Chapter 4: The Proposed Development

INTRODUCTION

4.1 This chapter of the ES presents a description of the Proposed Development, for which full (detailed) planning permission is being sought. It provides sufficient information on the Proposed Development to aid the identification and assessment of potential environmental impacts and likely environmental effects across the technical topic areas addressed by the EIA as presented in **ES Volume 1, Chapters: 6 to 12** and **ES Volume 2, Townscape, Visual and Built Heritage Impact Assessment (TVBHIA)**.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

Overview of the Proposed Development

4.2 The Proposed Development, illustrated in Figure 4.1, comprises the partial deconstruction of the existing building on-site (with the central core, basement and foundations retained) which forms the basis of a new commercial scheme in a single tower building of ground plus 32 storeys with a three-storey podium and two basement levels. The description of development is as follows:

"Redevelopment of Euston Tower, including the partial retention (retention of existing core, foundations and basement), disassembly, reuse and extension of the existing building, to provide a 32-storey building for use as offices and research and development floorspace (Class E(g)) and office, retail, café and restaurant space (Class E) and learning and community space (Class F) at ground, first and second floors, and associated external terraces. Provision of public realm enhancements, including new landscaping, and provision of new publicly accessible steps and ramp. Provision of short and long stay cycle storage, servicing, refuse storage, plant and other ancillary and associated works"

General Arrangement, Site Layout, Quantum, and Scale

Site Layout

4.3 The site is irregular in shape and covers an area of 0.8 hectares. The 32-storey tower is located towards the eastern end of the site, with Regent's Place Plaza located to the west and additional areas of landscaping provided to the north, east and south of the building at ground level and across the four podium levels. There are two levels of basement, the first of which comprises the existing basement and covers the majority of the site area, beneath both the building and Regent's Place Plaza. The second level of basement occupies a significantly smaller footprint comprising further plant rooms.

Land Use and Quantum of Development

4.4 Table 4.1 details the floorspace schedule for the Proposed Development, broken down by use class.

Table 4.1 Floorspace Schedule by Use Class

Land Use Class	Indicative Land Use	GIA (m^2)	GEA (m^2)
E(g)	Lobby	3,830	80,630
	Lab Enabled Workspace	21,603	
	Accelerator Lab Workspace	2,893	
	Commercial Office	46,465	
	Total E(g)	**74,791**	
E	Office, Retail, Café and Restaurant	748	774.9
E/F	Learning and Community Space	2,003	2,136.1
TOTAL		**77,542**	**83,541**

Figure 4.1 Illustration of the Proposed Development

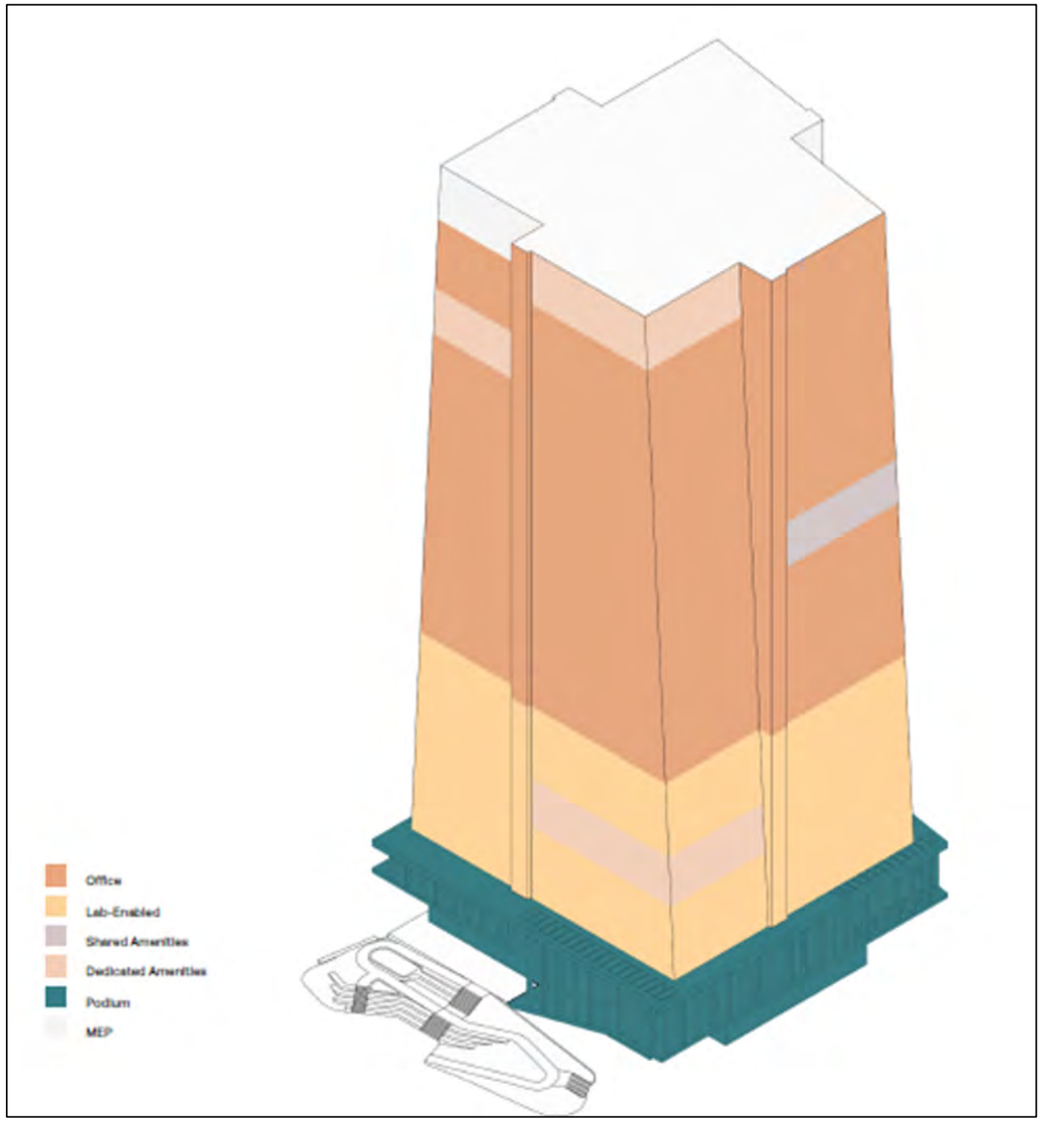
General Arrangement

4.5 The 32 storey building has a maximum height of 153.300 metres Above Ordnance Datum (mAOD) and is arranged as follows:

- Two basement levels accommodating lobby, ancillary space associated with the Class E / F spaces, plant space and cycle parking with associated end of trip facilities;
- Ground Level to Level 02 (the Podium) comprising lobby space, office (Class E(g)) space and flexible Class E / F space. Two outdoor terraces are provided along the southern elevation of Level 02; and
- Level 03 to 11 comprises Class E(g) uses including office and lab-enabled spaces; and
- Level 12 to 32 comprises office (Class E(g)) with plant facilities on Levels 30 and 31.

4.6 The arrangement of land uses throughout the Proposed Development is shown in Figure 4.2.

Figure 4.2 Arrangement of Land Uses (Ground Level and Above)



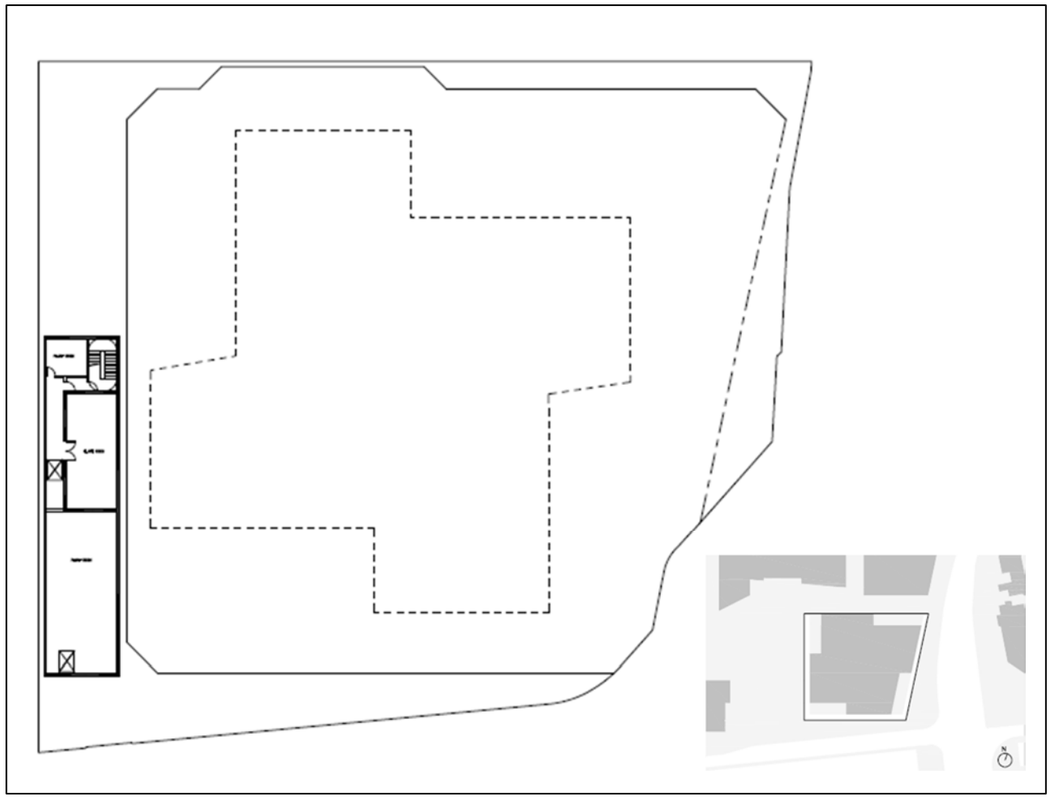
Basement 01 and 02

4.7 The Proposed Development includes the retention of the existing basement (Basement Level 01) of Euston Tower that serves the surrounding Regent's Place. The basement is split over two levels down to a maximum depth of -8.06m below ground level (bgl).

