

Transforming Tottenham Court Road

London Underground Works (Crossrail Act 2008)

Design & Access Statement

Prepared for the City of Westminster & London Borough of Camden

September 2009

This document is provided as supporting information not for approval relating to submissions CAM/2/4 and WES/8/6 (Schedule 7 Crossrail Act) and also the related TCPA (CAM/Plaza, for the top-most part of the Southern Plaza entrance) and listed building consent applications (CAM/Cpstairs, alteration to Centre Point stair)





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ISSUED FOR INFORMATION

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MAYOR OF LONDON

CONTENTS

Executive Summary	4
1.0 Introduction	5
1.1 Scope of this statement and the relationship with the Crossrail Planning regime	
1.2 Introduction to Crossrail	
2.0 Design Issues	10
2.1 Layout - above ground and unpaid side of underground areas of the station	
2.2 Scale of buildings	
2.3 Appearance	
2.4 Landscaping	
3.0 Access Issues	25
3.1 External access	
4.0 Conclusions	28
4.1 Main points in conclusion	

List of main illustrations and images
Illustration showing proposal for station entrances
Boundary Line between Westminster and Camden
Aerial view of St Giles Circus
Illustration showing proposed Crossrail interface
Illustration showing existing station
Illustration showing proposed station with Crossrail interface
Crossrail route connection map (with Key)
3D Model view of new plaza with Entrances
3D diagram of existing stations
Existing views of ticket hall and station surroundings
Constraints diagram
Section through new Dominion Theatre entrance and ticket hall
Diagram of station layout at ticket hall level
Axonometric diagram of proposed station design
Model view of new Plaza entrances
Existing views of station surroundings and ticket hall
Plan of existing Ticket Hall, Interchange and Platforms
Model view of new plaza and entrances
Model view of new Oxford St and Plaza entrances from the corner of Tottenham Ct Rd and Oxford St
Model view of new Oxford St entrance
3D model view of new station layout
Drawing of internal finishes in new ticket hall generally
Images of existing Paolozzi Artwork and new proposed Daniel Burien glass paneling
3D diagram showing proposed Artwork locations in station
Internal view of ticket hall from Central line escalator
Indicative Landscape design at plaza / street level
Diagram of step free access
Diagram showing Congestion Relief
Internal view of ticket hall from North Plaza entrance at ticket hall level

EXECUTIVE SUMMARY

London Underground Limited (LUL) is in the process of implementing a major station upgrade to the existing Underground station at Tottenham Court Road (TCR). In conjunction with works proposed by Crossrail Limited these works will also provide access to and interchange with Crossrail, a major new cross-London rail link project. The proposed works are authorised by the Crossrail Act 2008 ('the Act').

This Statement has been produced in accordance with guidelines agreed by the Crossrail Planning Forum and relates to the works proposed to be carried out at TCR by LUL as nominated undertaker and relating to the TCR (East) Plaza Ticket Hall. It is submitted for information as part of applications by LUL under Schedule 7 of the Act for approval of Plans & Specifications.

TCR station occupies a strategic location in central London at St Giles' Circus, the junction where Oxford Street, New Oxford Street, Tottenham Court Road and Charing Cross Road meet. The station (as existing and as proposed) has areas in both the London Borough of Camden and the City of Westminster. Separate applications will be made to each of the two planning authorities but this Statement is common to both applications.

The station provides access from the Underground to important parts of the West End including Oxford Street, Tottenham Court Road, the British Museum, Covent Garden and Soho. In the future it will also provide access to these areas from Crossrail. It also provides for interchange between the Northern and Central lines and the proposals will facilitate interchange with Crossrail. In the future Crossrail line 2 may also serve the station.

TCR is already one of the busiest sub surface stations in London and over 147,000 people currently use the station each day. This is projected to rise to over 200,000 people per day when Crossrail opens. The existing station was designed to cater for a much lower number of people than the number who use it today and consequently, even with strict operational management which control flows and access during peak hours, station closures do occur. These would become more frequent and of longer duration in the future without an upgrade of the station.

The implementation of the proposals, which include step free access from street to platform level, will enable the station to meet present and forecast demand. The quality of access, interchange and ambience will be significantly improved. The station design encompasses functional efficiency, structural integrity, sustainability, lifetime costing and flexibility as well as responsiveness to site and setting. The proposed station entrances at street level are designed so that in conjunction with other existing and proposed development at or in the vicinity of St. Giles Circus they will create an environment of a high standard that befits an important gateway to the West End.



Illustration showing proposals for the station entrances

1.0 INTRODUCTION



Illustration of boundary line between Westminster and Camden

1.1 Scope of this statement and the relationship with the Crossrail Planning Regime

1.1.1. This Statement supports the request for approval under Schedule 7 of the Plans and Specifications for the following works:

- The London Underground Works (Crossrail Act 2008) at Tottenham Court Road (East) Plaza Ticket Hall.

1.1.2. London Underground propose to enlarge and upgrade the existing Underground station at Tottenham Court Road (and also at Bond Street).

1.1.3. These works will provide interchange facilities with Crossrail and will also comprise major upgrade works that will include:

- Increased station capacity
- Provide Step Free Access from street to platform level
- Reduce passenger journey times
- Increase emergency egress capacity
- Improve quality of access, interchange and ambience
- Integration of tunnel cooling measures within the upgrade
- To improve access to and around station entrances at street level creating a 'world class gateway to the West End'.

1.1.4. This submission relates to the Plans and Specifications for the main phase of the works at Tottenham Court Road (East) Plaza Ticket Hall. The proposed works include:

- Two new high profile entrances of bold design in a new public area that will be created between the Centre Point building and Charing Cross Road.
- A new entrance on the south side of Oxford Street next to the Charing Cross Road junction (i.e. on the SW corner of St. Giles Circus).
- Refurbishment of the existing entrance outside the Dominion Theatre on the NE corner of St. Giles Circus.
- Removal of the other existing entrances.
- A significant expansion and reconfiguration of the ticket hall including the provision of a second gateline to provide separate routes to the Central and Northern lines. One of the gatelines will lead to a new bank of escalators serving the Northern and the works also include enabling works to provide access to a further new bank of escalators leading to the Crossrail platforms.
- An Operations Building and Emergency Escape Shaft to be located on the corner of Falconberg Court and Falconberg Mews.

1.1.5. The Crossrail Act 2008 provides powers for the construction and operation of Crossrail. Schedule 1 of the Bill describes the 'scheduled works' that the nominated undertaker will be authorised to carry out. A number of

the scheduled works included in the Act are in relation to the expansion and enhancement of Tottenham Court Road underground station, in order to improve its capacity for when Crossrail becomes operational. For these works London Underground Limited (LUL) is the nominated undertaker.

1.1.6. The Act deems planning permission to be granted for the works authorised by it, subject to the conditions set out in Schedule 7. Schedule 7 includes conditions requiring various matters be subject to the approval of the relevant local authority.

1.1.7. This is therefore a different planning regime to that which usually applies in England (i.e. the Town and Country Planning Act) and is different in terms of the nature of submissions and the issues that the local planning authorities (LPAs) can have regard to in determining requests for approval.

