

## 10.5 Hostile Vehicle Mitigation

The Hostile Vehicle Mitigation (HVM) strategy has been developed with the specialist security consultant, QCIC and informed by the Threat and Risk Assessment that QCIC has prepared.

As part of the detailed design process all necessary third parties will be consulted together with other stakeholders to agree the final specification of all security measures.

The strategy seeks to limit the impacts that a vehicle-borne attack might have on the structural integrity of the proposed design, by restricting the degree to which any vehicle can penetrate the building. The HVM Strategy for the Euston Tower is based on providing a protected perimeter by mixing landscape elements (planters and mounds) with fixed security devices (bollards) to provide an easily accessible and permeable site while still being fully safe and secured. It employs several methods to achieve this:

- Landscape measures have been integrated in the design of the public realm to provide mitigation measures to restrict vehicle access.
- Bollards rated to BSI PAS 68 will be installed in the public realm where the above measures cannot be integrated.

This strategy has been designed to connect into the existing HVM strategies of the neighbouring buildings within the Regent's Place Estate ensuring that the campus as a whole is protected.

Access to Regents Place Estate from the north and west will be defined further to ensure it provides a more permanent solution than what is currently provided.



01 When there is the absence of a mound, the security line is supported by bollards



02 Throughout the design, large mounds shape the landscape, offering additional security support through their height and immovability.





Illustrative View - Euston Road ground level view at dusk - landscape elements and HVM bollards combine to provide secure line around key entrances and exposed structural elements

## 10.6 Daylight & Sunlight Analysis

### Proposed Development

In total, 28 residential properties were assessed that contain residential accommodation.

Of these 28 properties, 22 will fully meet the Building Research Establishment (BRE) Guidelines for daylight and sunlight.

Overall, the technical analysis demonstrates a very high level of overall compliance for an urban area such as this, with 1076/1106 (97%) of the windows assessed adhering to the BRE Guidelines for VSC.

In terms of NSL, 713/733 (97%) will adhere to the BRE criteria. Turning to sunlight, 249 of the 250 rooms (99%) assessed for APSH will adhere to the BRE Guidelines.

In total, there are six properties that experience some alterations beyond the BRE guideline recommendations (noting that two of these properties, Triton Building and 175 Drummond Street, are within the same development).

The majority of these properties experience minor percentage alterations or there are clear reasons for the transgressions, such as the presence of overhanging balconies/walkways which result in a disproportionate percentage alteration on the light that is received.

Once these properties have been considered within the alternative assessment which negates the presence of these features, as allowed for within the BRE Guidelines, all of the relevant transgressions fall away (demonstrating that it is the presence of the overhang which is the main cause of the relative alteration in light rather than the Proposed Development).

The remaining transgressions are minor and predominantly located within bedrooms which have a lesser requirement for Daylight.

For Overshadowing, all amenity spaces show compliance with the BRE Guidelines on the 21st March and therefore remain sufficiently sunlit throughout the year.

Overall, the scheme performs very well from a Daylight, Sunlight and Overshadowing perspective. Whilst the proposal will result in some isolated, minor alterations as noted within this report, we would suggest that these could be found acceptable when considering the intended flexibility cited within the BRE Guidelines and

the urban context in which the Proposed Development and surrounding neighbouring properties are located.

More detail on the daylight & sunlight can be found in the Daylight, Sunlight and Overshadowing report prepared by Point2, in addition to the Environmental Statement submitted as part of this application.