4.8 Basement Level 01 contains cycle parking, changing rooms, showers, lockers, maintenance facilities and plant rooms. The existing loading bay and servicing area will also remain in the basement, as well as the adequate waste storage facilities, that are detailed further in this ES chapter.

4.9 Basement Level 02 offers an additional 246m^2 of basement to accommodate a water tank and plant room, (as shown in Figure 4.3.

Figure 4.3 Basement Level 02 Plan



Ground Level to Level 02

4.10 The ground floor of the Proposed Development comprises flexible office (Class E(g)) space along the southern elevation including an entrance lobby space used to provide access to the tower, and flexible commercial / community (Class E / F) spaces in the north-east corner. Entrances to these spaces are provided from the public realm adjacent to Euston Road and Hampstead Road respectively. There is an additional public entrance to the flexible commercial / community space from Brock Street to the north as well as an accessible lift entrance. Supporting and back of house (BOH) uses are located along the western edge of the building, along Regent's Place Plaza, and situated bellow the external stair and slopped terrace that are used to access level 01. Lifts and supporting facilities are located in the retained and expanded central core of the building.

4.11 Level 01 follows a similar arrangement to the ground floor, with office space and associated lobby space (Class E(g)) located along the southern section of the building, with flexible commercial (Class E) uses along the western side including a separate entrance accessed via a terrace, sloped landscaping, external staircases and external accessible lift, and flexible commercial / community uses (Class E / F) along the northern and

eastern portion. Lifts and supporting facilities are located in the retained central core of the building, although external stairs are provided along the southern edge.

~~4.12~~ Level 02 provides flexible commercial / community space (Class E / F) and associated lobby space in the northern and eastern areas of this floor, with office space (Class E(g)) in the southern section. Two outdoor terraces are provided along the southern elevation, the western terrace accessible from the Class E space and the eastern terrace accessible from the Class E(g) space.

Level 03 to 11

4.13 Levels 03 to 11 comprise flexible office (Class E(g)) space organised around a central core. Level 03 will be designated as 'accelerator space' which will be fitted out lab spaces and let out to scale-up companies to encourage the growing industry by removing the barrier of high fit-out costs. This level forms the top of the podium.

4.14 The remaining levels (Levels 04-11) will provide specialist lab-enabled floorspace with 4.080m floor-to-floor heights.

4.15 The lab-enabled spaces will be designed to accommodate both dry and wet lab activities. Activities include mechanical, electrical, software and hardware engineering, prototyping workshops and low-grade optical physics. These spaces will also be designed to accommodate Containment Levels CL1-2 which covers the use of non-hazardous and low-to-medium risk hazardous biological agents.

4.16 Double-height shared amenity spaces for the tenants are also provided at Level 07 and 08 and Level 11 and 12. Further details on amenity spaces are provided at the 'Landscape, Public Realm and Amenity Spaces' section of this ES chapter.

4.17 Indicative layout options for the lab-enabled floorspace are provided in Figure 4.7.

Level 12 to 30

4.18 Level 12 to 30 also comprise flexible office (Class E(g)) space organised around the central core. These spaces have been designed to retain maximum flexibility in terms of floorplate to accommodate multiple tenancies as required. An indicative layout for a single tenant, as well as for two or three tenants is shown in Figure 4.8.

4.19 Double-height amenity space is provided at Level 12, as well at Levels 19 and 20, and Levels 25 and 26. Further details on amenity spaces are provided at the *'Landscape, Public Realm and Amenity Spaces'* of this ES chapter.

Level 31 to 32

4.20 Level 30 comprises a mixture of plant and office (Class E(g)) space. A double height amenity space is also provided at Level 30 and 31. Level 31 is a plant level, principally the Air Source Heat Pumps (ASHP) for the building, as well as the Building Maintenance Unit (BMU) and 100m^2 of Photovoltaic (PV) panels. Level 32 comprises the roof level and includes a biodiverse green roof.

Scale and Massing

4.21 The Proposed Development comprises a 32-storey building (with a two storey-basement) with a trapezium podium at Level 02 and Level 03 that is inset at ground floor and Level 01. The massing of the single tower is sub-divided into four vertical tower quadrants which taper inwards from the podium to the roof and slightly offset as shown in Figure 4.4.

4.22 The Proposed Development will reach a maximum height of 153.300mAOD, with the podium reaching 44.210mAOD at its highest point.

