e/m2. This is significantly below the benchmark.

For full details of the assessment please refer to the Life Cycle Carbon Assessment by JAW Sustainability.

Sustainability - Sustainable urban drainage, Ecology and Urban greening



Sustainable urban drainage.

The following SUDs components and features are proposed as part of a surface water drainage strategy for the site, specifically:

- Pervious paving with a surface area of with attenuation storage in the sub-base.
- Extensive green roof to the building.
- Existing Rain Gardens located adjacent to the north of the site should also be maintained and preserved for future use.
- Maximising soft landscaping.
- An attenuation storage tank located under the rear garden for controlled discharge rate (to achieve greater than 50% betterment against the pre-development runoff rates).
- Flow control device to limit rate of discharge from site.

The preliminary hydraulic modelling by Eight Associates demonstrates that the proposed SUDs components would be viable for the surface water drainage strategy for the site, in order to achieve the targeted discharge rates, whilst mitigating flood risk to the site and surrounding area.

In combination, the flat roofs of the apartment buildings will include extensive green roof finishes where possible. The green roof will increase the thermal mass of the building and also reduce rain water run-off to increase on-site water retention.



Ecology

An ecological survey was carried out of the site by Eight Associates. It concluded that the site has low ecological value, providing habitat for nesting birds, foraging and commuting bats and invertebrates. Also, that the development is expected to have little impact on designated statutory sites near to the development. The survey made recommendations to mitigate any impact from the development and ensure that the site is enhanced for wildlife and a gain for biodiversity in line with national and local policy. The recommendations included:

- Installation of at least three bat boxes on the site
- External lighting in line with BCT guidelines
- Installation of at least four bird nesting boxes on the site
- Stag beetle loggery
- Hedgehog corridors
- Invertebrate houses
- Native planting

Following these recommendations landscape proposals have been developed by Remapp which include extensive green roof, new hedgerows, shrubs, grass land, and new trees.

An assessment of the biodiversity net gain (BNG) of the proposals has been carried out by Eight Associates. BNG is defined as “development that leaves biodiversity in a better state than before. The target is a value of 10% BNG and the proposals achieve 15.5% habitat gains and 100% hedgerow gains. Therefore, exceeding the target.

Urban greening.

The London Plan sets out policies to see that new development will result in an increase in green cover across the city.

Urban greening should form a fundamental element of site and building design, and incorporate such measures as high quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.

To quantify this and urban greening factor (UGF) should be calculated which broadly measures different types of green area as a proportion of the site and for developments that are predominantly residential a target UGF score of 0.4 is set. For the proposals on this site Eight Associates have calculated the UGF to be 1.73 which exceeds the target.

For a detailed analysis please refer to the BNG and UGF reports by Eight Versa.

Sustainability - Overheating prevention measures

Ventilation and overheating.