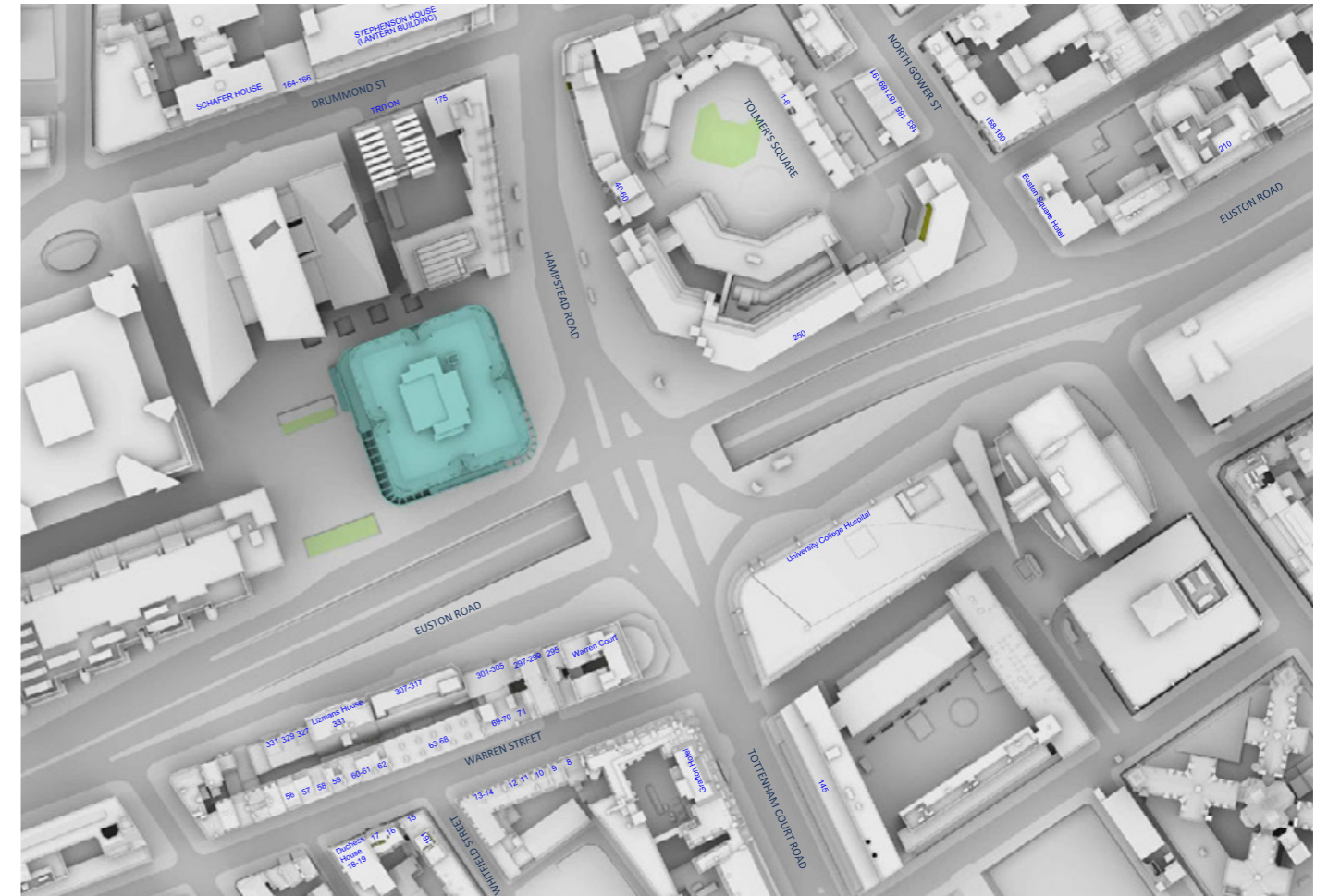


Diagram - Plan view of proposed Euston Tower in DLSL model

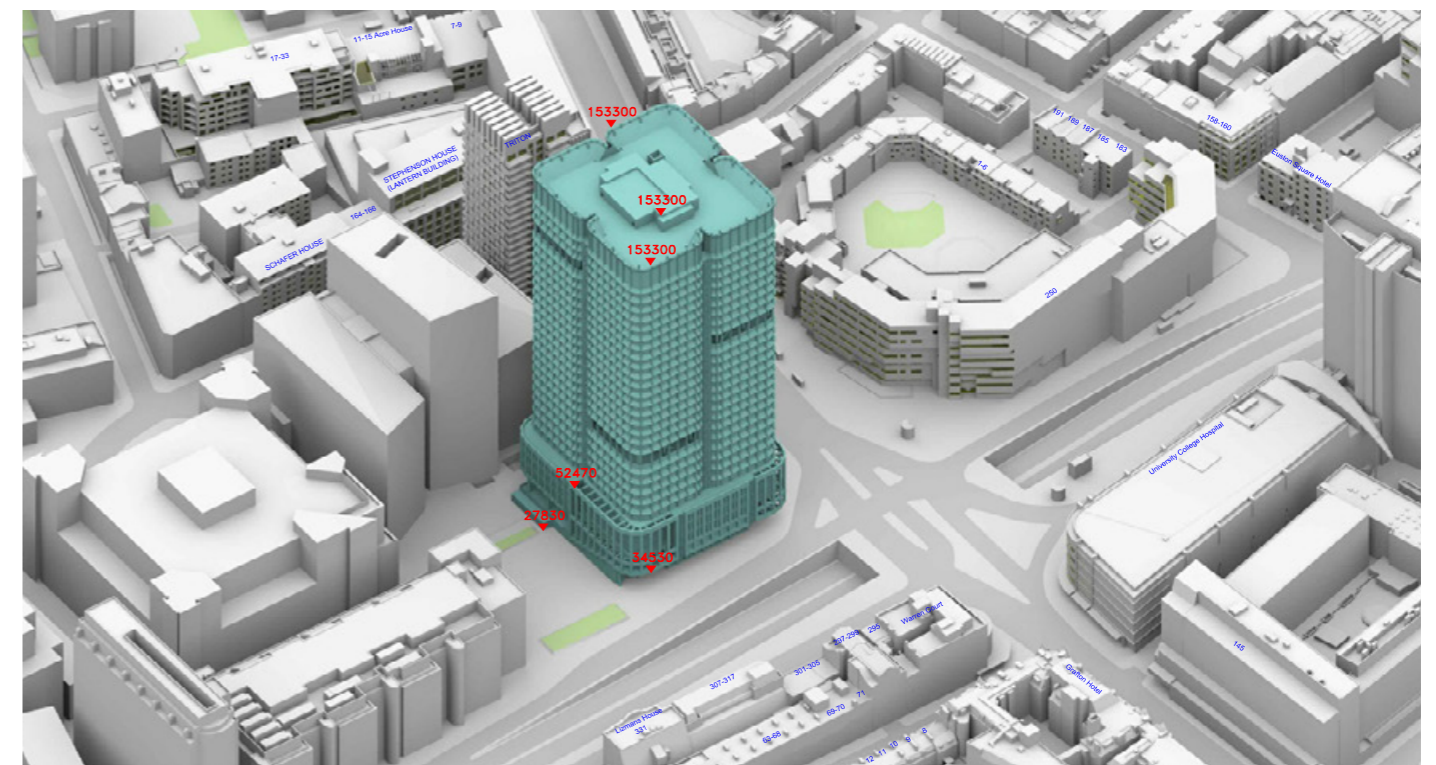


Diagram - Axonometric view of proposed Euston Tower in DLSL model

## 10.7 Facade Maintenance

### Façade access

This section provides an outline of the overall facade access proposals developed for the proposed Euston Tower highlighting the proposed access solutions. The façade access strategy is to be designed in accordance with the relevant code of practice for the design of buildings incorporating safe work at height and will need to follow local guidance and regulations regarding safety in window cleaning using suspended and powered access equipment.

### Tower

The cleaning access will be from a long reach tracked building maintenance unit (BMU) operating on a perimeter track installed behind the top parapet level. The BMU will comprise an extended reach jib which will ensure access to the tower façade below, the podium projections but also for the cradle to land on the ground. As the tower consists of solar shading GRC elements which protrude in all the facades restraint pins will be integrated on the shading elements to secure the BMU cradle and allow the unit to pull itself closer to the facades for cleaning and maintenance.