Figure 4.4 Massing of the Proposed Development

Figure 4.5 Basement Level 01 Plan

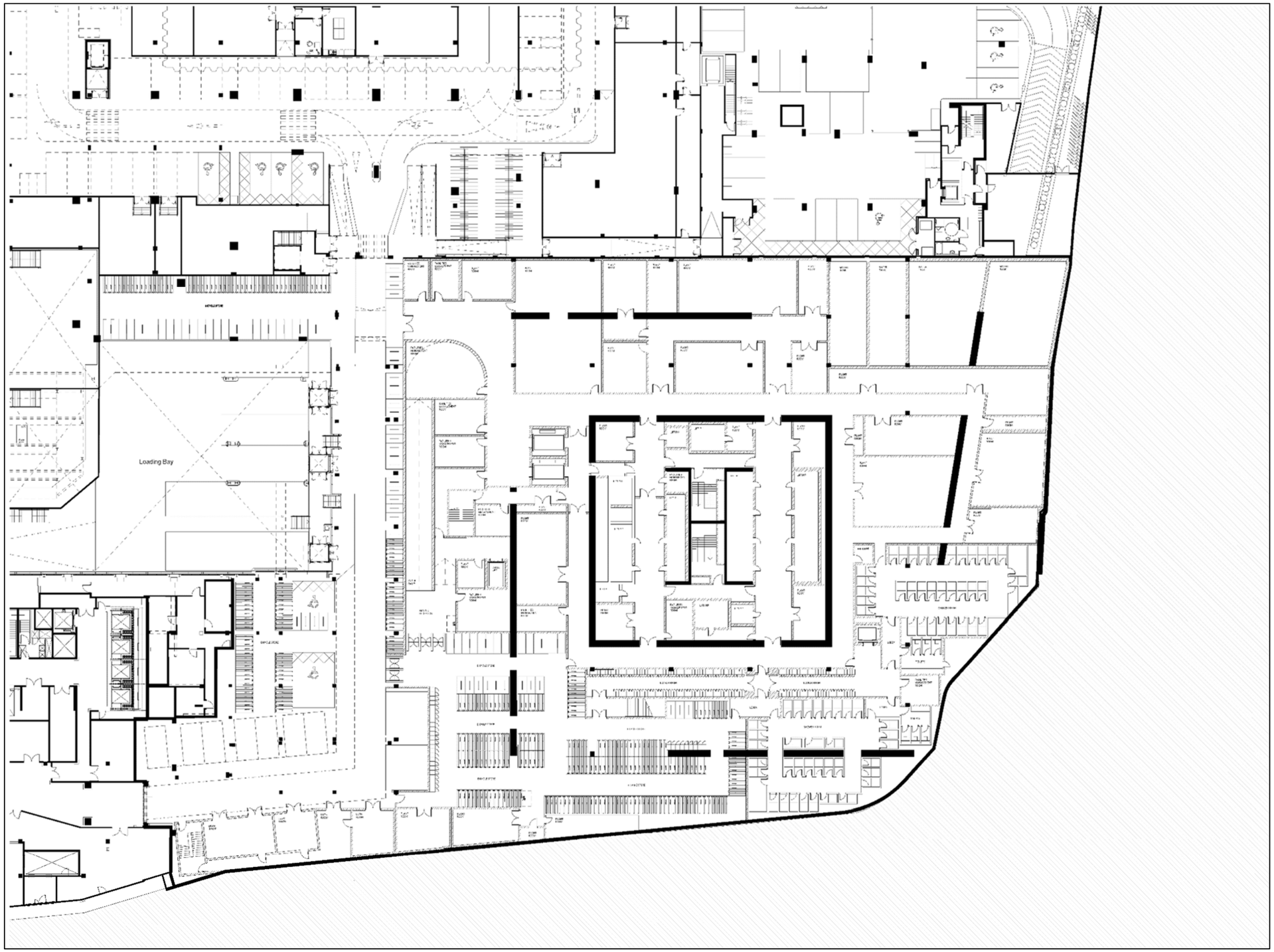


Figure 4.6 Proposed Ground Floor Layout

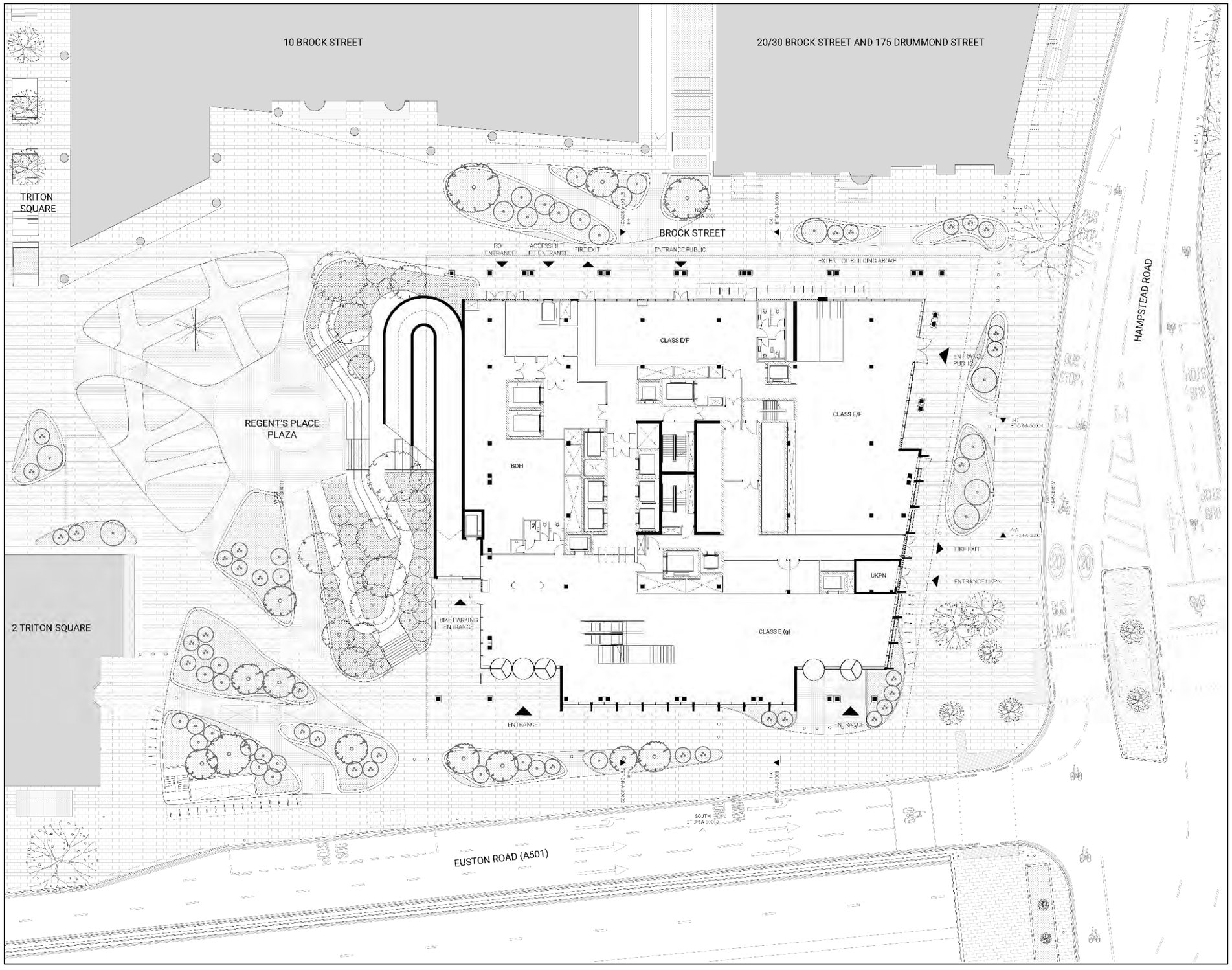


Figure 4.7 Indicative Layout – Lab-Enabled Floorspace

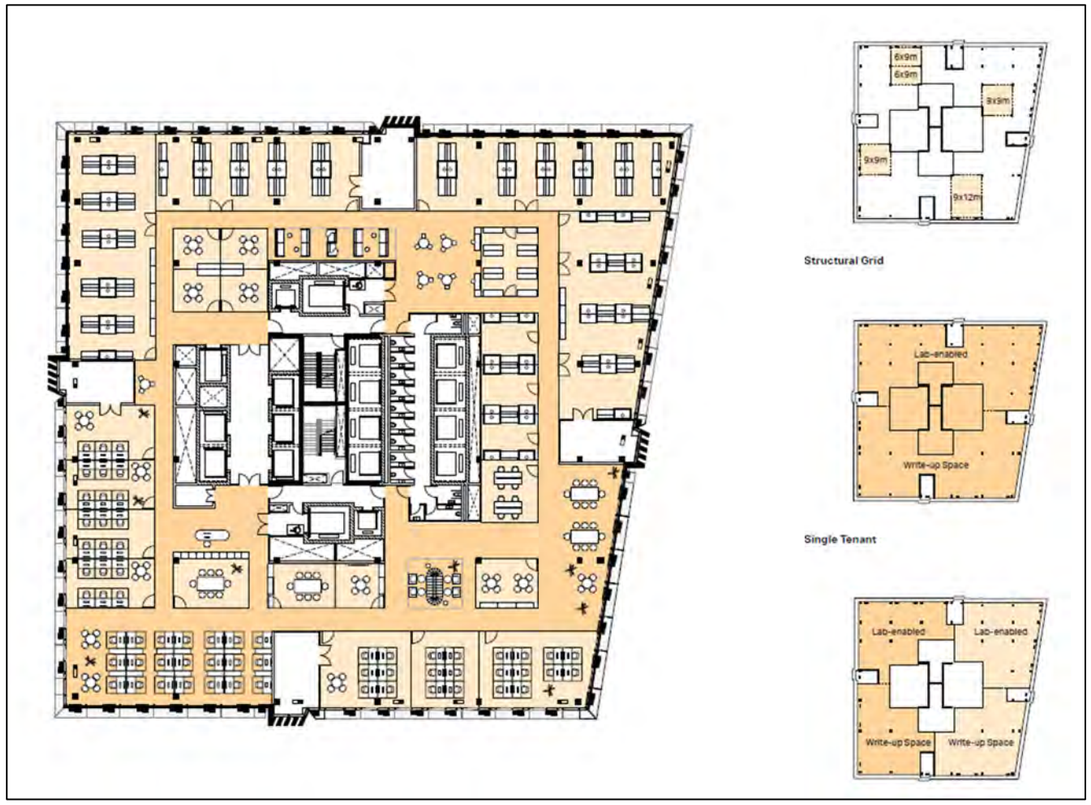
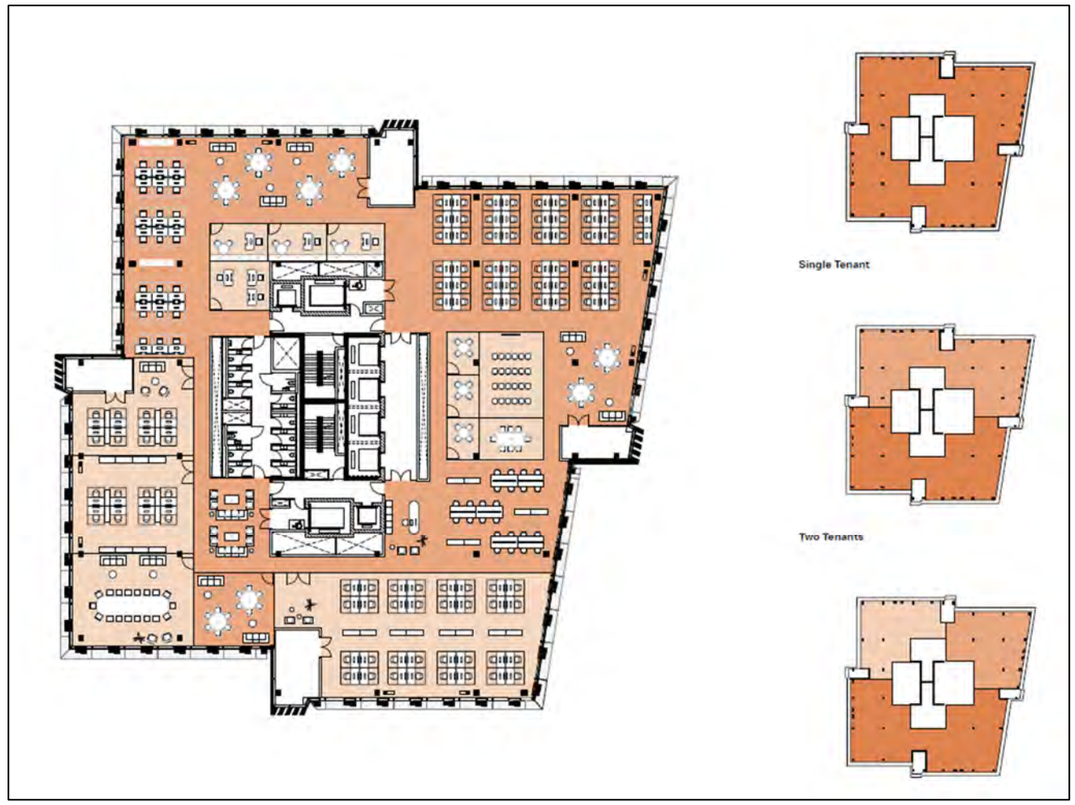
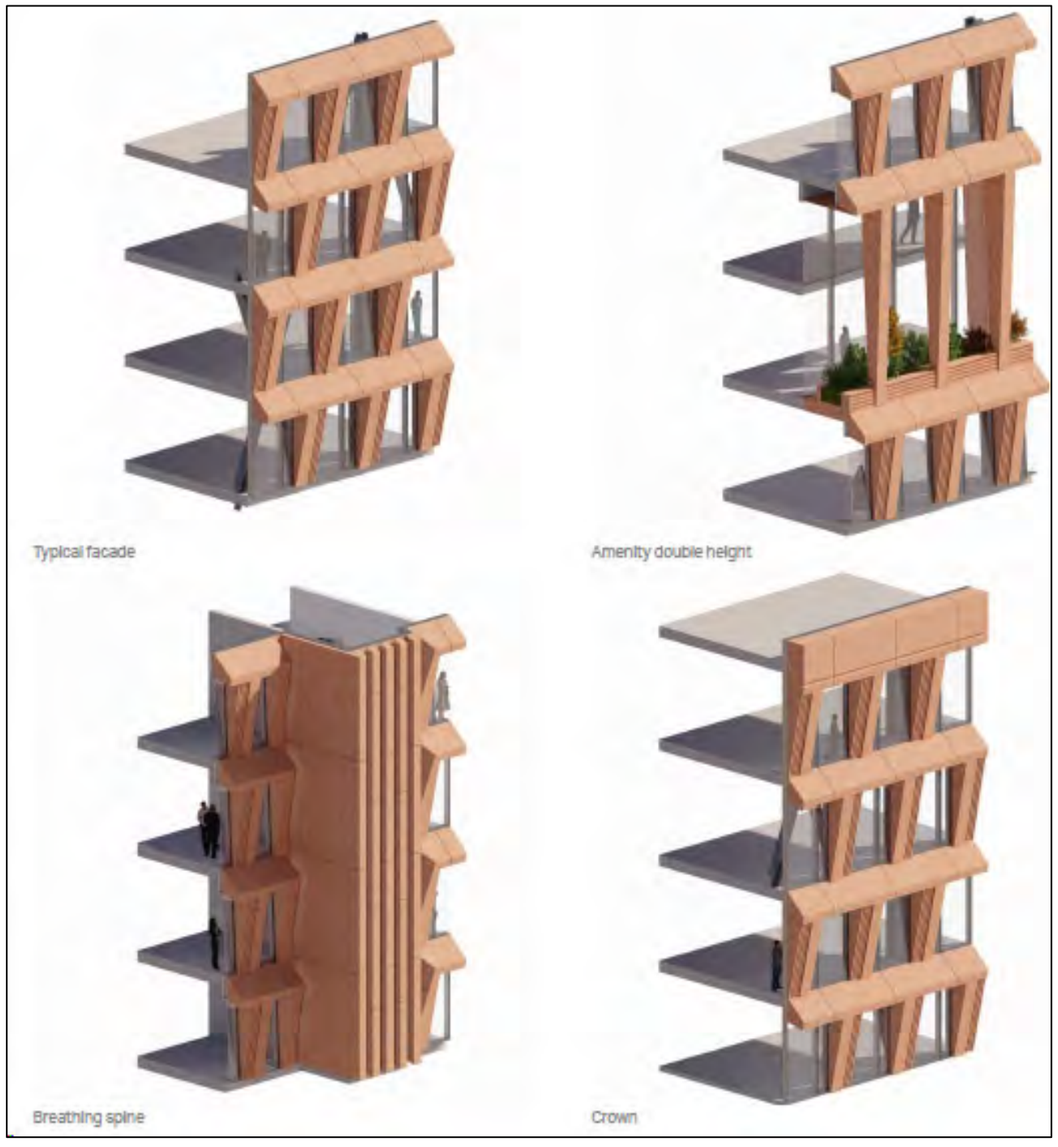