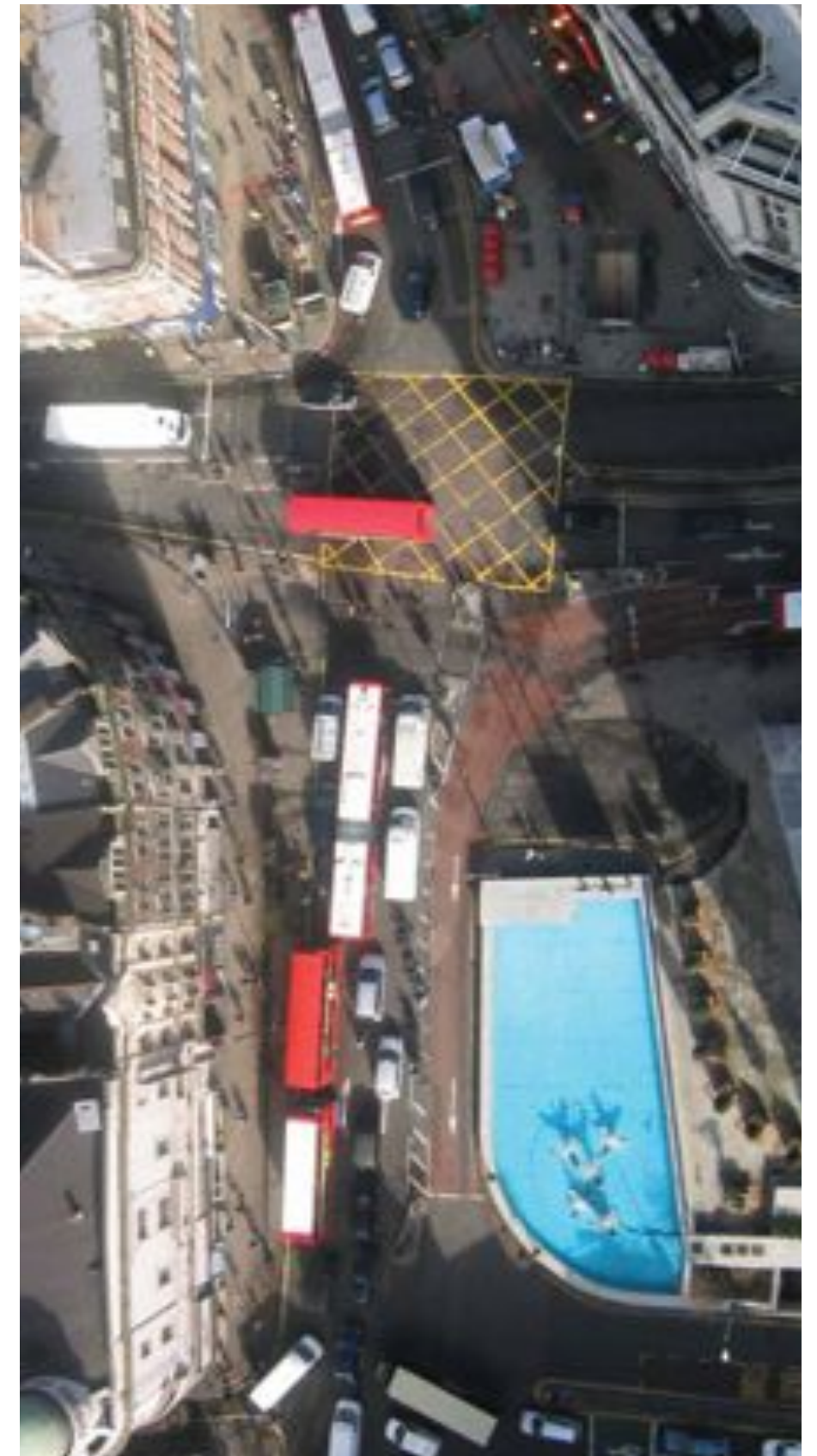
1.1.8. There are two types of submission that can be made by the nominated undertaker under Schedule 7:

- permanent works
- temporary works

1.1.9. The details of the permanent works that will be submitted are commonly referred to as 'plans and specification' (reflecting the description within paragraphs 6, 15 and 21 of Schedule 7), whilst the temporary works details to be submitted are commonly referred to as 'construction arrangements' (reflecting the description in paragraphs 7, 16 and 22 of Schedule 7). This statement includes information supporting the plans and specification submission.

1.1.10. In accordance with the provisions of the Crossrail Planning and Heritage Memorandum (Annex 2 to the Crossrail Environmental Minimum Requirements) the Crossrail Planning Forum has been established. The Planning Forum has agreed certain procedures including in respect of Design and Access Statements (DAS). It has been agreed that a DAS will accompany, for information, the main Plans and Specifications requests for approval under Schedule 7 for new stations and stations that are largely rebuilt and for structures related to shafts (and also the depot).

1.1.11. The Planning Forum has also agreed the scope and content of DASs and this is set out in Planning Forum Note 5. This statement has been prepared in accordance with that Note.



Aerial view of St Giles Circus

Illustration showing existing station layout



Illustration showing proposed station layout with Crossrail interface
(Key as previous page)



2.0 DESIGN ISSUES



3D Model view of new Plaza with Entrances

2.1 Layout - above ground and unpaid side of underground areas of station

The existing station

2.1.1. A key constraint to the design is that TCR is an existing and very busy station that must remain open whilst the construction works are carried out. Hence an understanding of the existing station is needed to help understand how the design has evolved.

2.1.2. The station opened as part of the Central London Railway (now the Central line) on July 30, 1900. The platforms are under Oxford Street west of the Tottenham Court Road junction, and were originally connected to the ticket hall via lifts at the end of the platforms. There have been a number of developments since then including:

- 1907 - TCR became an interchange station with the opening of the Charing Cross, Euston and Hampstead Railway (now part of the Northern line).
- 1925 - New ticket hall built and escalators replaced lifts (vacant lift shafts used as ventilation ducts)
- 1933 - Single escalator from the Northern line provided
- 1960s - Ticket hall rebuilt 1965 and entrances revised in the 1960s as part of the Centre Point development
- 1980s - Improvements made to public areas of the station (paid and unpaid) as part of a Station Modernisation programme.