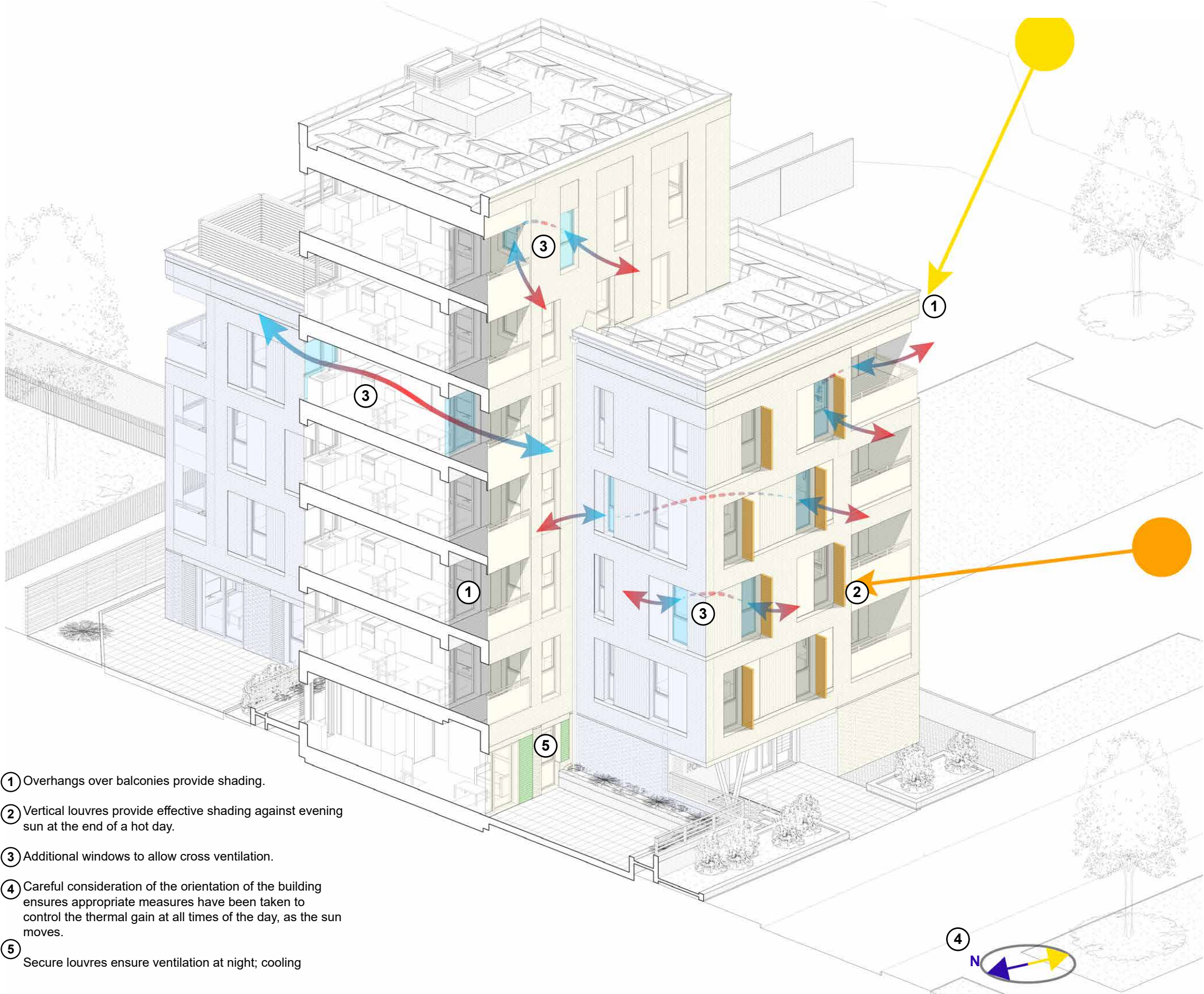
The proposed building also takes into account overheating, access to good levels of daylight and sunlight within homes, natural ventilation and security.

The design proposals follow the cooling hierarchy and use passive design measures to reduce potential overheating:

- 1. The amount of heat entering the building has been reduced using balconies and external louvres to provide shading, careful sizing and orientation of windows specified to have low emissivity, high levels of insulation and air tightness, and the provision of green roofs at all levels to reduce energy absorbed by the roof.
- 2. Internal heat generation will be minimised through energy efficient lighting and minimising heating pipe runs.
- 3. Heat within the building will be managed through use of the exposed internal thermal mass of concrete staircases and 2.5m high ceilings
- 4. Passive ventilation is enabled through the design of the apartment layouts and positioning of windows. Secure ventilation louvres are provided to the ground floor apartments so that ventilation at night is possible.
- 5. Mechanical ventilation is provided which can make use of free cooling when outside temperature is below inside in summer months.
- 6. Active cooling systems are not required.

Eight Versa have carried out an overheating analysis in accordance with GLA guidance. The analysis models three Design Summer Years defined by CIBSE. DSY1 which is for a moderately warm summer, DSY2, a summer with a short intense warm spell and DSY3, a summer with a longer less intense warm spell. Performance is assessed against 3 criteria. Criteria 1 sets a limit to the percentage of time when habitable rooms are occupied that the temperature thresholds are exceeded. Criteria 2 looks at the number of hours bedrooms during sleeping hours exceed 26 degrees C. Criteria 3 looks temperature in communal corridors. Results from modelling by indicate that the scheme is compliant with all 3 overheating criteria as set out in Building Regulations Part O for DSY1.