Figure 4.8 Indicative Layout – Office Space



Appearance of the Proposed Development

Figure 4.9 Consistency in Façade Elements



4.23 The vertical and sloping façade of the tower are the majority of the façade. Both the staggered pattern of the vertical façade and the vertically aligned pattern of the sloping façade contribute to its dynamic aesthetic. Additionally, the façade features four amenity planters, one amenity terrace, prominent breathing spines, and a tower crown. Consistent materiality, colour tone, and vertical elements throughout the six façade types, reinforces the strength of the whole design (Figure 4.9).

4.24 The design of the tower façade includes five key design features:

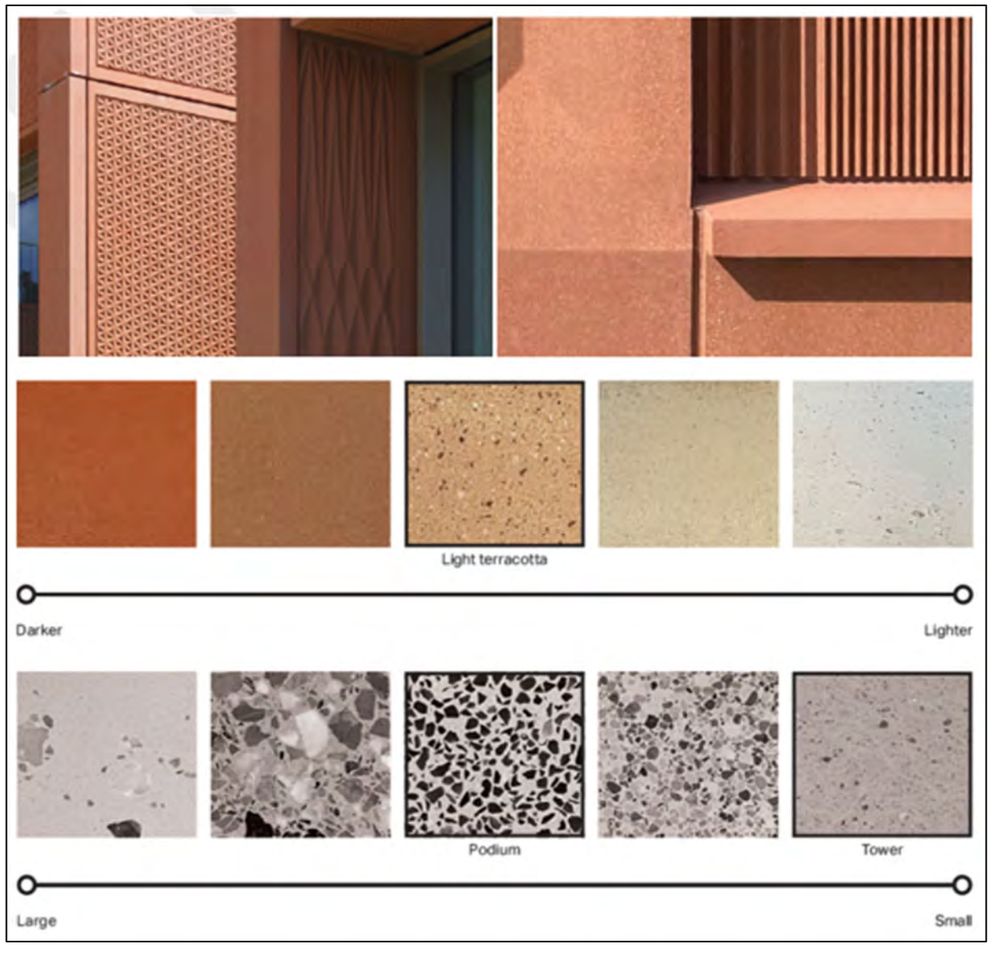
- The geometry of the cladding is three-dimensional, functioning both aesthetically and technically;
- The materiality of the cladding reinforces the sense of solidity. Glass Reinforced Concrete (GRC) with a light terracotta color provide the tower with a warmth contextually sensitive appearance;
- The expression of the 'breathing spine' highlights its importance both in terms of the functionality of the space and to separate the sloping and vertical elevations;
- The façade treatment of the double height amenity spaces provides a relief from the typical tower façade, helping to break down the scale of each of the four towers. The vertical façade elements here provide architectural expression and contrast with the opaque panels of the typical tower façade; and
- An integrated panel for natural ventilation in the opaque portion of the façade affords building users access to fresh air. The vertical expression of these panels relates to that of the breathing spine - a consistency that reinforces the design of each element.

4.25 The choice of GRC (or similar) for the façade cladding contributes significantly to the desired sense of solidity and robustness. It also relates to many of the brick buildings in Camden in the immediate context, in terms of both colour and texture.

4.26 The light terracotta tone of the GRC (or similar) façade represents a balance between the natural materials inherent to Camden's aesthetic and a lighter hue typical of tower structures. Cityscape's verified views reflect a cohesive approach to colour, seamlessly blending with and paying homage to the local built environment.

4.27 To maintain a cohesive visual language throughout the building, both the podium and the tower are clad in the same light terracotta coloured GRC (or similar) (Figure 4.10). However, subtle differences are introduced by varying the aggregate size and surface finish, subtly distinguishing the tower from the podium while preserving a strong and consistent aesthetic connection between the two.

Figure 4.10 Indicative Material Palette



LANDSCAPE, PUBLIC REALM AND AMENITY SPACES

Landscape and Public Realm

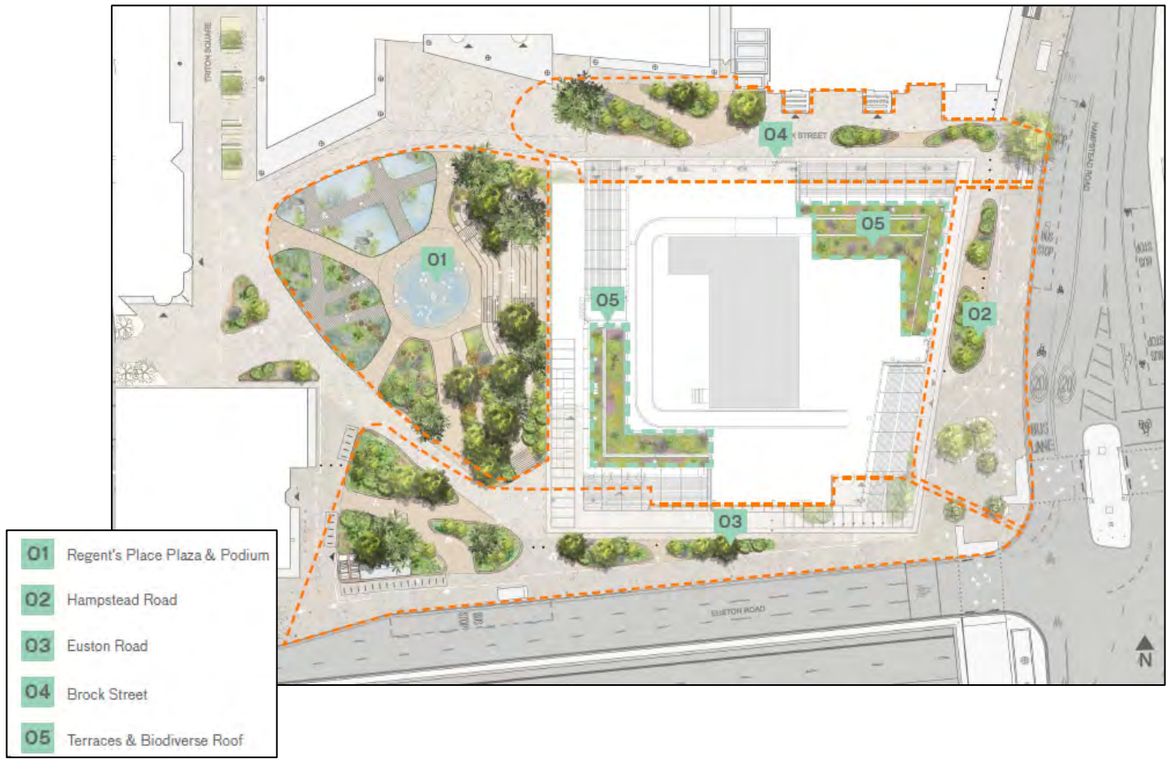
4.28 The Proposed Development will have a large impact on the surrounding Regent's Place Plaza and as such result in a number of opportunities to make significant public realm improvements to the site and its immediate context. The majority of the site will be publicly accessible and at multiple points, enhanced public entrances into the east and west side of the tower will be created.