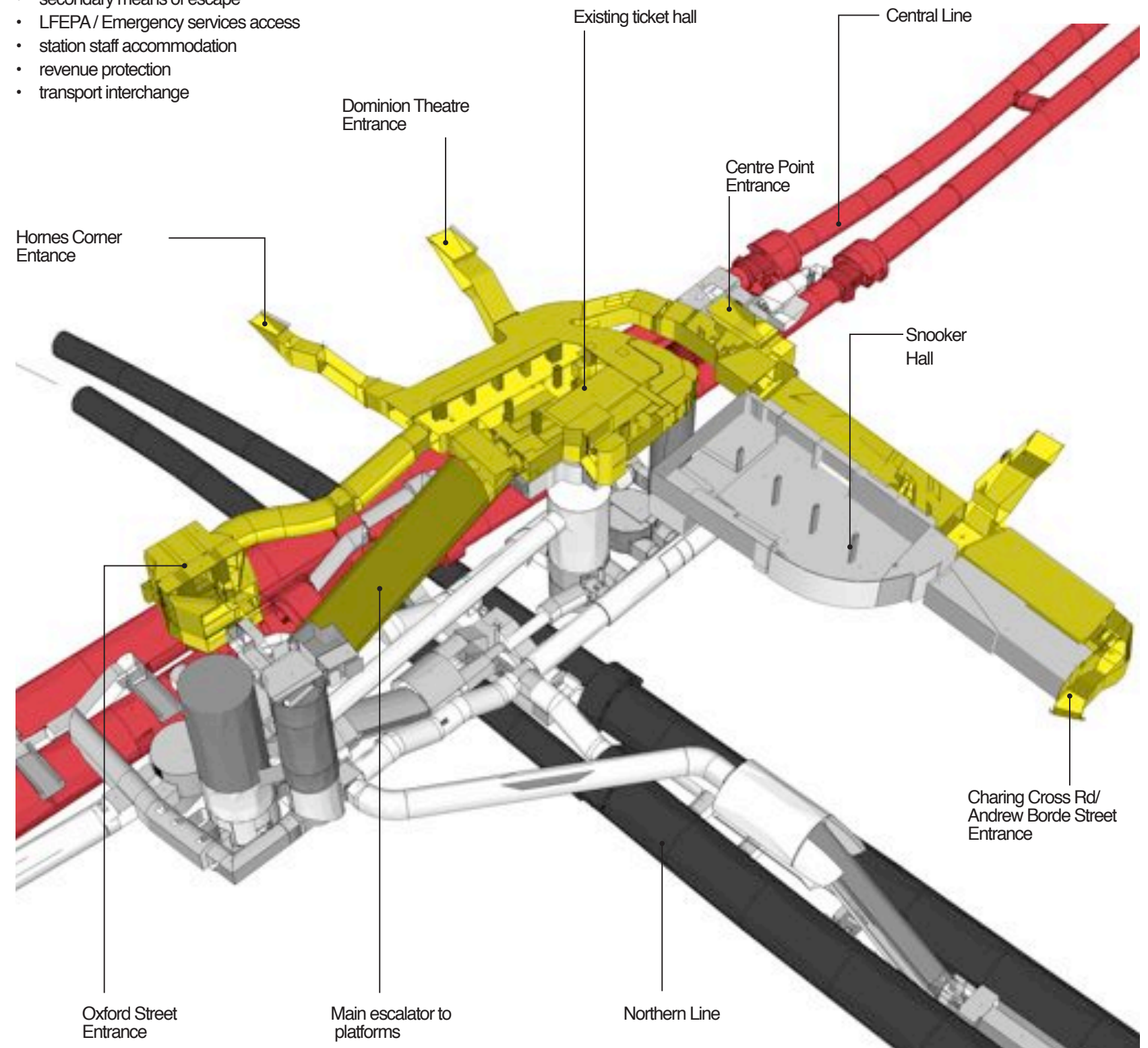
2.1.3. The existing station and its surroundings are shown in the axonometric on this page and the photographs overleaf. The station comprises 4 main levels below ground level. The uppermost level contains the station ticket hall which is accessed from street level via four entrance/ exits in the following locations:

- Oxford Street south side about 28 m west of Charing Cross Road and contained within the buildings at 9-15 Oxford Street.
- Hornes Corner on the NW corner of St Giles Circus – a stairway surrounded on 3 sides by ornate railings.
- Adjacent to the Dominion Theatre on the NE corner of St Giles Circus – also a stairway surrounded on 3 sides by ornate railings.
- Under the NW corner of Centre Point. The subway that leads to this entrance from the ticket hall used to also provide access to three other routes to the surface but these have recently been permanently closed.

2.1.4. From the ticket hall a bank of three escalators leads downwards to the interchange level. From here tunnels and stairs lead to the Central line platforms 1 and 2 to the west and escalators and long staircases lead to the Northern Line platforms 3 and 4 (the lowest level) to the south.

The primary issues of concern at Tottenham Court Road Station are:

- congestion relief
- step-free access
- secondary means of escape
- LFEPA/ Emergency services access
- station staff accommodation
- revenue protection
- transport interchange



