3.0 Station Design

3.1 Introduction
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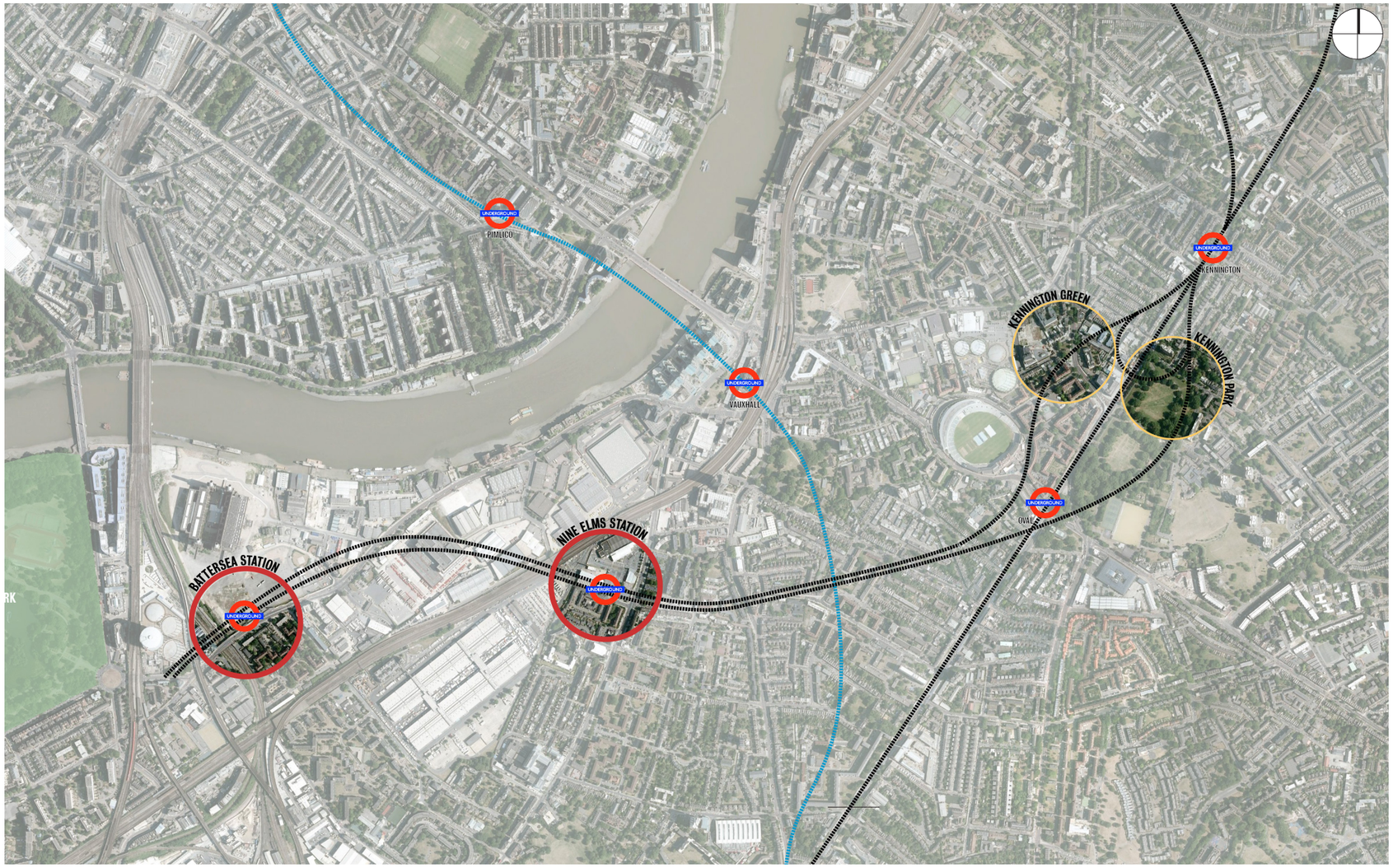
3.1 Introduction

3.1.1 This section covers the design of the station boxes – the structures which enclose the platforms, ventilation and draught relief systems, emergency intervention, ticket halls, circulation and staff accommodation - and indicative design of the above ground elements of the station such as the station entrances. The detailed design of the station entrances, their external appearance and associated landscaping is reserved by planning condition.

3.1.2 It is worth noting that before the public realm is completed at both station sites, there is the potential that interim works may be required during the period when the station opens to the public and commencement or completion of the development at Battersea Power Station or the over site development (OSD) at Nine Elms. To help set out how the designs have taken this into account, illustrative material has also been described in Sections 3.4 and 3.5, demonstrating how the stations may relate to these adjacent developments.

3.1.3 The general design principles for the stations have been set out in Table 3.2. This identifies the principles which have informed the design to date and those which will be taken into account through subsequent design development.

Figure 3.1 Northern Line Extension Stations - Contextual Overview (Indicative)



3.2 Functional and Operational Requirements of Stations

Functional requirements

3.2.1 The functional and operational requirements have a significant influence on the design of the stations. The design of stations has been developed in accordance with the London Underground Limited (LUL) Category 1 Standards, which are mandatory. The stations have been designed to the following standard:

- Being structurally sound with a life span of up to 120 years;
- Provide a ticket hall, platforms and vertical circulation elements that accommodate the projected passenger demand;
- Enable passengers to evacuate the station safely under emergency conditions; and
- Providing appropriate systems for ventilation, draught relief and emergency intervention.

3.2.2 Stations have also been designed to consider LUL 12 standard principles of design including:

1. The scope of the design should encompass all aspects of the Company's 'look and feel', not just those things passengers experience.
2. Infrastructure design and all elements of infrastructure design, will endeavour to contribute to an environment in which customers feel secure.
3. The needs of impaired users will be met in a consistent manner and through designs which enhance the LU brand, in all customer and staff environments.
4. All infrastructure design and all elements of a station's design will take account of the need for passengers to assimilate their environment as simply as possible, enabling them to move with confidence through a station.
5. All station and train design and all elements of a station's and a train's design, will take account of the need to move passengers with as little delay to them and others as possible.
6. Stations will always exhibit basic "World-class" features and will always embrace and balance in their design, functionality, distinctiveness, and a sense of LU's continuing commitment to a positive contribution to the civic scene.
7. The concept of 'zoning', to segregate and demarcate unrelated activities will inform all station development activity.
8. All fixtures and fittings will be developed and installed to make a positive contribution to the overall environment in which it is located.
9. Materials and finishes will be consistently applied across the whole of a station, wherever possible.
10. The corporate colour palette will be applied in all environments in ways that enhance the LU brand and make the use of an environment easy and pleasant.
11. The use of line identifiers and network identifiers must be consistent and clear. Network identity elements will be the principal means used to identify LU environments and products.
12. Only the corporate icons and identifiers, including the use of graphics, as defined in Company standards, shall be used.

Operational requirements

3.2.3 In terms of operational requirements, the stations have been designed to include:

- Step-free access;
- Intuitive way-finding;
- Congestion free circulation;
- Staff accommodation;
- Ticketing facilities;
- Gate lines;
- Security control and communication systems; and
- Evacuation facilities.