Ground Level

4.29 The ground level landscape and public realm of the Proposed Development, as presented in Figure 4.11, is split into the following areas:

- Regent's Place Plaza;
- Terraced Landscaping;
- Euston Road;
- Hampstead Road; and
- Brock Street.

Figure 4.11 Key Areas of the Proposed Site Plan



Hard Landscaping Strategy

4.30 The aspiration is to use the hardscape to link together the public spaces surrounding Regent's Place. The strategy aims to create a transition between the existing dark granite paving along Euston Road and Hampstead Road and the yellow limestone along the Triton developments.

4.31 The paving will be used to signpost different zones of public space, including denoting public entrances but with transitional spaces to avoid the creation of barriers between public and private space. The colours and materials selected compliment those used on the tower to bring these aspects together.

4.32 Natural materials will be selected where possible for their ability to change appearance when wet, creating a visual link to the concept of water on-site. Wooden material will be used to construct boardwalks over the wetland features, evoking the traditional elements found in these habitats. All hardscape materials will be selected for their durability and non-slip qualities. Re-used materials will be prioritized where available, following additional design exploration in the next stages. Figure 4.12 highlights the different hard landscaping materials proposed.

Figure 4.12 Hard Landscaping Proposals

Soft Landscaping Strategy

4.33 The ground level planting scheme is broken into four distinct character areas, corresponding to different types of ecosystems:

- Woodland (618m^2) – concentrated around the southwest and northeast corners of the site, along Euston Road and Hampstead Road;
- Grassland (299m^2) – located in the western area of Regent's Place Plaza and along Euston Road;
- Heathland (325m^2) – located within the Terraced Staircase area; and
- Wetland (250m^2) – located within Regent's Place Plaza.

4.34 In the woodland areas, a range of British native trees have been selected which will be planted at a variety of heights and sizes to imitate a more natural environment. These include *Pinus sylvestris* (Scots pine), *Ilex aquifolium* (common holly), *Sorbus aucuparia* (rowan), *Crataegus monogyna* (common hawthorn), *Betula pubescens* (downy birch), *Betula pendula* (silver birch), and *Malix sylverstris* (European crab apple).

4.35 The grassland planting mix will use a mixture of evergreen ornamental grasses combined with a selection of perennial and bulb species that offer an interesting winter structure to extend the colour and display through the winter months before the cycle of growth in early spring.

4.36 The heathland areas will embody a more diverse planting mix through the inclusion of flowering perennials and ornamental grasses and a wider mix of subshrubs to create a rich tapestry of colour, texture and winter form.

4.37 Within the wetland planting areas, the conditions and profiles will be created to support the various aspects of wetland habitats: meadow, bog, marginal, and submergent layers will be replicated.

Figure 4.13 Ground Floor Landscaping Proposals

Figure 4.14 Ground Level Planting Areas

Regent's Place Plaza

4.38 Regent's Place Plaza features a series of activated landscape elements around a civic square clearing with the external terraced landscaping located at the eastern edge.

4.39 Dense planting beds with a heathland palette bridge the gap between the ground floor and the publicly accessible first floor podium. Tree planting along the stairs is used to vertically extend the site's greening potential whilst responding to conditions of the microclimate.

4.40 A feature for shallow waterplay is located within the centre of the Plaza. In addition to use for play or relaxation, this pool can be programmed to respond to changing climate conditions as well as user need, including being fully drained to provide additional open space.

4.41 Wetland areas are located on the west side of the site and include a series of accessible boardwalk crossings: one of which is a fixed aquatic habitat with a permanent body of water; and a second riparian wetland to allow for periodic flooding during storm events. Both beds will be planted with submergent and emergent vegetation to promote biodiversity.

Terraced Landscaping

4.42 The terraces at the east of Regent's Place Plaza provide access to the Level 01 terrace via a number of staircases as well as a gently sloping accessible pathway that meanders upwards through a proposed new planted landscape.

4.43 Alongside the sloped pathway, an externally accessed lift is provided at the western end of Brock Street for a fully accessible route to the Level 01 terrace.

4.44 The terraced landscape also provides approximately 100 linear metres of seating within the greening, the majority of which faces the centre of Regent's Place Plaza, allowing for informal audience set-ups facing towards the waterplay feature in the civic square clearing.

4.45 At the top of the stairs and slope, the Level 01 terrace has the possibility to allow the flexible commercial uses (Class E) to occupy this space, thereby creating further seating opportunities.

4.46 Further access to terraces and green spaces is provided at the Level 02 terrace, accessed via an external and internal terraced stair that runs southward from the Level 01 terrace and expressed via the rising colonnade on the West Elevation. The Level 02 terrace is also accessed internally through the public lift on Brock St., which will be operating in accordance with opening and closing times of the tower's interior public spaces

Euston Road

4.47 The landscape along Euston Road has been designed to accommodate a wide range of users while responding to a number of critical conditions. The area hosts two of the buildings main entrances including the ramped entrance to the cycle store in the basement. Eastbound cycle lanes and a bus stop border the site along Euston Road.

4.48 A 4.5m clear width has been introduced as a shared pedestrian and cycle lane, connecting from the south-east corner and running north-west towards Triton Street. The east-west footway was maintained and the narrow condition around the bus stop to the west was improved.

4.49 Large, landscaped mounds have been strategically placed to increase planting and seating opportunities without hindering access to the public realm. Steep edges have been created along the southern edge to conceal basement utilities and double as hazardous vehicle mitigation. Internal edges with reduced grades allow for stepped access to landscape features or seating away from the busy Euston Road.

4.50 The dispersed arrangement of the mounds creates a uniform wall of vegetation, effectively shielding the central plaza from the noise, pollution, and windy conditions to the south.

Hampstead Road

4.51 This area is located along the eastern edge of the site and is one of the major pedestrian footways for Regent's Place. A minimum clear width of 6m was maintained to accommodate existing and anticipated pedestrian movements. The pedestrian footway is divided by a series of central mounds, allowing for two choices of routes along the pavement.

4.52 Landscape mounds have been placed to respond to micro-climatic conditions and work to buffer pedestrians from the adjacent traffic. The mounds are fragmented to provide breaks for retail entrances along the eastern façade, with emphasis around framing the Community Corner to the north.

4.53 Generous setbacks around the anticipated Transport for London (TfL) bus shelter were included along with planter edge seating in order to provide safe and comfortable spaces for commuters.

Brock Street

4.54 Careful consideration was made to accommodate the anticipated increase of pedestrian connections along Brock Street whilst also improving its landscape character.

4.55 Brock Street was envisioned as a gateway to the Plaza with landscape mounds acting as bookends to the street. The increased setback of the tower provides additional space, allowing for the implementation of valuable greening opportunities. Grassland and woodland planting palettes respond to the desire for brighter colours and seasonal interest for both the public and residents along the street. The mounds increase in size and scale as they move towards the plaza to draw interest to the public space within.

4.56 Two mounds at the western end of Brock Street act as a safety measure during gas deliveries. Trucks are able to be parked between the façade and southern mound, with pedestrian flow temporarily re-directed north.

4.57 Seating opportunities were incorporated away from the entrance to 20 Brock Street in order to increase privacy for the residential entrance.

Upper Levels

Landscaping

4.58 Areas of biodiverse roofs are located at Levels 02, 03, 04, 07, 11, 19, 25 and 30 comprising a variety of native and non-native heathland species at a density of 11 plants per m^2. In addition, Level 32 (the roof) will comprise

of a biodiverse roof which will be planted with a variety of native species and plants on the Royal Horticultural Society (RHS) Plants for Pollinators list at a density of 30 plants per m^2. The roof area will also include invertebrate features such as logs, stone piles and liners for temporary water bodies.

Amenity Spaces

4.59 Double height amenity spaces for the tenants are located at Levels 07 to 08, 11 to 12, 19 to 20, 25 to 26 and 30 to 31, expressed on the façade as the setback double-height colonnaded spaces with a planted edge, reflecting the different nature of these spaces internally.

4.60 Level 19 and 20 comprises amenity space intended to be shared across all tenants of the proposed tower and features an accessible external terrace space in addition to provide outdoor amenity within the tower.

4.61 The additional double-height amenity spaces at Levels 07 to 08, 11 to 12 and 25 to 26 are intended to be accessed by the tenant who occupies the specific floorplate allowing for the opportunity to create double height spaces and internal vertical connections through soft spots along the double height façade.

Figure 4.15 Upper Level Amenity Spaces

Site Wide Biodiversity and Greening

Biodiversity Net Gain

4.62 In accordance with the National Planning Policy Framework (NPPF)[1], a Biodiversity Net Gain (BNG) assessment of the Proposed Development was prepared by Greengage on behalf of the Applicant. The BNG was calculated using the Natural England Biodiversity Metric 4.0[2]. The assessment found that the Proposed Development will provide 0.66 Habitat Units (HU), resulting in a net gain of 26.9%.

Urban Greening Factor

4.63 The Urban Greening Factor (UGF) has been calculated using the Greater London Authority (GLA) calculator in accordance with Policy G5 of the London Plan. The Proposed Development achieves a score of 0.386 which is policy compliant, as the target score for commercial developments is an UGF of 0.30. This score is achieved through a combination of semi-natural vegetation and planting, wetland features, green roofs and tree planting.

Lighting Strategy

4.64 The lighting design for the Proposed Development will be further developed at detailed design stage to provide a positive contribution to the night time experience of this prime central London location and encourage evening use of the amenity spaces.