3D diagram of existing station

Existing views of ticket hall and station surroundings



Existing view of station ticket hall



Existing view of Oxford St entrance



Existing view of Centrepiece staircase



Existing view of Centrepiece and plaza

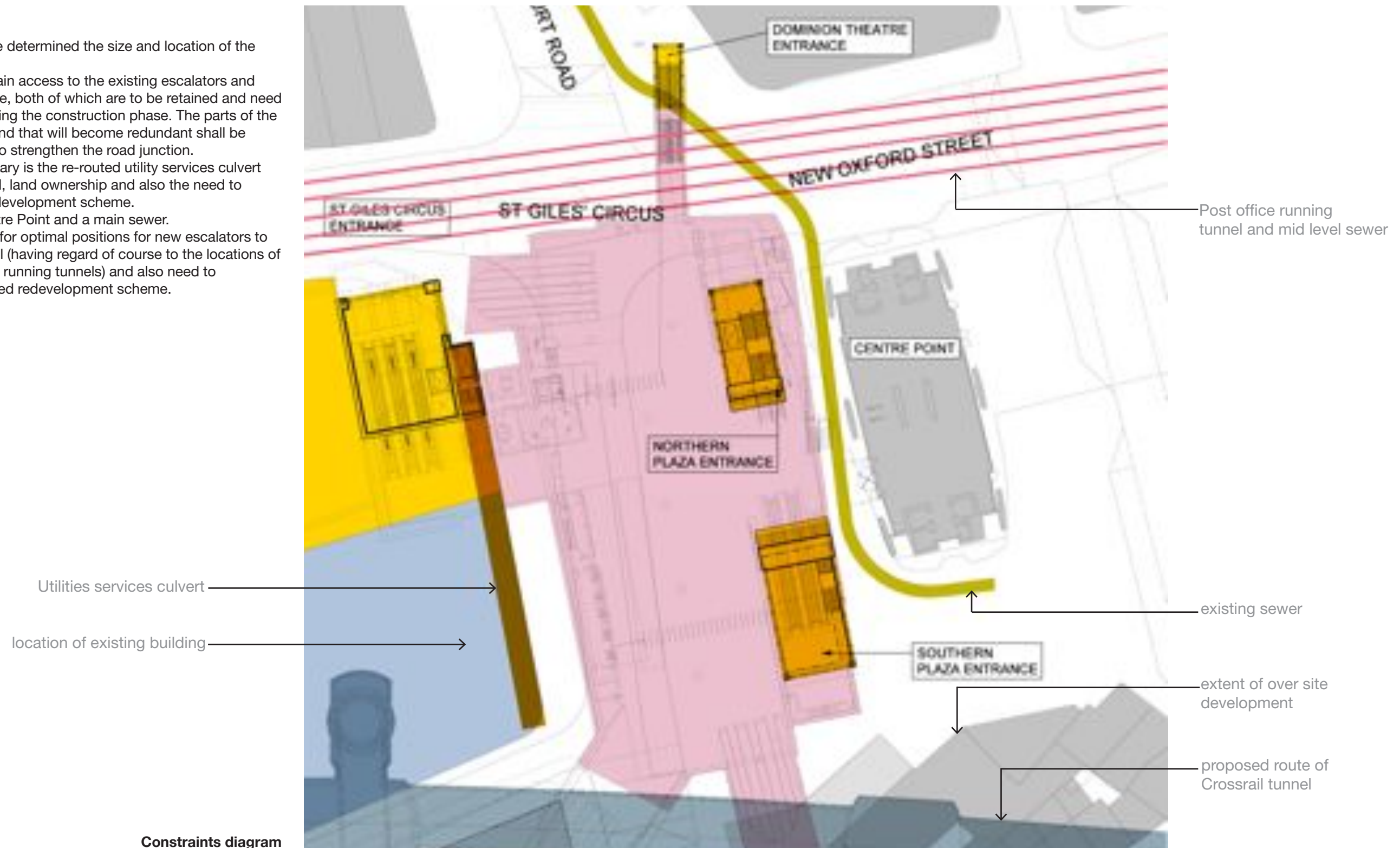


Existing view of Dominion Theatre entrance

Principal Design Constraints

2.1.5. The main factors that have determined the size and location of the proposed ticket hall are:

- North – the need to maintain access to the existing escalators and Dominion Theatre Entrance, both of which are to be retained and need to be kept operational during the construction phase. The parts of the ticket hall at its northern end that will become redundant shall be back-filled with concrete to strengthen the road junction.
- West - the physical boundary is the re-routed utility services culvert along Charing Cross Road, land ownership and also the need to coordinate with property development scheme.
- East - foundations of Centre Point and a main sewer.
- South – the need to allow for optimal positions for new escalators to Northern line and Crossrail (having regard of course to the locations of the existing and proposed running tunnels) and also need to co-ordinate with a proposed redevelopment scheme.

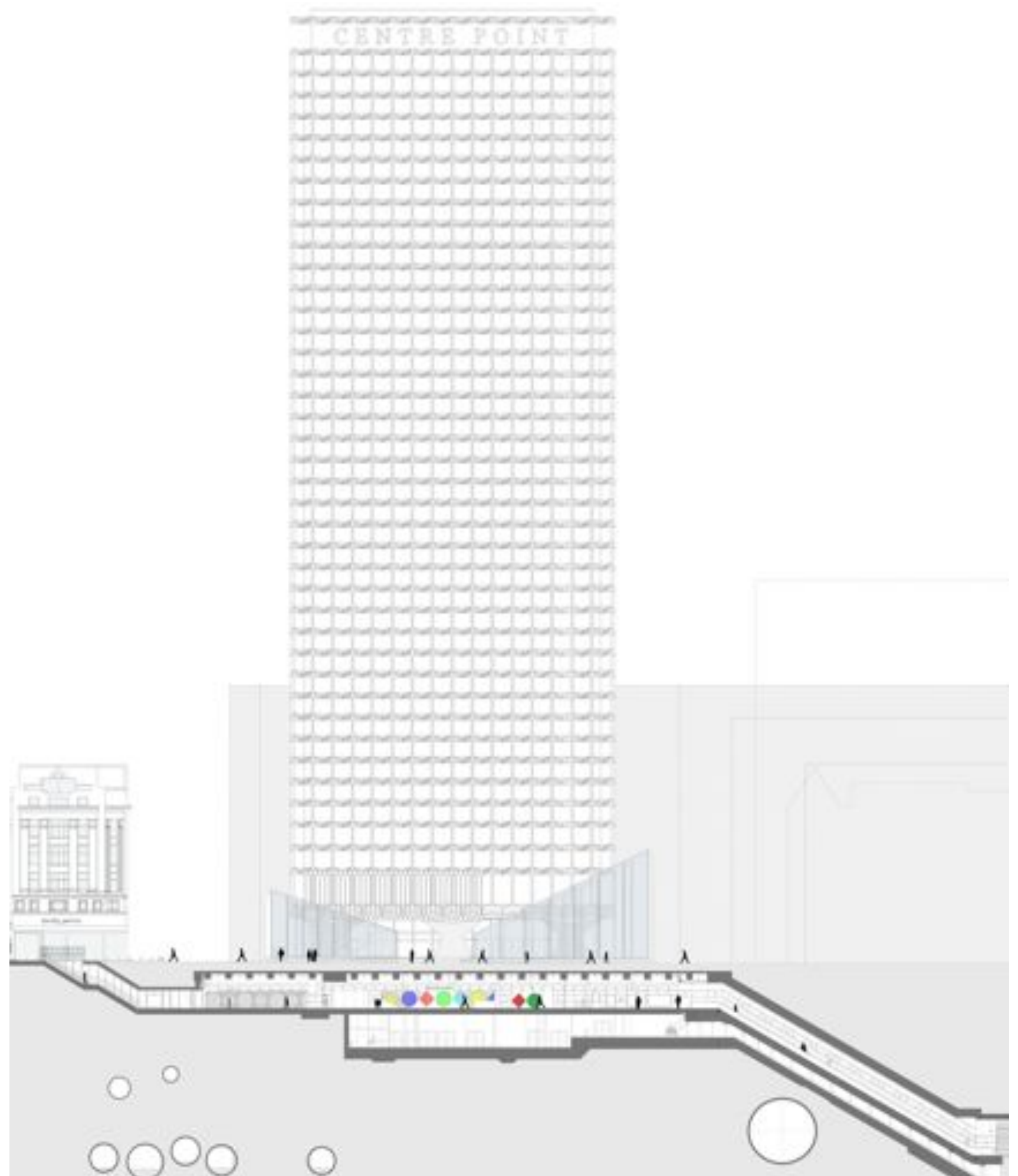


Proposed station design

2.1.6. The new station design provides a robust design solution in that it relieves both the congestion and way-finding problems associated with the existing station. The design has been informed by the requirement to reduce and optimise travel distances between ticket hall and platform levels. In turn this informs the layout at ticket hall level and station entrance locations. The resulting station design is such that the new ticket hall expansion will be to the southeast of the existing ticket hall. The alignments of the new entrances take account of the proposed ticket hall layout whilst also providing a good interface at street level. The proposed layout is shown on the section and plan diagrams to the right and overleaf.

2.1.7. In order to create a legible space at ticket hall level, views from the ticket hall out to the street level through station entrances have been maximised where practicable to aid passenger orientation. Passengers will be helped to find their shortest route and minimise confusion at street level. This addresses one of the issues that currently exists with the below ground station and covered entrances. The ticket hall is one single open space serving all lines with the number of columns minimized.

2.1.8. The roof design is comprised of a single spine beam above the central column line to the ticket hall with tapering downstand beams at just under three metre centres. The resulting coffer provides space for acoustic absorption, a public address system and technical lighting. The management of services and cable routes will be integrated within the ceiling layout as shown on the reflected ceiling plan. The design philosophy is to incorporate lighting and speakers within the acoustic absorption louvers and surface mount these fittings over the area of exposed soffit. The beam arrangement is designed to produce clearer sightlines with less visual interference.



Section through new Dominion Theatre entrance and Ticket Hall

Ticket Hall layout

2.1.9. The staff accommodation in the north eastern corner of the ticket hall will incorporate a disabled toilet with lobby, which will have controlled public access.