3.2.4 Stations have be designed to accommodate forecast passenger demand and, in accordance with relevant good practice guidance, particularly London Underground's Station Planning Standards and Guidelines and 'World Class Stations' Good Practice Guide.

3.2.5 Step-free access into and out of the stations from the public realm has been incorporated into the landscape proposals and the public realm immediately outside of the stations will be designed in general accordance with TfL's Legible London initiative, to help pedestrians find their way, especially when leaving Underground stations.

3.3 Overarching Design Principles

3.3.1 There are a number of common principles for the designs of the stations based on the requirements listed above, as well as urban design requirements which are intended to ensure that the proposed stations integrate with their surrounding areas. These principles have been taken into account in the station designs and will also inform the subsequent detailed design stages for both the external appearance of the station buildings and the associated landscaping/public realm work.

3.3.2 Table 3.2 overleaf sets out the general principles for the stations while paragraphs 3.4.14 and 3.5.10 set out specific design principles for Nine Elms and Battersea stations respectively.

Table 3.2 General Design Principles for the Stations

Project element	Technical requirements	Urban design requirements
Station box structure	The station has been designed to: ▪ be operationally independent of the OSD. ▪ accommodate the appropriate scale of development of any potential OSD. ▪ cater for a train length of 114m, to ensure that the station can accommodate longer trains than those currently in use on the Northern line. ▪ accommodate the requirements of the tunnel ventilation systems, including the appropriate vertical air ducts. ▪ take account of the necessary ducts, louvres and plant associated with the cooling and ventilating of the various plant and accommodation rooms. The ticket hall and escape cores have been designed to take account of the need for the station to remain open during the construction and demolition of any OSD. To do this the designs have incorporate a crash deck to provide protection to passengers and emergency services entering and exiting the station building. Details of the **external appearance of the stations** shall have appropriate regard to the following design principle: ▪ take account of the necessary ducts, louvres and plant associated with the cooling and ventilating of the various plant and accommodation rooms.	Details of the **external appearance of the stations** shall have appropriate regard to the following design principles: ▪ OSD construction: Design of the station should facilitate a high quality, comprehensive OSD to be built at an undefined later date. ▪ OSD access and servicing: Station design should include or allow for the later addition of cores for OSD and appropriate servicing and access arrangements. ▪ OSD life span: Consider the relative predicted life span of the station and the OSD so that the structure allows for both the construction and demolition and reconstruction of OSD without the need to interrupt the operation of the station.
Internal layout	Stations and Premises comply with category one standards and would comply with the Building Regulations and relevant British standards. Where any conflicts arise between Building Regulations and this standard, compliance with this standard shall take precedence except where a breach in the Law would arise. Space for normal operations in stations has been planned to: a) minimise congestion; b) be resilient to surges in demand and train service disruption; c) provide sufficient non-passenger space to enable staff to function efficiently. Station size has been determined by the space requirements of all required activities, e.g. emergency escape provision, access for the emergency services, ticket purchase, retailing, vending, passage through the gate-line, way-finding, access to and from platforms, waiting for trains, boarding and alighting from trains and staff accommodation. Station design has sought to ensure that obvious routes with minimum travel distances, are free from obstructions, have good lines of sight and avoid dead ends and hiding places. The stations have been designed to ensure that persons of reduced mobility can move between street and train via step-free routes between levels, which comprise of lifts, ramps and level access between platform and trains. A bank of three heavy duty metro type escalators between surface level and ticket hall has been included at each station. To achieve a minimum platform width of 3.0m these have been located in the centre of the platforms.	In defining the precise internal layout, TfL shall have regard to the following: ▪ Clean and simple: Provide a clean & simple environment free of clutter, excess detail and signage. ▪ Continuous public realm: Consider the internal space as a continuous part of the public realm outside of the station. ▪ Desire lines: Provide direct, legible and easy to understand routes from the gate line to internal destinations and exits. ▪ Wayfinding: Provide opportunities to integrate simple signage that complement direct and easy to understand routes through the station. ▪ Dwell spaces: Provide dwell spaces appropriately located relative to entrances, gate lines and information boards providing direct views across the station. ▪ Commercial: Consider opportunities for commercial uses to be inserted in appropriate locations within and around the station. ▪ Flexibility: Create flexible spaces that can be used for different purposes at different times of the day and week. ▪ Adaptable: Be adaptable in order to accommodate future changes to the use of space and changes in technology. ▪ Microclimate: Consider micro-climate created by the interface between the street entrance and the underground tunnels in order to create a comfortable environment that minimises energy consumption. ▪ Natural light: Maximise the potential of natural day light into the ticket hall to create a natural airy and light environment while minimising energy requirements.

Project element	Technical requirements	Urban design requirements
Internal layout (continued)	Escalators to maintain an uninterrupted run off width through the ticket hall to minimise passenger congestion at the ticket hall level. A designated fire lift accessible from street level have been provided at both stations. The layouts of the station have been designed to allow for plant replacement, including appropriate arrangements for vehicular access.	▪ Place-making: Develop an internal character of the station that reflects and enhances the existing and new character and identity of the surrounding neighbourhood in a way that creates an appropriate gateway to the area.
Station entrance design	Details of the **external appearance of the stations** shall have appropriate regard to the following design principles: ▪ The entrance level should be set out in accordance with flood protection measures. ▪ The station entrance should remain open and operational during the construction, demolition and redevelopment of any OSD.	Details of the **external appearance of the stations** shall have appropriate regard to the following design principles: ▪ Quality: Should be of a high quality and have regard to LUL's ambition for 'World Class Stations'. ▪ Quality: Stations should also be in keeping with its surrounding area. ▪ Identity: Create a distinct identity, signalling the presence of the London Underground station. ▪ Location: The station entrance(s) should be positioned to respond to desire lines in between the gate line and surrounding destinations and to enable good sight lines and ease of wayfinding. ▪ Size: the entrance should be dimensioned to allow for predicted pedestrian flows along with any regular or extraordinary servicing requirements. ▪ Passive capacity: Entrances should consider the need to provide additional capacity "passively" to cater for future increases in demand. ▪ Step-free access: Step-free access into and out of the station must be provided. ▪ Station entrance structures at street level will need to include provision for louvres at least five metres above ground to provide ventilation for the station.
Landscape and interchange facilities	Details of the **landscape scheme** shall have appropriate regard to the following design principles: ▪ the station should provide public transport interchange facilities with other modes of transport, such as bus and bicycle ▪ adequate cycle parking provision and storage should be provided (further detail of which are provided in Section 5 on Access).	Details of the **landscape scheme** shall have appropriate regard to the following design principles: ▪ The quality of the public realm should be of a high standard to reflect the importance of the NLE station and the VNEB regeneration. ▪ The design of the public realm should provide good access to public transport. ▪ The station should be integrated with the existing and planned public realm and be easily accessible and visible to pedestrians, bus users and cyclists at street level. ▪ Allowance to be made at surface level for cycle parking/cycle hire facilities. ▪ Clear pedestrian and cycle links should be provided between the station and the wider VNEB area. ▪ Wayfinding and signage should provide clear routes for pedestrians and cyclists arriving at/leaving from the station, using 'Legible London' principles (see Section 5 for further details).