4.65 The following considerations define the overall lighting approach:

- Safety - creating a safe environment through positive lighting after dark. This includes ensuring that appropriate light levels are provided along routes, as well as ensuring that people's faces are well illuminated, and that changes of levels or other hazards are clearly identifiable;
- Identity - meeting the functional lighting requirements in a way that also creates a memorable and attractive identity with a pedestrian neighbourhood character after dark;
- Legibility - balancing light intensity and distribution to create an environment that is intuitively legible after dark; and
- Movement - using light to encourage movement into and through the site by clearly identifying entrances, framing routes and highlighting destinations.

4.66 The Lighting Strategy will also be sensitive to the landscape and ecological constraints of the site.

ACCESS, PARKING AND SERVICING

Pedestrian and Cycle Access

4.67 Pedestrian access to the Proposed Development will be provided via a number of access points at ground level. Public access points are located along Brock Street and Hampstead Road. A further public access point is located via Regent's Place Plaza at Level 01.

4.68 Pedestrian entrances to the office and life science elements of the Proposed Development are located via Euston Road at the south of the building.

4.69 A dedicated cycle entrance is also provided from Euston Road which provides access to the basement cycle store via a dedicated cycle ramp or lift. The cyclist lift is sized to accommodate larger bicycle types. Access controls for cyclists will be located in the basement so that cyclists do not need to dismount when travelling between the local roads and the basement.

Figure 4.16 Proposed Pedestrian and Cyclist Access Routes

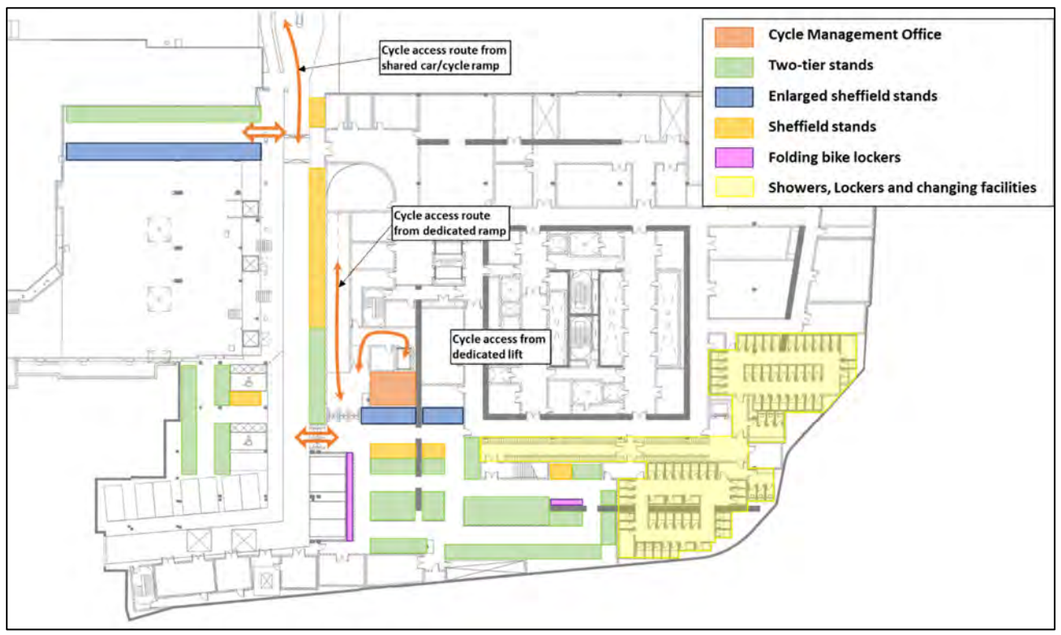
[1] *NPPF (2023) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019*

[2] *Defra (2021) Biodiversity Metric 4.0*

Vehicle Access

4.70 The existing vehicle access ramps along Longford Street and Drummond Street to the north are to be retained to enable vehicle access to the basement servicing areas.

Figure 4.17 Basement Cycle Parking Layout



Vehicle and Cycle Parking

4.71 The Proposed Development is car-free and removes 102 spaces, in accordance with London Plan[3] and Camden Local Plan[4] policy requirements. Two blue-badge parking spaces are proposed within the Euston Tower basement demise and located as close as possible to the accessible access.

4.72 The Proposed Development will provide a total of 861 long-stay cycle parking spaces at basement level. They consist of 646 two-tier parking (75%), 86 foldable bicycle parking (10%), 86 Sheffield stands (10%), and 43 Enlarged Sheffield stands (5%). Male and female changing rooms will be located adjacent to the long-stay cycle parking and will provide 574 lockers (two lockers per three parking spaces), 72 showers including two accessible showers (one shower per 12 cycle parking spaces) and six toilets including two accessible WCs. As well as showering and changing facilities, it is proposed to include cycle maintenance facilities and water dispensers.

4.73 There will be 90 short-stay cycle parking spaces provided within the surrounding public realm. Twelve spaces are proposed to be located to the south of the dedicated cycle access and will include a number of enlarged spaces to accommodate all types of cycle, including 2 cargo bike stands located next to the entrance of the basement cycle store. The remaining short-stay cycle parking spaces will be located within the public realm close to the building.

Deliveries and Servicing

4.74 Vehicle access for servicing vehicles is via the existing ramp along Longford Street; the basement ramp provides access to a number of servicing areas which serve all buildings within the Regent's Place Campus. The service yard area for Euston Tower is located towards the eastern side of the basement and is shared with Brock Street as presented in Figure 4.18.

4.75 The existing access and vehicle route to the servicing area will be retained for Euston Tower and Brock Street and Regent's Place Management will continue to manage the entire basement area. The proposed basement servicing arrangement is shown in Figure 4.19.

Figure 4.18 Existing Regents Place Basement Area

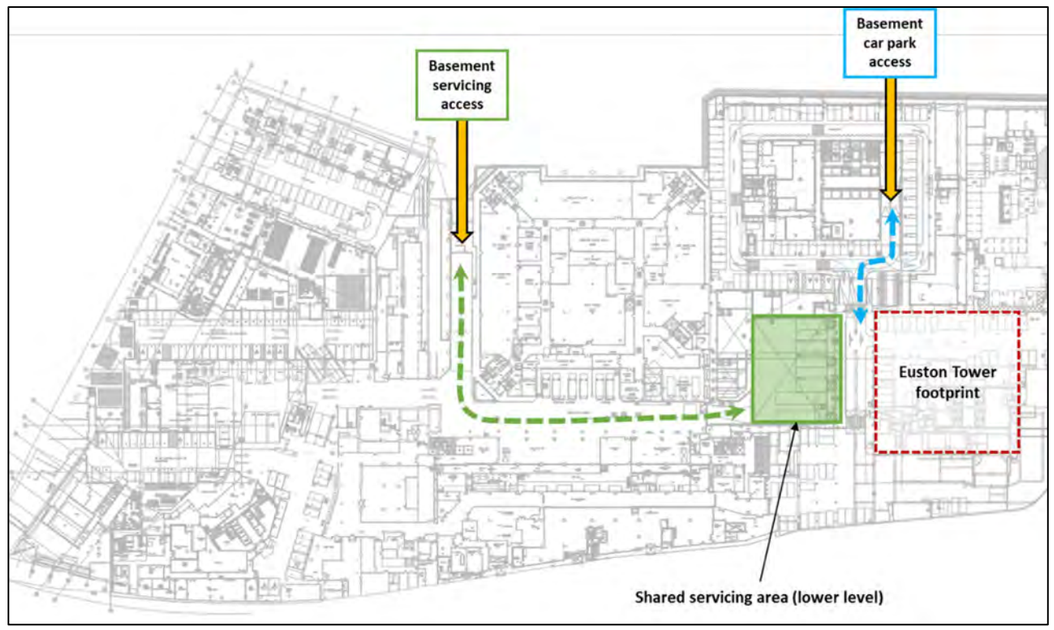
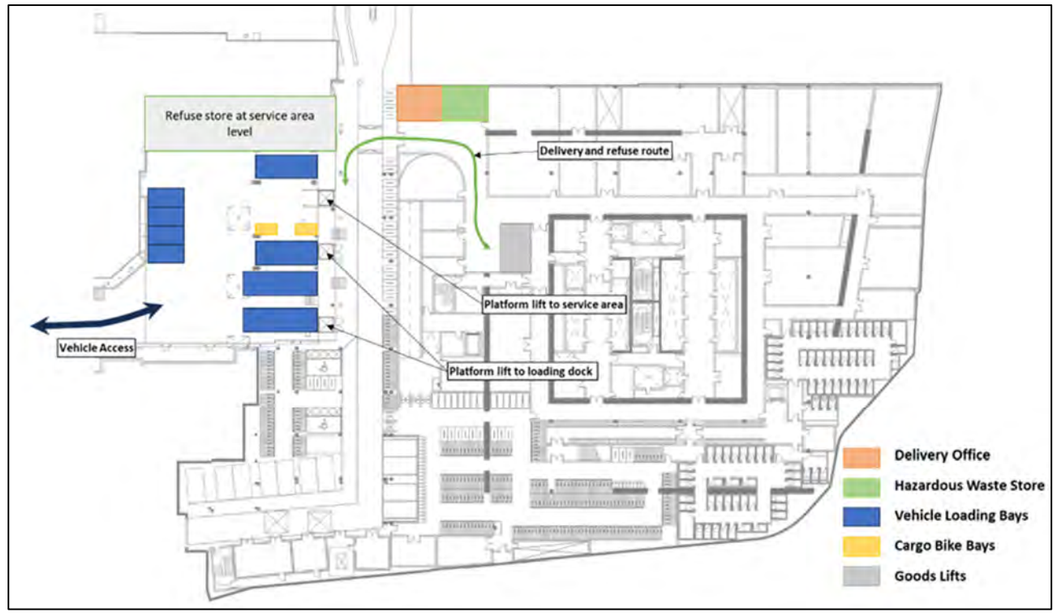


Figure 4.19 Proposed Basement Servicing Arrangements



4.76 The service area provides eights loading bays in total, comprising two 10m loading bays, two 8m bays and four 6m bays. The loading bays are located at a lower level than the Euston Tower and Brock Street back-of-house

[3] *Greater London Authority (GLA), (2021); The London Plan.*

[4] *London Borough of Camden (LBC), (2017); Camden Local Plan*

accesses and platform lifts are provided to move goods and bins between the two levels. All vehicles[5] will enter and exit the service area in forward gear.