2.1.10. Recent modelling has demonstrated that the design principles that have been adopted (including a substantially enlarged ticket hall, new entrances and a new Northern line escalator) will meet the scheme's objectives as regards congestion relief measures and capacity to meet current and future demand.

2.1.11. The new ticket hall will feature a large 'unpaid' concourse providing access to and from:

- On its western side a ticket office (providing 2 No. Ticket Issuing Windows and, on the paid side, 1 No. Assistance Window) and access to the new Oxford Street south side entrance.
- On its northern side the new Central line gateline (10no. gates, 2no. wide isle gates and 1no. manual equipment gate) and the retained Dominion Theatre entrance. The paid side beyond the Central line gateline will be separated from the route to the Dominion Theatre entrance by a glass screen.
- On the eastern side the new Plaza entrances.
- On the south side the new Northern line / Crossrail gateline (7no. gates, 2no. wide isle gates and 1no. manual gate with a provision of an additional 9no. gates for the Crossrail intersection).

2.1.12. Above ground the layout will comprise:

- New entrances, referred to as North Plaza and South Plaza, on the Plaza between Centre Point and Charing Cross Road. The northern one will incorporate a wide stairway and lift, the southern on two escalators and a stairway. All of these will provide direct access from surface to ticket hall level.
- A new entrance on the south side of Oxford Street next to the Charing Cross Road junction. By means of a bank of three escalators this will provide direct access from surface to ticket hall level. Pedroute modelling is being provided as part of the application to demonstrate that adequate provision is being made for pedestrian circulation around and into the entrance at street level.
- The refurbished existing entrance outside the Dominion Theatre for which modelling has been undertaken which demonstrates that adequate provision is being made for pedestrian circulation around and into the entrance at street level.

blue indicates Dominion Theatre entrance above at street level

yellow indicates lift to street level above

green indicates staircase to street level above

brown indicates escalator to street level above

blue indicates entrance above at street level

blue shows indicative outline of Oxford St entrance above at street level

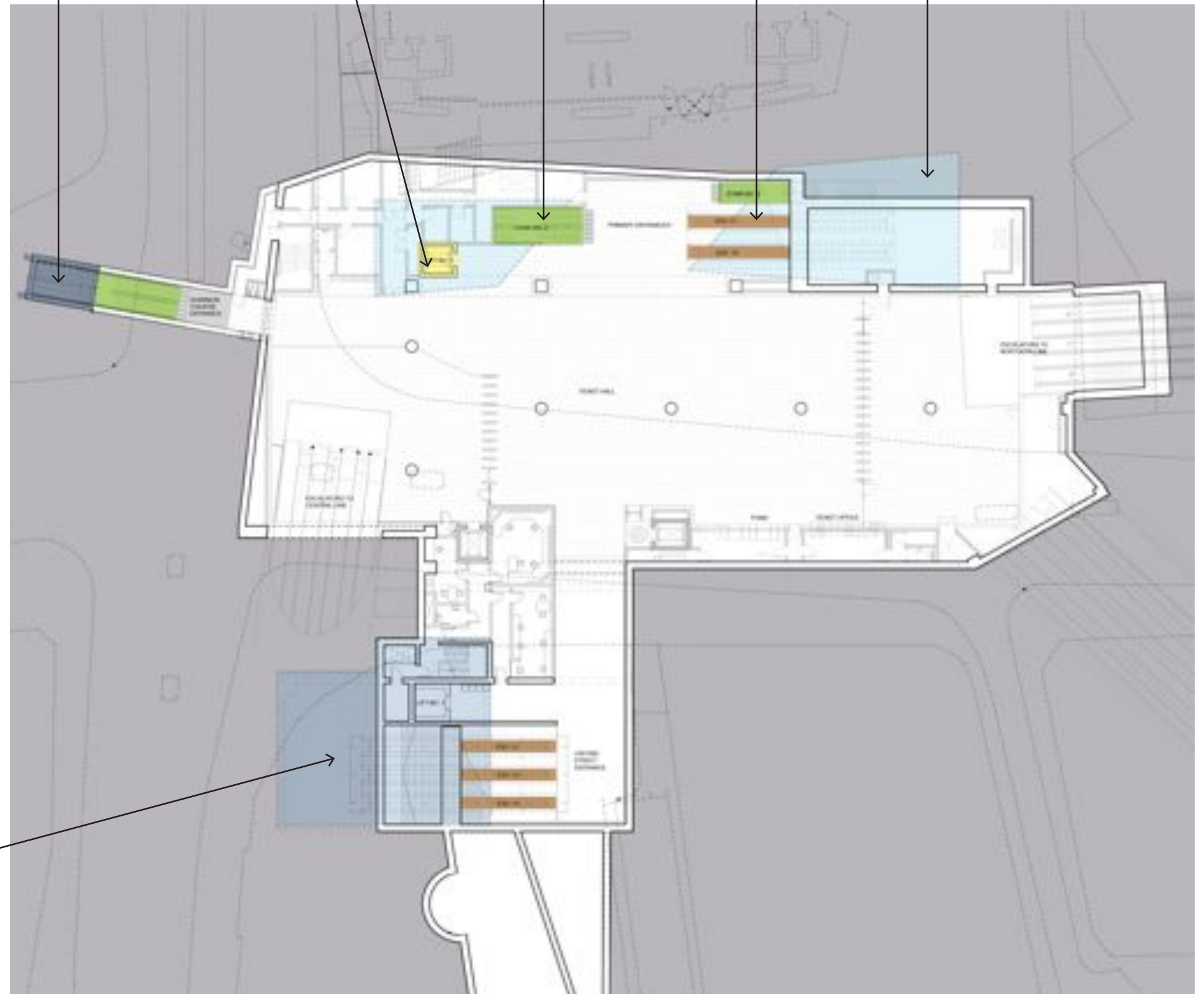
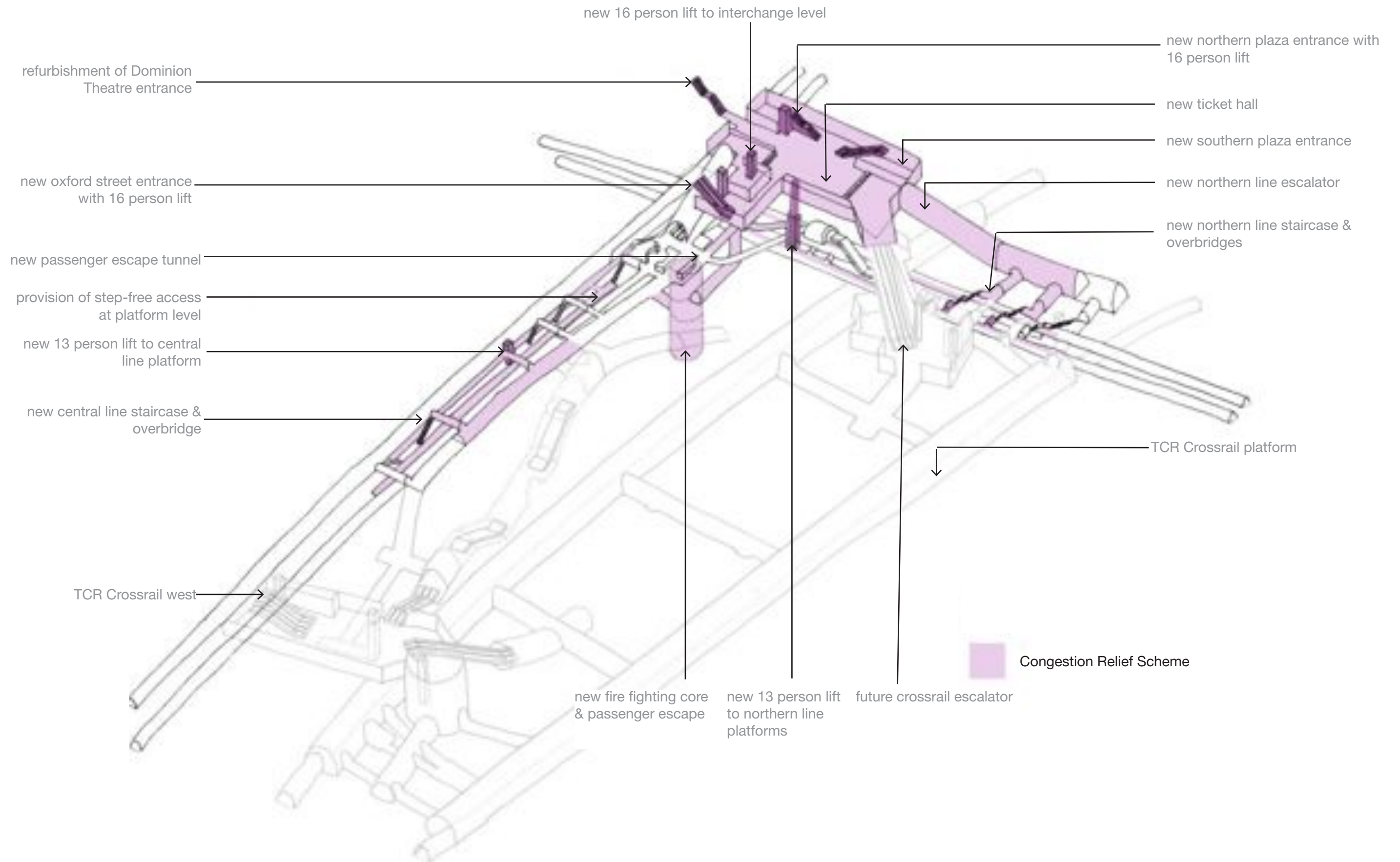