3.4 Nine Elms Station

Location

3.4.1 The proposed site is shown in Figure 3.3 and bounded by Wandsworth Road to the east and Pascal Street to the south. The site is currently within three separate land ownerships, Sainsbury's, Banham Security and Covent Garden Market Authority (CGMA).

3.4.2 CGMA land lies immediately to the west of the station site beyond which is a railway viaduct, which is visually dominant and acts as a physical barrier to movement in the area.

Context

Surrounding land use

3.4.3 The surrounding uses currently include:

1. Railway viaduct
2. Sainsbury's supermarket
3. Sainsbury's car park
4. CGMA access road
5. CGMA boiler house
6. Sainsbury's petrol station
7. Proposed station box
8. Banham Security offices
9. CGMA offices (Covent House)
10. Housing (mixed tenures).

3.4.4 Banham Security submitted a fully detailed planning application in 2011 to redevelop and intensify the site for office and residential uses. The proposal did not make any provision for the NLE at either above or below ground levels. Following discussions with LB Lambeth GLA and TfL, the applicant withdrew the application.

Figure 3.3 Nine Elms Station – Existing Site with Proposed Station Box (Indicative)

3.4.5 Currently CGMA has no proposal for the Covent House site and associated land. It is understood that the head office or boiler house will be relocated as part of the longer term redevelopment of the wider Covent Garden Market site.

3.4.6 LB Lambeth have resolved to grant planning permission to Sainsbury's, subject to completion of a section106 agreement. This is a mixed use development, including a replacement retail store, residential units, and community and office space. The outline element of the Sainsbury's proposal anticipated a station entrance located on the southern edge of their site facing onto Wandsworth Road.

Character

3.4.7 The site is located adjacent to the busy Wandsworth Road in an area defined by residential, large-scale retail and light industrial uses. Residential properties (including a sheltered housing block) are located on the south side of Pascal Street opposite the proposed station site and to the east of Wandsworth Road. The immediate area is primarily urban in character with a range of building typologies from large residential blocks to smaller terraces. These range from two to four storeys in height.

3.4.8 There are no heritage assets, conservation areas, listed or locally listed buildings or registered parks and gardens in the vicinity.

3.4.9 TfL's Pedestrian Environment Review System (PERS) audit of this site highlighted that whilst the quality of the walking environment is generally good on Wandsworth Road, Pascal Street requires significant improvements. Maintenance and quality of environment were found to be very poor and identified a need for connectivity improvements west of Wandsworth Road.

3.4.10 There are a number of key sites planned to the north of the Nine Elms station site in the vicinity of Vauxhall Interchange. These proposals increase in height and scale towards the recently constructed 50-storey Vauxhall Tower. Indeed, the consented scheme on the adjacent Sainsbury's site includes towers up to 38 storeys in height.

Movement

3.4.11 The area's historic uses, notably the market and other warehouses with their large disconnected plots, have acted as barriers to pedestrian, cycle and vehicular movement.

3.4.12 The railway viaduct is another major barrier to movement in the area. The new development is expected to improve connectivity in line with the principles set out by the respective planning policies by opening up new connections through these sites, improving strategic links between the river, through the viaduct to the existing communities east of Nine Elms station and the OA. This includes a proposed connection from Pascal Street through the railway viaduct to Ponton Road.

Constraints

3.4.13 The design of the station considers a number of physical constraints, namely:

- The need for the station box to follow the east-west orientation of the proposed NLE alignment;
- The vertical alignment of the railway which dictates a platform level which is approximately 18.5 metres below typical ground level in the local area;
- The aspirations of surrounding land and development proposals; and
- Proximity to Wandsworth Road (part of the Strategic Road Network) and the important CGMA access roads.

Site-specific design principles

3.4.14 In addition to principles identified in Table 3.2 in Section 3.3, there are a number of specific design principles which are applicable at Nine Elms station. These are as follows:

Station box

- Where practicable, the external appearance of the station should be designed so that it could incorporate natural daylight from skylights and would also relate to potential future over site development (OSD).

Station entrance design

- The station has been designed to include a single ticket hall with a dual/split entrance with a southern entrance on Pascal Street and the northern entrance directly opposite, facing the pedestrianised street adjoining the proposed Sainsbury's scheme.
- The landscape scheme should retain appropriate access to the internal street, along with access routes to the south and east.

Landscape and interchange facilities

- The landscape scheme should make provision for clear, coherent and safe pedestrian and cycle links between the station, the Covent Garden Market site, Nine Elms Lane and the river.

Design development

3.4.15 As set out in Section 2.6 above, Route 2 was the preferred route at consultation and has been endorsed by LB Lambeth, LB Wandsworth and other key stakeholders. In parallel with work on the final route adjustment, a detailed assessment of station locations was undertaken (Figure 3.4a). This assessment considered: local connectivity; operational requirements; cost implications; impact of construction; development criteria; and policy compliance.

3.4.16 This highlighted that the Nine Elms site was the most appropriate location for the intermediate station. TfL then continued liaising with stakeholders regarding the possible location and orientation of the station. TfL also investigated the possibility of integrating the station with proposed developments surrounding the site such as the previous Banham's proposals.

3.4.17 For reasons related to engineering, phasing and cost integration, it was not possible, practical or feasible to integrate the station with the Banham proposals in particular. Instead, the optimum station layout was selected that crossed all three land ownerships, but allowed for comprehensive development proposals to come forward above the station structure itself (see Section 6 for further detail).

3.4.18 Figure 3.4 shows a number of the different options for the cores and station box, based on double-ended designs:

- facing Wandsworth Road at one end and the CGMA scheme at the other end (Figures 3.4b);
- single-ended designs with an entrance off Wandsworth Road (Figure 3.4d and 3.4c); and
- single-ended design with an entrance off the pedestrian street (Figure 3.4e).

All of these attempted to accommodate development proposals as far as practically possible.

3.4.19 A single-ended station facing Wandsworth Road emerged as the optimal design solution based on:

- Forecast passenger demand which suggested that only a single ticket hall would be required;
- Forecast passenger movements by direction;
- Facilitating appropriate interchange between buses and the new station;
- Cost and staffing implications for single versus double-ended station layout options;
- The need to integrate and link the new station with the surrounding area with high quality public realm, lighting and signage;
- The need to link the station to the rest of the OA through the railway viaduct; and
- The opportunity to create active frontages along Pascal Street and the new internal pedestrian street to the north of the station building.

3.4.20 The size of the station box also increased during the design development stage to accommodate future train lengths and as a result of the deletion of Claylands Road shaft, which led to additional ventilation requirements at the station.