4.77 Deliveries made by larger cargo bikes or quadricycles will service the Proposed Development via the existing basement ramp and loading area. Within the basement loading area, two cargo bike parking bays will be provided. Deliveries will be received by a member of on-site staff.

Specialist Life Science Deliveries

4.78 The requirements for specialist deliveries are highly dependent upon the tenants. At this stage it is therefore necessary to design flexibly to allow for different volumes, types and delivery methods of liquids/ gases.

4.79 Life sciences require several additional specialist bottled/liquid gas deliveries along with the regular deliveries expected to a lab-type building. The liquid and bottled gas deliveries cannot take place within the basement and need to be at ground level with blue-sky above them. All specialist delivery activity is proposed to be at ground-level to the northwest corner of the building.

4.80 The proposed delivery location will enable quick deliveries over a short distance directly into the ground level gas store. The specialist vehicle will access the delivery bay from Drummond Street via Triton Square and Brock Street and stop in an area close to the gas store with landscaping to the north which will allow the vehicle to be temporarily 'fenced off' to stop pedestrians walking past when the vehicle is delivering. A pedestrian route is maintained to the north.

4.81 All vehicle movements across the Regent's Place Plaza and the delivery process will be fully managed by trained staff.

4.82 Once the servicing vehicle has arrived, the delivery can be transferred from the vehicle into the building.

4.83 For liquid nitrogen (LN_2) deliveries, it may be that a hose is extended from the vehicle directly to an inlet connected to the on-site LN_2 store, located on the Brock Street frontage, so that liquid nitrogen can be pumped directly to an on-site tank. If a dewar solution is adopted, dewars will be transported between the vehicle and the LN2 store via Brock Street.

4.84 Gas bottles would also be brought to the site from delivery vehicles using trollies and directly to the gas store at ground level.

CLIMATE CHANGE, ENERGY AND SUSTAINABILITY

Whole Life Carbon

4.85 As the operational energy use and associated carbon emissions of new buildings declines, the relative importance of the embodied carbon emitted during their construction increases. For contemporary high performance buildings in London, embodied carbon emitted up until their practical completion can be greater than the operational carbon emissions due to their energy use throughout their life time.

4.86 Emitted during an intense period of manufacture and construction even before the building is occupied, this embodied carbon can also lead to a more immediate and greater damage than the operational carbon emitted gradually over long periods.

4.87 In response to this emerging challenge, and in line with the GLA's policies, the potential whole life-cycle carbon emission impact of the Proposed Development was assessed.

4.88 A Sustainability Statement is submitted as part of the planning application which sets out the circular economy principles to reduce the embodied carbon of the Proposed Development during the construction and operational stages. In order to reduce embodied carbon, the Proposed Development includes the following:

- Retention of the existing foundation, substructure, and central concrete core;
- Optimisation of structural, façade, and Mechanical, Electrical and Plumbing (MEP) designs to reduce material intensity;
- Improved concrete specification and higher quantities of cement replacements;
- High recycled content aluminium and glass in façades;
- Reduction of emissions associated with transport (e.g. electric vehicles, consolidation centres, local sourcing); and
- Reduction of emissions associated with site operations (e.g. electric site plant, HVO fuel for site plant, REGO-backed renewable energy).

Circular Economy

4.89 A circular economy statement has been prepared in support of the planning application. This confirms that the following key commitments and targets have been prepared in order to comply with the requirements of the London Plan:

- Maximising utility of existing buildings; achieved by strategically retaining as much as possible of the existing building, reducing waste and the need for new materials;
- A thorough and transparent Feasibility Study studying the condition of the existing building, and assessing options for redevelopment;
- Retention of 31% of the existing structure, following a third-party reviewed feasibility study (pre-redevelopment audit), the report of which has been issued to LBC;
- Minimising waste in deconstruction and construction through a transparent approach to handling deconstructed materials and identifying opportunities to put them to best use;
- A pre-deconstruction audit has been undertaken;
- A detailed assessment of opportunities for on-site and off-site deconstruction waste reuse/ upcycling/recycling are considered and captured in the Circular Economy Statement;
- Prototyping innovative approaches for structural reuse of concrete and recycling of building glass at scale, with ambition to publish the findings;
- Following this approach, 98% of the construction and deconstruction waste will be diverted from landfill, and 95% of excavation waste will be put to beneficial use;
- In order to minimise waste in operation and end of life, the overall strategic design approach is to design a building for adaptability and longevity, reducing waste and preventing premature obsolescence;
- Particular focus is applied to the structure as it is the most carbon-intensive element, and is seen as foundational meaningful long-term adaptability;
- Considering the different building elements in layers to enable maintenance and replacement that minimises destructive impacts on other building elements (especially structure);
- Designing a modular façade and utilising off-site manufacturing to reduce waste;
- Dedicated storage areas for waste recycling;
- The Proposed Development will contribute to achieving the GLA's municipal waste target of 65% recycling by 2030;
- Improving end of life reusability by committing to capture useful data for key building elements in material passports;
- Committing to submitting a post-construction report to report as-built circular economy performance;
- Using reused and/or high recycled content materials where possible, targeting 25% recycled content by value; and
- Driving innovation by upcycling/transforming materials from the deconstruction to reduce waste and the reliance on virgin materials, captured in the material strategy as part of this statement.

[5] *The loading bays are used for servicing the wider Regent's Place Campus as well as Euston Tower itself.*

Energy and Sustainability

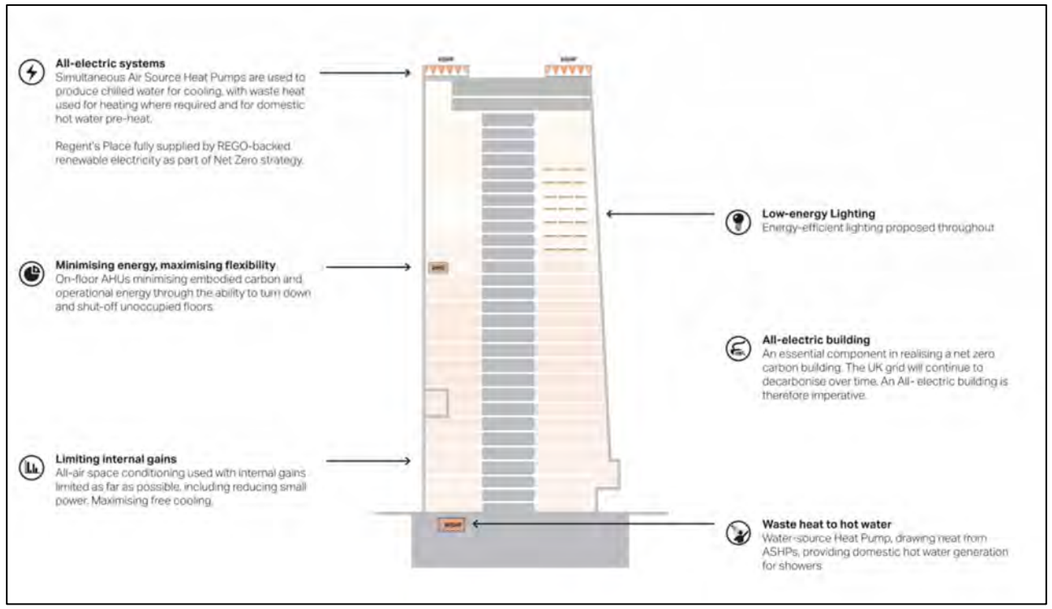
4.90 The Energy Strategy for the Proposed Development has followed the energy hierarchy principles set out in the London Plan and the Camden Local Plan.

4.91 The proposed energy strategy has been demonstrated to achieve an annual 14% on-site reduction in regulated carbon dioxide emissions (10% at the Be Lean stage and 4% at the Be Green stage).

4.92 The carbon off-set contribution required has been calculated on the remaining regulated carbon emissions post Be Green stage. The carbon offsetting price of £95/tonne of CO_2 has been used in line with recommendations from The London Plan; a carbon shortfall payment of £795,581 will be made for the to meet the zero carbon requirement.