Diagram of station layout at ticket hall level



Axonometric diagram of proposed station design

2.2 Scale of buildings

Plaza entrance structures

2.2.1. The main external feature of the proposal will be the North Plaza and South Plaza entrances. Their shape is perhaps best described as glass prisms and their maximum dimensions of these will measure:

- North - 9.5m high (at highest point), 8.5m wide and 16m long (at longest point).
- South - 15m high (at highest point), 12m wide and 25m long (at longest point). The parts of the glass enclosure structure that are more than 12m as measured from ground level are for approval under the Town and Country Planning Act 1990.

2.2.2. Their design is the result of a design competition and it responds to the large scales of both the Centre Point Tower (which they will be next to) and the space in which they will sit. The Plaza will become a substantial and prominent area of public realm and the large scale of the entrances responds to the objective of providing a design that is appropriate for an important gateway to the West End, because they will be essentially transparent it will be possible to appreciate the scale of the plaza notwithstanding the scale of the entrances. The composition of the two asymmetrical structures allow a transition in scale from Centre Point to the new pedestrian plaza, sheltering the new proposed space from the prominent downdraft created by the tower and considerably improving the environment for pedestrians at ground level.

2.2.3 The design proposal for the new entrance pavilions for Tottenham Court Road station is inspired by the early design of the great underground station by Charles Holden in the 1920s and 30s, his use of the latest technology in term of large expanse of glazing, transparency and fluorescent lighting to produce “light architecture” allowing daylight to penetrate dramatic entrance hall spaces and create light beacons at night time. In a similar manner, the glazed pavilions will bring daylight into the ticket hall as well as light the new plaza at night.

2.2.4. The glass structures are designed to form a strong architectural composition with Centre Point without competing with the sculptural forms of the Tower. They will also help to reduce the overpowering presence of the Tower toward the Plaza, by introducing a new relationship between the glass structures and the surrounding buildings. Their scale and form has been very carefully considered to achieve a balance between the objective of providing a landmark that is iconic in its own right and the objective of providing an improved and appropriate setting for the Tower as viewed from the Plaza and the surrounding area. At 15m high (maximum) as compared with the 120m of the Tower the largely transparent entrances will give an iconic setting to the listed building appropriate to the scale of the Tower as seen from street level.

2.2.5. Another important factor considered in determining their form and scale of the pavilions has been the desire to establish a more positive environment for those using the Plaza. Wind tunnel tests have demonstrated that the entrance pavilions will help shelter people from seasonal down-draughts from Centre Point. Between the Pavilions we propose to create a new diagonal pedestrian route toward St Giles and Covent Garden in reference to the historical route that originally crossed this site. A diagonal ‘cut’ between entrances is orientated toward St Giles High Street to encourage pedestrian flow from Oxford Street and Tottenham Court Road toward St. Giles’ in the Fields Church and Covent Garden. It recognises the historical importance of St Giles High Street as a major route to and from Covent Garden and the West End. This opening also allows movement towards Centre Point’s entrance lobby and reception area.