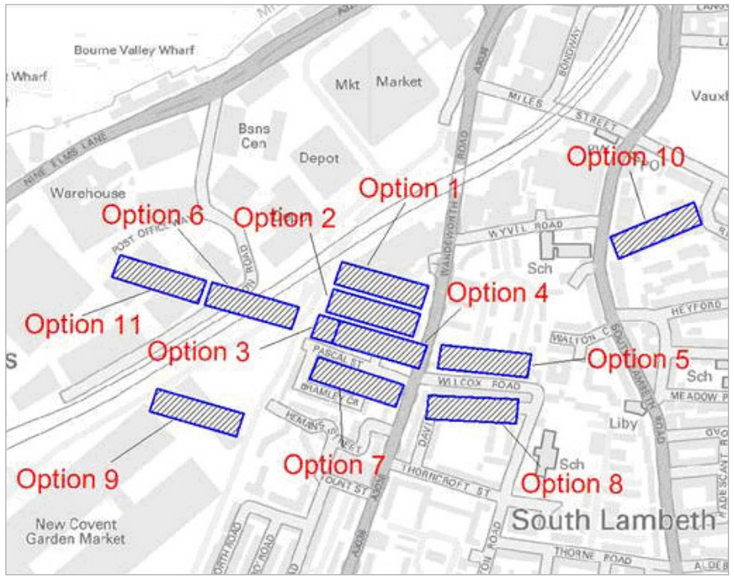
3.4.21 A single-ended station facing Wandsworth Road was included in TfL's 2012 consultation, as shown in Figure 3.4f, showing:

- Entrances at the corner of Wandsworth Road and Pascal Street;
- A lift providing step-free access to trains;
- A ground-level ticket hall;
- Three escalators giving access to two spacious platforms; and
- Links to pedestrian and cycle networks proposed for the area, including through the railway arches to the north.

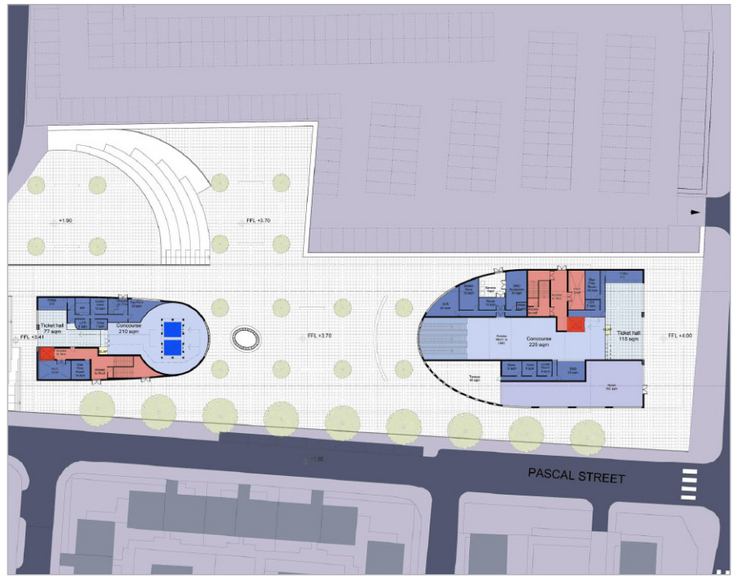
3.4.22 41% of those who responded to the questionnaire made comments on Nine Elms station, with 47% of those respondents making positive comments (34% were neutral and 19% were negative).

3.4.23 The final design, as described in the following pages incorporates all the necessary TfL operating criteria whilst maximising the opportunity for a comprehensive OSD to support the regeneration of the area.

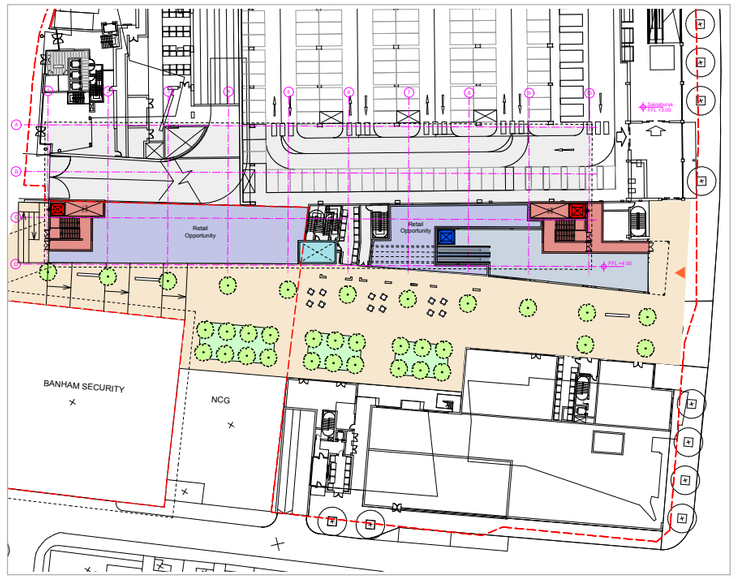
Figure 3.4 Nine Elms Station – Design Development Options



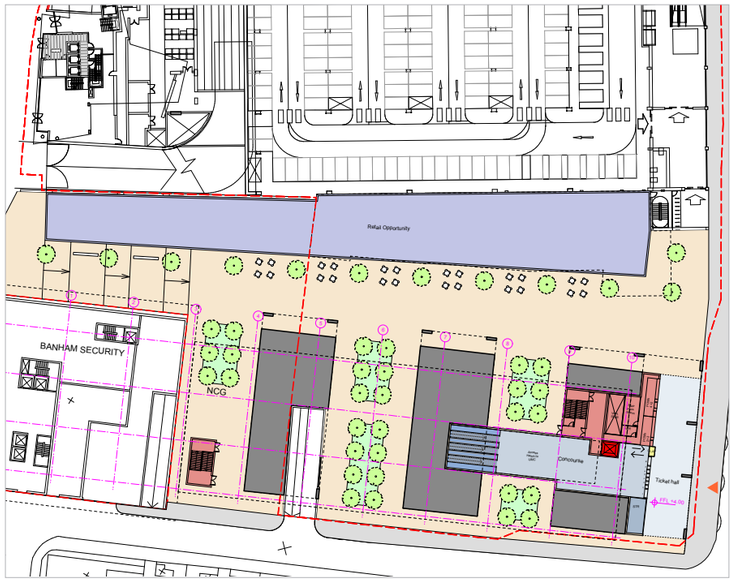
(a) Different locations



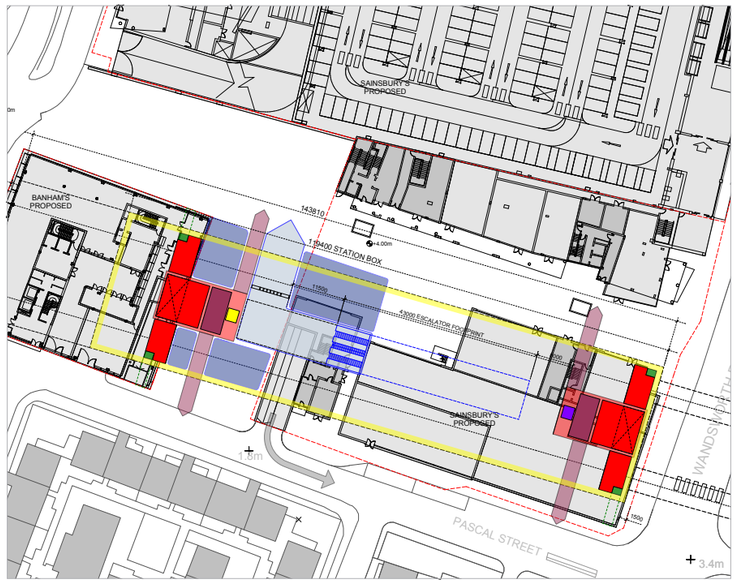
(b) A double-ended station located on Pascal Street