4.93 An overview of the proposed MEP and energy strategy is provided in Figure 4.20.

Figure 4.20 Proposed MEP and Energy Strategy



4.94 The following measures have been implemented to minimise energy use at each stage of the energy hierarchy:

- Be Lean
  - Optimised glazing percentages to maximise daylight penetration but minimising overheating. G-value limits specified for glazing elements aims to limit excessive solar gain on to the floor plate.
  - Façade elements that project horizontally and vertically adjacent to glazing are optimised to provide solar shading during peak scenarios but also allows for beneficial solar gain during winter months.
  - An underfloor ventilation system avoids the need for active cooling for large periods of the year through free cooling provided by largely un-tempered fresh air supplied by the on-floor Air Handling Units (AHUs), with cooling by the high efficiency heat exchanger. The underfloor system also avoids the need for additional high-level mechanical services, significantly reducing embodied carbon.
  - A high-performance curtain wall façade has been specified to reduce space heating demand in winter and minimise the risk of summertime overheating. Embodied carbon has bene considered in the analysis of the façade to provide a solution that reduces operational carbon but is also expected to be a lower embodied carbon solution when compared to other façade types.
- Be Clean
  - The Proposed Development follows the GLA heating hierarchy first considering district systems followed by zero emissions or local heat sources. There are no proposed district heat networks in the local area for connection on day one, therefore on-site communal network is proposed using low carbon heat generation.
  - The Proposed Development is designed to avoid all on-site emissions, using an all-electric heating and cooling strategy, therefore no gas boilers or Combined Heat and Power (CHP) units are proposed.
  - The Proposed Development will be enabled for future connections into any local heat networks if available.
- Be Green
  - Heating and cooling will be provided to the Proposed Development by central heating and cooling plant consisting of air source heat pumps (ASHPs) and air-cooled to maximise the ability to share heat between spaces within the building. This will be served by a low temperature hot water (LTHW) and chilled water (CHW) system emanating from high efficiency air source heat pumps (ASHP) capable of providing simultaneous heating and cooling, supported with air-cooled chiller/ heat-pump(s) to meet peak demands, located at roof level.
  - Simultaneous heating and cooling heat pumps can utilise free cooling to maximise efficiency through mid-seasons.
  - Domestic hot water (DHW) for use in high demand areas such as the basement showers will be generated by a water source heat pump (WSHP) which will boost rejected heat from space cooling provided by the ASHPs to provide DHW at appropriate supply temperatures.
  - The installation of Photovoltaic (PV) panels is included within the scheme to contribute to the reduction of the on-site carbon emissions. Approximately 100m^2 is planned to be included spread across appropriate areas at Level 31.
- Be Seen
  - The GLA's 'Be Seen' spreadsheet with performance indicators including contextual data, building energy use and carbon emissions for the Proposed Development will be submitted as part of the wider planning application.
  - The energy performance of the Proposed Development has been assessed using a CIBSE TM54 compliant methodology to provide an assessment of regulated and non-regulated energy consumption.
  - A comprehensive NABERS Design for Performance assessment will be carried out during RIBA Stage 3.

Flood Resilience and Drainage Strategy

4.95 The Flood Risk Assessment (FRA) has identified the site as lying in Flood Zone 1 (an area of very low (less than 1 in 1,000 annual probability of) flood risk from rivers and seas). Flood risk from tidal/fluvial sources, pluvial sources, groundwater, artificial sources, and infrastructure failure are all considered to be low.

4.96 The public realm drainage strategy, as presented in Figure 4.21, is a combination of the existing perimeter drainage with an integrated Sustainable Drainage Systems (SuDS) system in order to align with the hierarchy set out in Policy SI. 13 of the London Plan. Where possible, surface flow will be directed into two open planter features; the freshwater and riparian wetland. Surface flows outside the overland catchment area will be directed into a series of drainage channels along the perimeter and contained in a detention tank. All surface water flows from within the site boundary will be directed from the detention tank and used to feed the wetland system. Water treated from the wetland system will then be retained and re-used for planter irrigation in the public realm. The concept aims to imitate the ecosystem services of wetlands found in Hampstead Heath but adapted to the realities of an urban space above impermeable surfaces. Where natural infiltration cannot occur, the detention basins coupled with natural wetland processes mimic the benefits of water retention and filtration while retaining all stormwater on-site.

Figure 4.21 Drainage Strategy

4.97 A number of preferred SuDS options are not available due to the site's location and so the strategy is based around reducing the discharge of rainwater to the sewers. Currently a blue roof and attenuation tank in the basement are the most appropriate means of attenuating surface water, with a combined rainwater harvesting and surface water attenuation tank at basement level. The strategies that comprise the proposed SuDS will reduce the discharge rate from the existing 11.9l/s to 3.0l/; all calculations include an allowance of 40% for climate change in all in line with the Environment Agency's guidance.

Foul Drainage

4.98 There are no adoptable Thames Water assets located within the development parcel and therefore foul water is thought to currently drain via private connection from Euston Tower into the adjacent combined sewer.

4.99 It is proposed that foul flows from the building will be discharged to the TWUL (Thames Water Utilities Limited) combined sewer with Hampstead Road. Due to the change in building use, there will be an increase in the foul discharge from the building. The rate of discharge will be agreed with TWUL prior to connection; a pump system will be required to discharge flows into a demarcation chamber which then drains under gravity to the proposed point of connection.

Water Consumption

4.100 Policy CC2 of the Camden Local Plan (2017) expects all non-residential development of at least 500m^2 to achieve BREEAM "Excellent" certification. The Proposed Development is targeting BREEAM "Outstanding" certification for offices, exceeding local planning policy requirements.

4.101 The Proposed Development will be provided with water efficient fixtures, fittings and appliances and will include measures to encourage efficient water use, including:

- Installation of water meters with pulsed or other open protocol communication output to enable connection to a utility monitoring and management system;
- A leak detection system on the mains water supply between the building and the utilities water meter; flow control devices will be fitted to minimise water leaks and wastage from sanitary fittings; and
- Greywater and rainwater harvesting systems are proposed as a further means of reclaiming non-potable water and reducing potable water demand.

4.102 The water demand volumes of the Proposed Development have been calculated and are outlined below. The water consumption has been calculated using an average of 90 litres per person per day for the commercial uses: Commercial uses – 90L X 5,512 (maximum jobs) = 496,080 litres per day.

4.103 Table 4.2 sets out the minimum performance requirements of the water-efficient fixtures and fittings that will be installed in the proposed WCs, shower rooms, etc.

Table 4.2 Minimum Water Performance Requirements

Water fitting – Non-Domestic Areas	Capacity / flow rate	Units
WC, dual flush (effective)	4.5 (full flush) or 3 (low flush)	Litres
Wash hand basin taps	5	Litres/minute
Showers	7	Litres/minute
Dishwashers	10	Litres/cycle
Kitchen sink taps	4.5	Litres/minute

Waste Storage and Management

Operational Waste Management

4.104 An Operational Waste Management Strategy has been prepared for the Proposed Development, which will be adopted to manage the waste generated from the Proposed Development once operational. The strategy sets out the proposed waste storage, management, and collection arrangements for the Proposed Development.

4.105 The estimated waste generation from the Proposed Development is provided in Table 4.3.

Table 4.3 Estimated Weekly Waste Generation

Commercial Use	Litres per Week				
	Residual Waste	Dry Mixed Recyclable Waste (DMR)	Food Waste	Glass Waste	Total
Office / Life Science / Learning	62,528	175,077	10,004	2,501	247,609
Class E Flexible Retail	2,291	5,956	733	184	8,980
Total	**64,819**	**181,033**	**10,737**	**2,685**	**256,589**

4.106 All waste facilities will be designed to British Standard BS5906:2005 Waste Management in Buildings – Code of Practice standards. In summary, the waste facilities will include the following:

- A suitable water point in close proximity to allow washing down;
- All surfaces will be sealed with a suitable wash proof finish (vinyl, tiles etc.);
- All surfaces will be easy to clean;
- Suitable floor drain; and
- Suitable lighting and ventilation.

4.107 In line with the existing operation of the Regent's Place, the commercial tenants will provide temporary internal waste storage within their communal areas for segregation of waste at source. An on-site Facilities Management (FM) contractor will be appointed to collect the internally segregated waste from as part of standard cleansing operations. The on-site FM team will collect the waste in suitable trolleys as separate waste streams. Using the service lifts and access corridors, the on-site FM team will transfer the segregated waste to a commercial waste store.

4.108 A commercial waste store will be provided in the basement service yard (Basement Level 01), where all bagged waste streams will be deposited by the on-site FM team.

4.109 Based on the estimated weekly waste generation detailed in Table 4.3, the proposed waste storage provisions, (appropriate to the capacity of the commercial waste store) are detailed in Table 4.4.

Table 4.4 Estimated Waste Storage Requirements

Waste Stream	Container Type	No. of Containers	No. of Days Storage
Residual Waste	1,100-Litre Eurobins	12	1
DMR		33	
Food Waste	240-Litre Wheeled Bins	9	
Glass Waste		3	

4.110 The proposed waste strategy will maintain the same principles of consolidation and collection for each waste stream. On collection days, the commercial waste collection contractor accesses the basement service yard to attend the individual waste streams. The food waste and glass waste bins are collected directly from each tenant waste area.

4.111 Each waste stream will continue to be collected multiple times a week in accordance with the LBC approved servicing hours for the Proposed Development. Additional waste collections could be implemented as necessary to accommodate the waste generated by the Proposed Development.

Laboratory Waste Management

4.112 Space within laboratory areas on each tenant floor will be provided for the temporary storage of specialist waste materials that meet all requirements in accordance with prevailing guidance and legislation. Due to the range of potential tenants for the laboratory areas, the exact requirements for the temporary waste storage areas will be determined during the fit-out phase as they will be informed by the specific activities of the tenants.

Specialist and Hazardous Waste

4.113 It is anticipated that a level of specialist waste will be generated by the Proposed Development once operational, which is anticipated to potentially include flammable, chemical and biohazard waste.

4.114 A specialist waste storage area has been provided at Basement Level 01.

4.115 This facility will be designed in accordance with requirements determined by their physical and chemical properties and all prevailing legislation. The exact design of the storage facilities will also be dictated by the specific requirements of the commercial tenants and their business activities.

4.116 As necessary the on-site FM team will transfer the specialist waste from each tenant floor to the specialist waste store at Basement Level 01. On an agreed schedule appropriately licensed specialist waste contractors will be appointed to collect directly from the specialist waste store and tenanted areas.

Clinical Waste

4.117 It is expected that a level of clinical waste will be generated by the lab areas within the Proposed Development which will be stored in 770-litre clinical waste bins. It is anticipated that the clinical waste bins will be stored within a nominated area within the commercial waste store at basement.

4.118 As necessary, the on-site FM team will transfer clinical waste bins which collect hazardous waste from tenanted areas and transfer it to the commercial waste store. The number of clinical waste bins required to service the Proposed Development will vary based on the precise business activities of the tenants.

4.119 Based on experience from similar operational developments, it is anticipated that approximately four to six 770-litre Eurobins may be required to service the Proposed Development.

4.120 A suitably licenced clinical waste contractor will be appointed to collect the clinical waste bins directly from the commercial waste store on an agreed schedule.