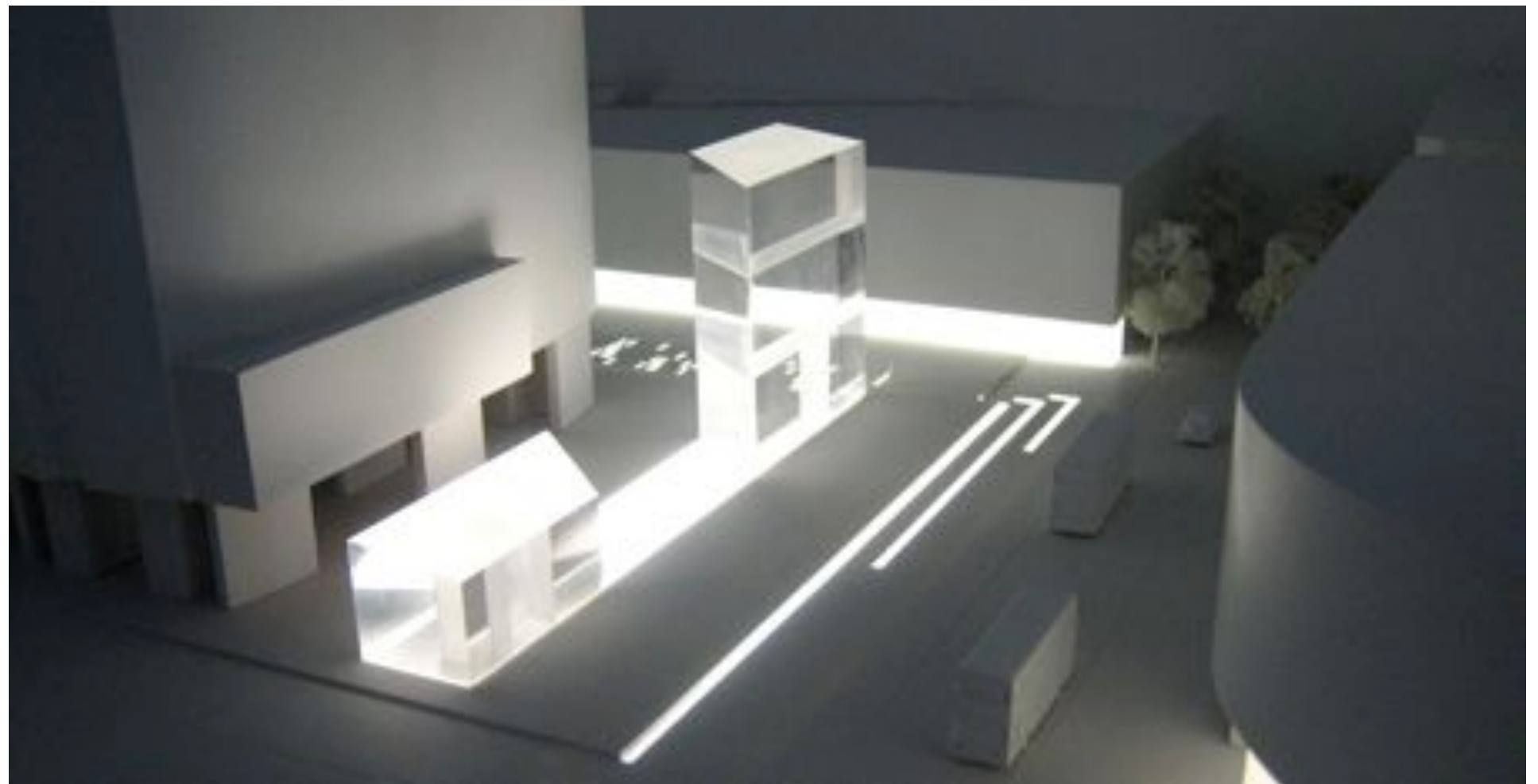
2.2.6. The large scale of these entrances will also maximise visibility into and out of the ticket hall and hence assist wayfinding and the penetration of daylight below ground level.



Acton Town London Underground Station - Charles Holden



Chiswick Park London Underground Station - Charles Holden



Design Competition Model

Oxford Street south side entrance

2.2.6. The new Oxford Street south side entrance will be 7.5m high (plus 1m structural zone between soffit and first floor of the over site development), 15.8m wide and 17.7m deep. The height is equivalent to 2 storeys and is intended to give a spacious feel to this important entrance. The width and depth allow for adequate circulation space at ground level and for the provision of three escalators and MIP lift shaft. The entrance has been designed to facilitate the development of a larger building (an over-site development) around and over it in due course. The design of the over-site development is outside the scope of this application but it will clearly be possible for its scale to respond appropriately to its surroundings.

Other important factors considered in determining their form and scale has been the desire to establish a more positive environment for those using the Plaza. Wind tunnel tests have demonstrated that they will help shelter people from seasonal down-draughts from Centre Point and the diagonal 'cut' between entrances is orientated toward St Giles High Street to encourage pedestrian flow from Oxford Street and Tottenham Court Road toward St. Giles' Church and Covent Garden. It recognises the historical importance of St Giles High Street as a major route to and from Covent Garden and the West End. This opening also allows movement towards Centre Point's entrance lobby and reception area.

Falconberg Court Operations Building & Escape Shaft

2.2.7. The Falconberg Court Operations Building & Escape Shaft is to be located off Falconberg Mews. The building occupies a street length of approximately 33m at street level to allow for vehicular access, emergency escape and intervention. The Falconberg Mews street width is approximately 7.8m. The building comprises 3 levels above ground (including the ground floor level) and a shaft that descends seven levels below ground. The above ground accommodation comprises of an emergency escape into the street, plant rooms, a refuse area and the ventilation plenum at high level. Below ground accommodation provides links to the station ticket hall and basement accommodation and extends down to the Northern line / Central line interchange tunnel level to provide emergency intervention and escape to surface level. The new Falconberg Court west side elevation will be 9m high, 33m wide and to a various depth of up to 18m. The building has been designed to facilitate the development of a larger building (an over-site development) around and over it in due course.

2.2.8. The following plant will be located outside on the Falconberg Court building level 1 roof:

- TCR Station Cooling 2no. heat rejection units serve the indoor chillers located in the chiller plantroom (LUL level 2/ OSD level B1) and which in turn supply chilled water to the fan coil units and the air handling unit for the station cooling. Their size is 4000mm(L) x 1500mm(W) x 1500mm(H) and weight is 500kg each.
- CTP (Cooling the Tube Programme) Cooling 2no. units that are air cooled packaged chillers that supply chilled water to the platform air handling units. Their size is 6360mm(L) x 2200mm(W) x 2525mm(H) and weight is 6500kg each.



Model view of new Oxford St and Plaza Entrances from the corner of Tottenham Ct Rd and Oxford St



Model view of new Oxford St Entrance

2.3 Appearance and other design issues

Plaza entrance structures

2.3.1 As previously mentioned the entrance structures were the subject of a design competition led by a steering group including senior representatives from London Borough of Camden, Westminster City Council, London Underground, Transport for London, the greater London Authority and others were a party to this process. It is the winning design by Stanton Williams that has been taken forward and developed to form the subject of the current proposal.

2.3.2. The North and South Plaza entrance structures are designed to create a world class public space at St Giles' Circus at the foot of London's iconic Centre Point tower. Our proposal unlocks the potential of this key junction, offering a significantly improved experience for pedestrians and users of the new station whilst also stimulating the area's regeneration. A strong streetscape and sense of place is created by two prismatic glass volumes which sit on a concrete plinth, internally clad in stainless steel paneling internally, giving access to the below-ground station concourse. Supported by an innovative glass structure, their form has been developed as a response to the sculptural rhythms of Centre Point's elevations. They will glow at night, recalling the innovative use of glazing and lighting by London Underground in their acclaimed stations of the 1920s and 1930s. Between the volumes, a diagonal route is incorporated, while the concrete plinth at the base of the glass structures will function as a place to sit and pause. The glazed nature of the volumes will draw down views of Centre Point into the station concourse. In this way, the tower's established role as a wayfinding landmark on the London skyline will be reprised in miniature for the station users.

2.3.3 These iconic crystalline structures are designed to appear as if emerging from the Underground station. They will create a sense of arrival onto Centre Point's plaza and allow dramatic views of the Tower from the escalators or stairs for passengers progressing towards the exits.