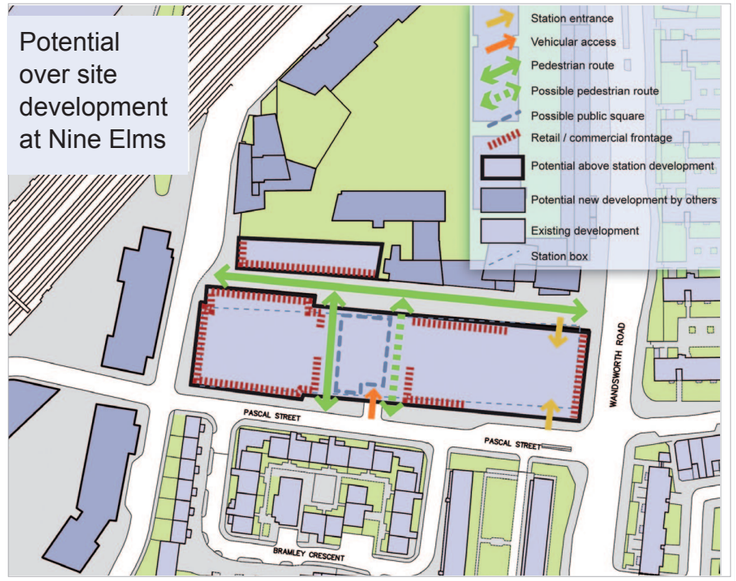
(c) A single-ended station off Pascal Street



(d) Single entrance from Wandsworth Road



(e) Single entrance from northern side of station box



(f) Design included in the 2012 consultation

Proposed development

3.4.24 This TWAO application includes a request for a Planning Direction to grant planning permission for all relevant development. Full planning details are provided for the below ground structure and the ticket hall with the detailed design of above ground station entrance, external appearance and landscaping/public realm reserved by planning condition to be agreed with the respective local authority in due course.

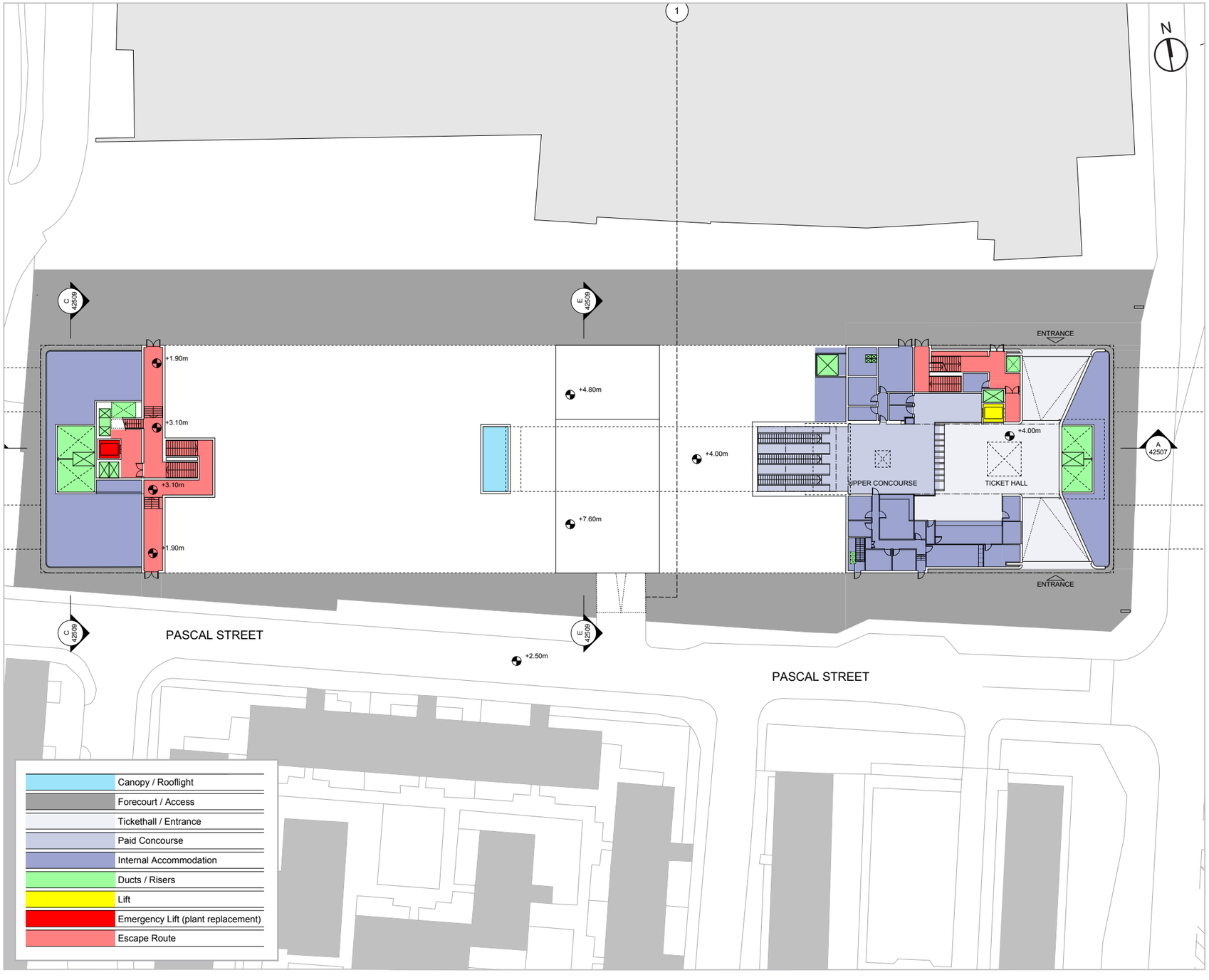
3.4.25 The overarching station design principles set out in Table 3.2 and the site-specific principles set out in paragraph 3.4.14, have informed the basis of this final design.

Amount and layout

3.4.26 The proposed station box extends over the full width of the site between Wandsworth Road and the end of Pascal Street. The alignment of the station is broadly parallel with Pascal Street, as shown in Figure 3.5.