When not in use the BMU will be parked at roof level (Level 31) so as not to be visible.

### Podium and Ground Floor

Cleaning access to the podium level facades can be effectively cleaned from operatives equipped with a short or long handled cleaning equipment. Fixed balustrades will be installed to provide a fall protection with a height of 1.1m minimum. Where there are no balustrades available a fall protection system will be provided. Higher levels of the podium facades will be maintained via the roof BMU.

At Ground Level where the two stories facades are located, cleaning will be from a compact aerial work platform (AWP) reaching up to 10m in height.

## 10.8 Fire Strategy

The fire strategy for Euston Tower has been developed to demonstrate compliance with the Building Regulations, and specific client requirements. As the building retains element of the basement and existing structure, there are constraints which the fire strategy has taken into account.

The building does not contain residential units, so it is not defined as a higher risk building under the Building Safety Act.

The guidance provided in BS 9999: 2017 has been followed in principle, with other relevant guidance and applicable British Standards (and European Norms) set out in the strategy. The following sets out some of the main fire safety provisions (non-exhaustive):

- The building operates a phased evacuation strategy, with two typical floors escaping at the same time. Where floors are linked via an open void such as an accommodation stair, they shall evacuate together, with a maximum of two storeys connected. The podium levels are one escape zone, and the basement is an escape zone.
- The structure shall be rated to 120mins, including compartment floors, and is constructed of non-combustible materials.
- Sprinklers shall be provided throughout, in accordance with BS EN 12845 + Annex F.
- There are two firefighting cores, including dedicated fire fighting lifts. The shafts are pressurised in accordance with BS EN 12101 and provided with wet riser outlets.
- The two stairs provide sufficient capacity for the occupants on the typical floors. Travel distances limits can be met throughout with the provision of additional doors, as stated in the main body of the fire strategy. Some travel distances are to within 4.5m of a void which is non-compliant with the recommendations in BS 9999. However, this is justified in the main body of the fire strategy.
- The podium levels are provided with an additional escape stair to accommodate the increased occupancies on these floors.
- All stairs are provided with evacuation lifts, which are combined with the goods lifts.

- All stairs lead to outside via a protected route, which leads to compliant fire brigade vehicle locations.
- Automatic alarm and detection will be provided throughout, including a PA/VA system, to ensure early detection and support the phased evacuation strategy.
- A fire control centre is provided at Ground Level, accessed from a protected access route.
- Based on preliminary assessments, no fire rated facade has been identified, to mitigate the risk of external fire spread. Further assessments will be undertaken as the design develops.
- The facade will not increase the risk of external fire spread, and cladding and insulation materials will be non-combustible.
- In addition to floor by floor compartmentation, there will be internal sub-compartmentation around higher risk spaces, such as plant rooms, and life safety provisions, e.g stairs, lifts and life safety plant.
- Photovoltaic panels (PV) are proposed to be located on the roof.
- Planting is proposed on the roof which will follow the principles described by The Green Roof Organisation (GRO) as a guideline.
- The basement escape and fire fighting access provisions will rely on the same two stair cores which serve the tower.
- The basement areas located below Euston Tower will contain plant and cycling facilities only.
- The basement will be provided with mechanical smoke extract, achieving 10 air changes per hour.
- The basement shall be separated from upper levels with fire resistant construction.
- Some Euston Tower related provisions are located outside the immediate Euston Tower basement demise (e.g. UKPN), and are located within the Regent's Place basement. These changes will need to be incorporated within the Regent's Place fire strategy by the Regent's Place responsible persons so that Building Regulation compliance is demonstrated. This will need to be developed further as the design continues.

Overall, it is considered that the fire strategy can demonstrate compliance with the relevant regulations, including Building Regulations and the Regulatory (Fire Safety) Reform Order 2005. Early consultation with Building Control has been held and will continue during the next stages of design. No significant objections have been raised to date. Further design development will be ongoing through the next design stages, to work through and implement all required fire safety measures.