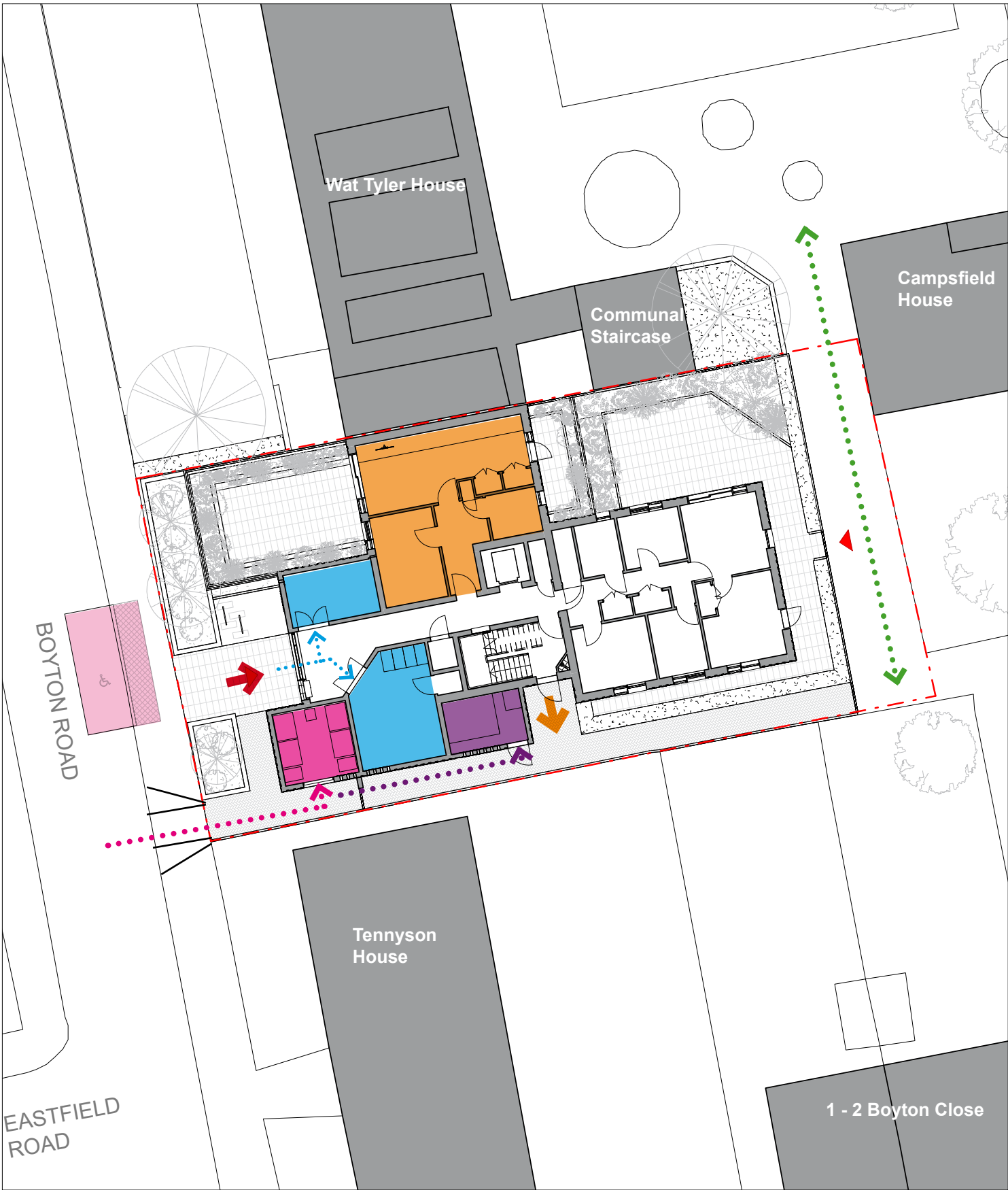
For more extreme weather scenarios DSY 2 and DSY 3 the proposals meet Criteria 1. However, for night time overheating in these extreme conditions a number of bedrooms do not meet criterion 2. The assessment assumes that if internal room temperatures do not exceed 23 degrees at 11 pm then occupants will not open windows and so in the analysis occupants do not benefit from cross ventilation built into the design proposals. However, the majority of the common parts meet the upper criterion 3. For further details please refer to the Overheating Analysis by Eight Versa.