3.4.27 There are two parts to the above ground elements at Nine Elms station - the main station (east) core including the entrances and ticket hall at the eastern end nearest Wandsworth Road, and the west core nearest the railway viaduct which houses emergency escape, vent shafts and a fire fighting lift. The east core is approximately 1,200m^2 and the west core, 270m^2.

Figure 3.5 Nine Elms Station – General Arrangement Plan, Street Level



3.4.28 The proposed station core includes the ticket hall with a dual/split entrance onto Pascal Street to the south and the internal pedestrianised street to the north (which forms part of the approved Sainsbury's scheme). The area between the two cores would form part of the OSD and would be designed to accommodate other uses, including entrances to residential floors above and retail and other active frontages.

3.4.29 The ticket hall, illustrated in Figure 3.6, includes a bank of three heavy duty metro escalators in the centre of the station box leading down to the centre of the platform level, with a platform on either side of the escalators. A passenger lift down to platform level would also be provided north of the ticket hall and would serve as a fire fighting lift in the event of an emergency. Stairs would also connect to platform level for service and emergency access. Staff accommodation is provided south of the ticket hall on the Pascal Street side. The main station core also includes two vertical ventilation ducts originating from platform level – these take air away from the tunnels to be vented above the OSD and are located at the Wandsworth Road end of the station box. These vents are replicated at the western end.

3.4.30 The west core is the emergency escape with a lift and two sets of stairs linking to the platform level. This is a secondary fire intervention point with exits in opposite directions on to Pascal Street and the internal street to the north. This core needs to be protected as a means of escape during an emergency and is designed with a crash deck on top to protect it from the OSD above.

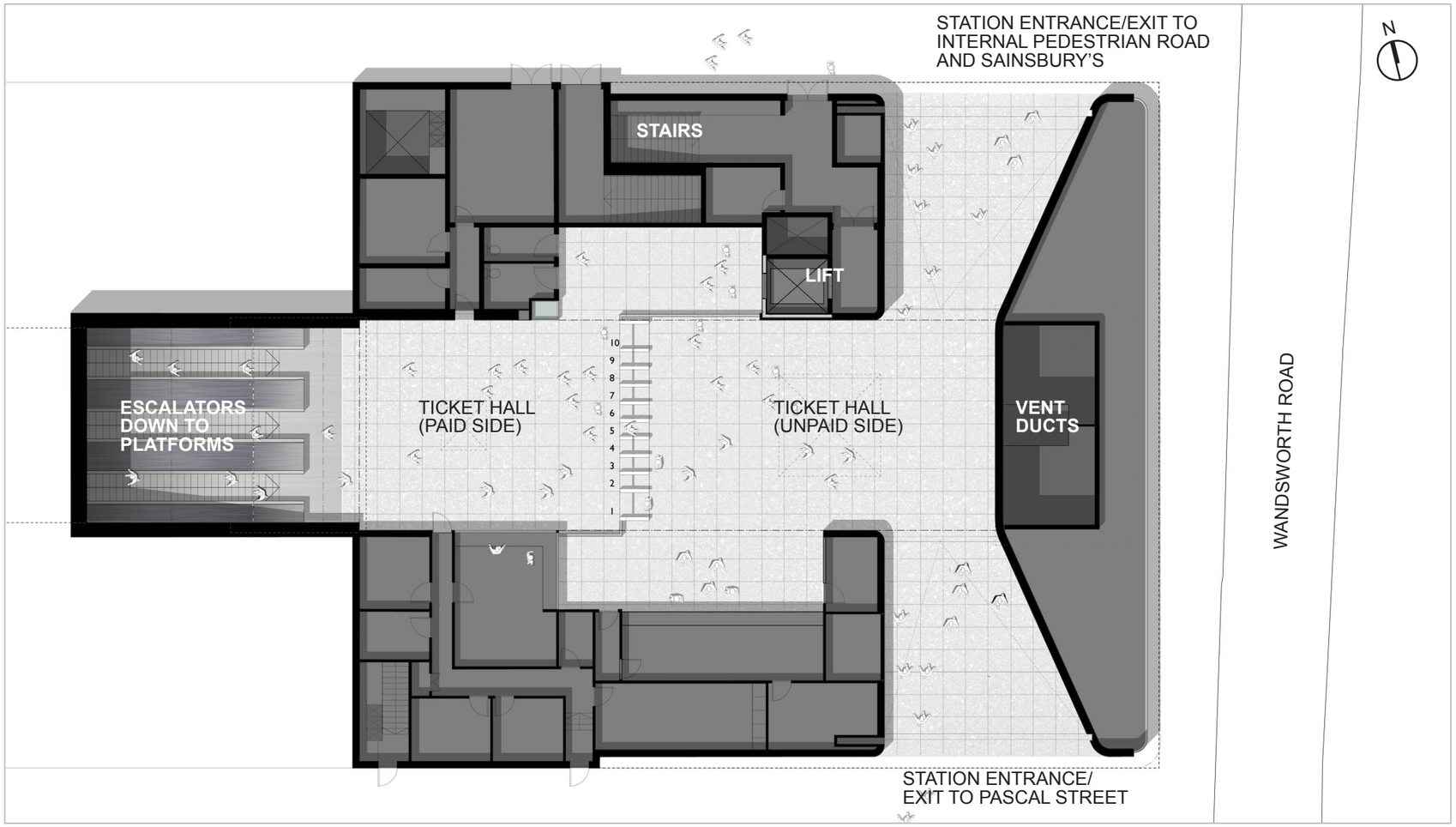


Figure 3.6 (above) Nine Elms Station – Illustrative Ticket Hall Layout

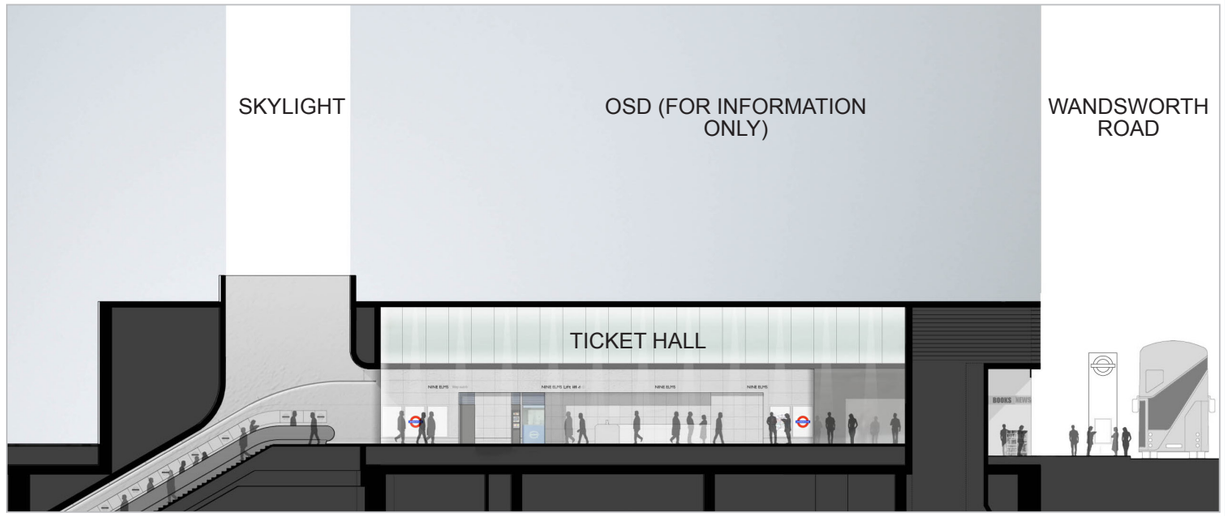


Figure 3.7 (right) Nine Elms Station – Illustrative Section showing Station and Potential OSD

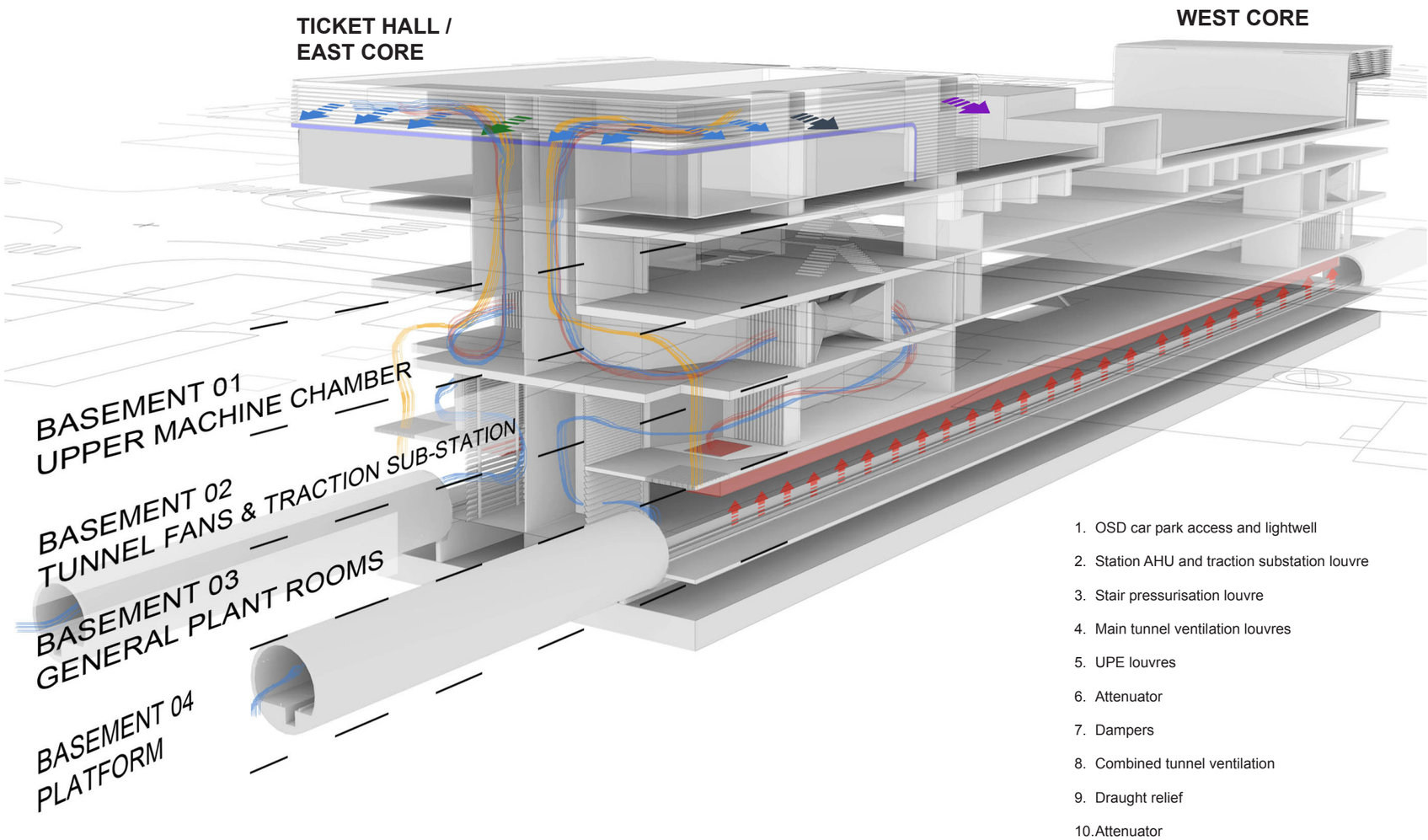
3.4.31 Below the ticket hall level are the platforms and tunnels as illustrated in Figure 3.8. The basement levels provide accommodation for plant rooms, including:

- an upper machine chamber at basement level 1;
- tunnel fans and traction sub-station at basement level 2;
- general plant rooms at basement level 3; and
- the platforms at basement level 4.

Scale

3.4.32 The detailed design of the external appearance of the above ground element of the station, including scale, is reserved by condition for subsequent determination and will follow the relevant design principles highlighted in Table 3.2 and in paragraph 3.4.14. The scale of the street level component of the station takes into consideration the need to enable a future comprehensive OSD. The east and west cores are located at either end of the station box and will be integrated into the future OSD.

Figure 3.8 Nine Elms Station – Station Overview Diagram



Appearance

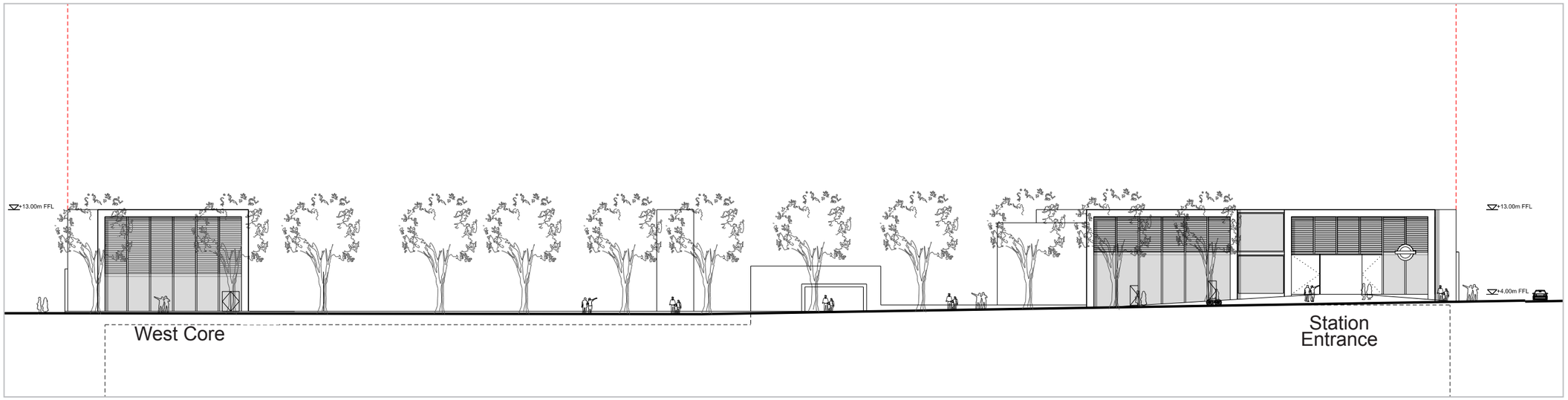
3.4.33 The detailed design of the external appearance of the above ground element of the station is reserved by condition for subsequent determination and will follow the relevant design principles highlighted in Table 3.2 and in paragraph 3.4.14.