- 1 Overhangs over balconies provide shading.
- 2 Vertical louvres provide effective shading against evening sun at the end of a hot day.
- 3 Additional windows to allow cross ventilation.
- 4 Careful consideration of the orientation of the building ensures appropriate measures have been taken to control the thermal gain at all times of the day, as the sun moves.
- 5 Secure louvres ensure ventilation at night; cooling

Diagram of measures used to prevent overheating

Access, servicing and parking



Proposed Site Plan

General access

- The proposed building is accessed via Boyton Road.
- Access will be controlled via video intercom at the main entrance.
- Level access entry is to be provided at all entrance thresholds, terraces and balconies.
- Low level external lighting will be provided along the access route.
- Post will be delivered via a secure 'through the wall' letter box.
- There is one fully wheelchair accessible user dwelling (Part M4(3) compliant) located at ground floor level and accessed via an internal protected corridor.
- An on-street disabled parking space could be provided in front of the building where the cross over to the existing car park is currently located.
- The other flats on the ground floor and upper floors have been designed to be compliant with Part M4 (2) Accessible and adaptable dwellings.
- The communal refuse/recycling store is located within the proposed building to the South, and accessed externally from Boyton Road. A dropped kerb is provided. It is building regulations compliant within the acceptable distance of each flat entrance.

Fire access strategy

- Apartments and communal areas will be fire compartmented in accordance with the current building Regulations.
- A dry riser is provided within the stair core and the inlet value is within 18m of a fire tender vehicle parked on Boyton Road.
- A fire fighting staircase and fire fighting shaft and lift will be provided according to the current building regulations. For further details of the fire strategy see the Tall buildings statement in the Assessment section of this report and the Fire Strategy report by Vemco.

Waste management

- Refuse collection will take place from Boyton Road.
- Residents are within 30m of the horizontal distance between their entrance doors and the refuse store.

Parking

The scheme has been designed to be car free with the exception of

the potential of creating one new on-street wheelchair parking space where the current cross over is situated. The PTAL rating of the Site is 1b, however Hornsey or Alexandra Palace stations are within reasonable walking distance just beyond the 960m cut off distance for inclusion in the PTAL measure and this along with local bus services, cycle and pedestrian routes justifies the car free approach.

The Site is currently 24 car parking spaces and these will be removed as a result of the development. Parking surveys of the neighbourhood have been carried out to assess the level of parking overnight and during the day. The surveys undertaken show an average occupancy level of 84% on the adopted highway (using the recommended 5m parking bay length recommended in the Lambeth methodology 78 empty spaces out of 496 still remain available for use.

The Transport Statement by Caneparo Associates concludes that sufficient parking capacity is available locally to cater for the cars currently parking on the Site and the low level of car ownership expected to be associated with the development, such that existing residents would not have any material difficulty in parking in the surrounding area.

Bicycle

To encourage sustainable travel two shared secure cycle and pram stores are located next to the building entrance providing 28 spaces for bikes. In addition, 2 external Sheffield stands provide 4 visitor parking spaces.

For the use of existing residents two 'Bikehangers' are proposed near Wat Tyler House. See the landscape plan for indicative locations.

For further detail please refer to the Transport Statement by Caneparo.

Maintenance

All windows are designed to be cleaned from the inside.

Roof mounted plant is accessed from the common parts via a door to the lower flat roof areas or an access hatch and pull down ladder to the highest area of roof. A fixed safety hand rail is provided around the perimeter of each roof.

Other plant is at ground level accessed via a secure side gate.

KEY:

- | | | | |
|--|----------------------|--|----------------------------------|
| | Building entrance | | Secure cycle stores |
| | Means of escape | | Refuse store |
| | Pedestrian route | | Wheelchair adapted flat |
| | Access to bike store | | Potential wheelchair parking bay |
| | Access to bin store | | Plant room |
| | Access to plant room | | |