3.4.34 The main core of the station and the western core should allow for appropriate venting/air conditioning of the above ground areas and below ground accommodation and venting from the tunnel below. This may include louvres at least five metres above ground level.

3.4.35 The main core of the station and western core will be visible when the station becomes operational and prior to any OSD having commenced or being completed as seen in Figure 3.10. It is anticipated that the OSD would incorporate these station structures into the overall design. Images in Section 6 of this document illustrate how that transition may be treated.

Figure 3.9 Nine Elms Station - Illustrative Visualisation, without potential OSD

Figure 3.10 Nine Elms Station - Illustrative South Elevation, without potential OSD



Landscape

3.4.36 Figure 3.11 illustrates a high quality public realm around the station site, including Pascal Street and the internal street adjacent to the Sainsbury's scheme to the north. Feature paving is anticipated to be provided at the station entrance area.

3.4.37 Pascal Street is identified in both the VNEB OAPF and the Vauxhall SPD as a 'strategic green link' and a key pedestrian and cycle route to the river. It also serves an important function in terms of access to existing residences and businesses, as well as providing future access to the CGMA site and Sainsbury's site as shown in Figure 3.13. An avenue of trees is proposed on the street with high quality paving to reinforce the importance of this improved connection. The landscape details would be developed to the south side of Pascal Street and will be part of the future details to be agreed with the local authority as discussed above.

Figure 3.11 Nine Elms Station – Landscape Masterplan (Illustrative)

3.4.38 The intention is that the internal pedestrianised street between the station and redeveloped Sainsbury's site to the north will be activated by ground floor retail outlets and cafés, proposed as part of the potential OSD - further detail is provided in Section 6. Colour, in the form of lighting, seating and art is envisaged for this street to provide interest and animation - see Figure 3.12. Feature trees could be provided at the western end of the street to create seasonal interest.

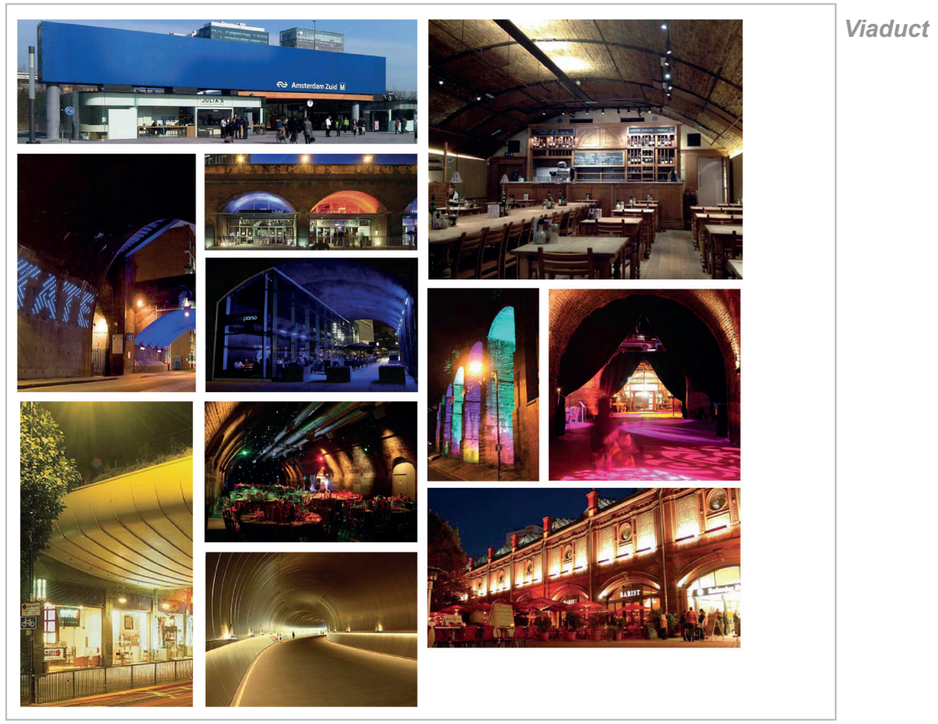
3.4.39 Pascal Street would also have active frontages, although the intention would be for it to be a quieter street because of the existing residential uses opposite. Nevertheless, the broad pavements would provide the opportunity for café uses, taking advantage of the south facing orientation and generous space.

Figure 3.12 Nine Elms Station – Public Realm Precedent Images

Pedestrianised street

Pascal Street

Viaduct



3.4.40 Wayfinding signage will be provided at the corner of Pascal Street and Wandsworth Road, at the western end of Pascal Street and at both ends of the pedestrianised street. Cycle parking with 90 spaces will be provided at the western end of the station box with cycle hire stands on Pascal Street opposite the station entrance. Further information on wayfinding and cycle parking is provided in Section 5.

3.4.41 In order to create the strategic link, the existing wall at the western end of Pascal Street would need to be demolished and one of the railway arches of the viaduct opened up to create a new pedestrian and cycle link through to the adjacent CGMA land, Ponton Road and the Nine Elms developments on the western side of the viaduct. It would also connect to the proposed River Walk northwest of the site. This proposed link forms part of the TWAO proposals.

3.4.42 To prevent unauthorised vehicular access to this new link through the viaduct from Pascal Street, telescopic bollards could be placed at the western end of the street. Two existing vehicular routes cross this new link (shown as 11 on Figure 3.13) and raised tables could be provided to ensure pedestrian and cyclist safety. Additional bollards could also be placed at these intersections to restrict vehicles using the link.

3.4.43 Where the station becomes open to the public before the OSD is completed, a temporary surface and landscaping material would be used. The material palette for the permanent landscape scheme will be coordinated with the OSD proposals and in discussion with the local authorities and surrounding landowners.

Figure 3.13 Nine Elms Station – Contextual Landscape Masterplan (Illustrative)

Refuse and servicing

3.4.44 Station related waste would be stored in a dedicated waste storage room on the north face of the ticket hall building. This storage area would be accessed internally off the ticket hall concourse. A set of double doors on the external elevation allows waste to be removed from site via the pedestrian route immediately to the north of the station.

3.4.45 The station would require 24 hour service access to take account of tube and station maintenance - for example, the replacement of plant such as fans and traction power. Plant replacement would be carried out via a hatch in the floor of the ticket hall (on the unpaid side). Plant would be lifted from the basement levels, up into the ticket hall through the hatch and out of the station entrance – the height of the traction power (approximately 3.6m high x 3m long x 3m wide) has determined the height of the station entrances.