2.3.4 The southern entrance (the larger volume) will contain 8 primary frames and the northern entrance 6 frames, with geometry allowing an exciting dynamic fanned arrangement in plan and elevation. The maximum dimension is 3m between these members, meaning that an obtrusive secondary structure to support the glazed panels in elevation is not required. This has the advantage of offering fewer surfaces to clean and limited perching spots for birds. In the roof a glass fin system provides secondary support to the roof glazing for residual strength conditions. Attached to the 'portals' will be internally and externally fixed stainless steel channels. The external channels provide an open 'gutter' in the roof plane to collect rainwater from individual sections of roof area between primary frames. This is then channelled downwards in open faced 'downpipes'. Internally the open channel is used for distributing electrical cabling in the columns to roof level LED fittings in the underside of the roof beams.

2.3.5 Overall, the Plaza entrances maintain their pure transparent form, the initial concept presented at competition stage. 150mm high open slots are located at high level in north and south elevations of each entrance for cross ventilation purposes to maintain ambient conditions in summer months.



Model view of new Plaza Entrances

2.3.6 Having entered the ticket hall from either Plaza entrance the minimum clearance is approximately 3.1m. Below ground an art installation is proposed to the prominent back wall.

2.3.7 The proposed finishes to the soffit between the glass structures are insitu fairfaced concrete with metal linings defining the glazed aperture and openings in the slab.

2.3.8 The entrances will be integrated into the emerging design for the public realm in the surrounding Plaza, details of which will be the subject of a separate submission in due course.

2.3.9 BMT Fluid Mechanics were commissioned to conduct Wind Tunnel Testing, a Wind Environmental Study and a Cladding Pressure Study for the proposed structures. Centre Point represents the dominant structure creating significant downdraughts affecting pedestrian comfort in some locations at the base of the tower at certain times of the year. The studies undertaken indicate that the proposed glass structures in themselves will have a negligible effect on wind conditions but will help to mitigate the effects of the downdraughts that are currently experienced at ground level.

Oxford Street south side entrance

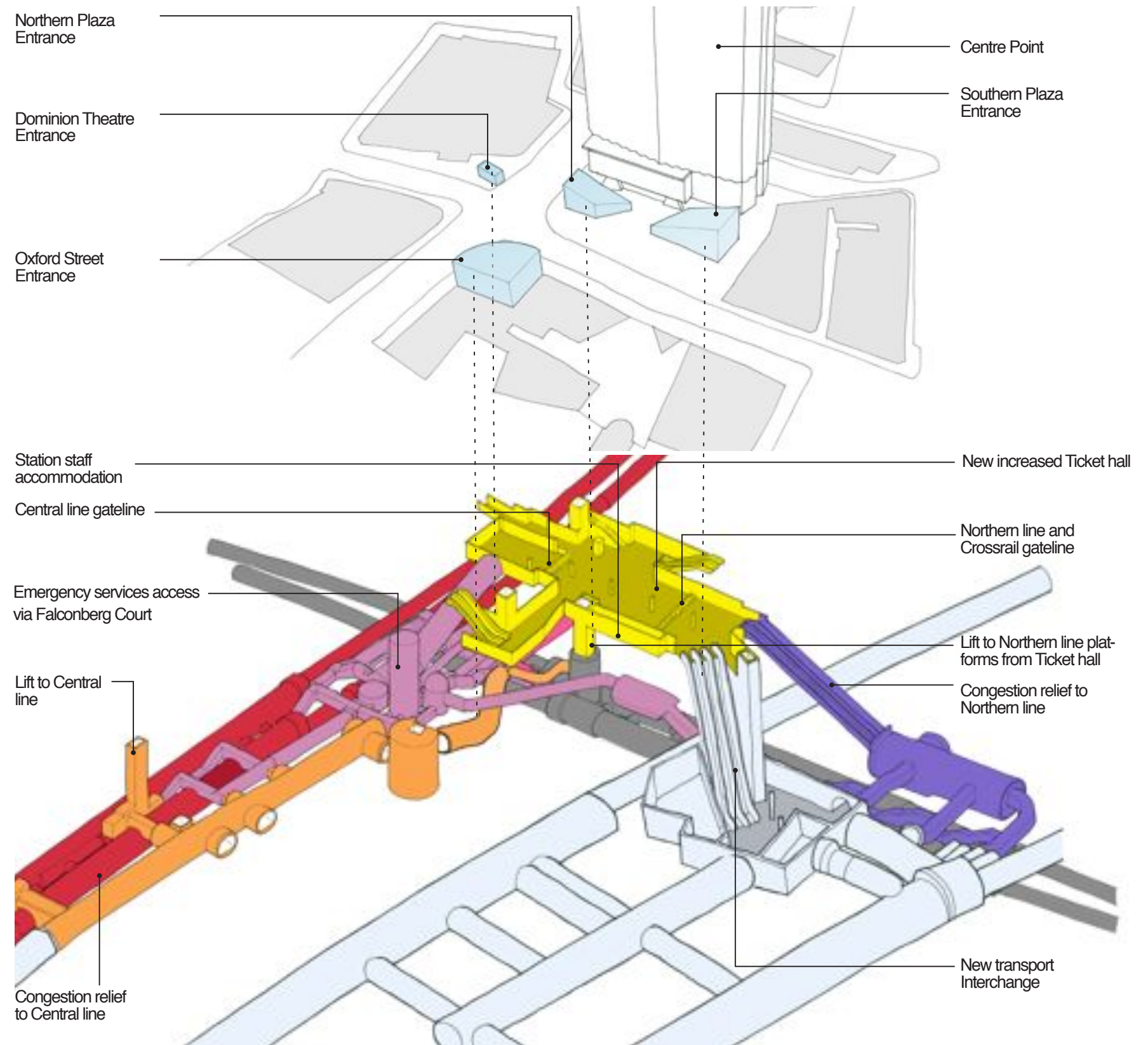
2.3.10. The Oxford Street Entrance exterior envelope has been designed to integrate with the over site development. Entrance elevations have been divided into 3m proportions to fit with the future over site development cladding arrangement (6m, 12m and 9m). The exterior cladding will be fitted with structural frameless glazing, clear above pedestrian access allowing natural light inside to the ticket hall and translucent over staff accommodation walls which will be constructed in reinforced concrete. A typical London Underground blue illuminated station sign strip will wrap around the entrance approximately 3m above ground. Two typical LU wall mounted illuminated roundels will be fixed at each end of the entrance, one on Oxford Street and one on Charing Cross Road. The interior wall cladding will be glass panels with an interlayer artwork which is being developed in conjunction with artist Daniel Buren. Internal finishes comprise natural granite flooring and coloured laminated glass internal elevations to match station concourse treatments.

Dominion Theatre Entrance

2.3.11. The existing Dominion Theatre entrance at the junction of Tottenham Court Road East/ Oxford Street North will be refurbished to match the new ticket hall finishes (see below) with precast terrazzo tiles (1200x600mm) and skirtings to be used for the floor covering. The wall cladding generally is laminated glass paneling which has a white colour interlayer. There will be small areas where stainless steel paneling is used. The ceiling is finished with grey and white metal or vitreous enamel paneling and flush lighting. The existing cast iron railings and concrete plinth will be re-furbished.

Falconberg Court Operations Building & Escape Shaft

2.3.12. The design of the Falconberg Mews street façade in Terracotta louvers and stainless steel cladding has been designed to both respond appropriately to its surroundings in its scale and to integrate into the future over-site development.



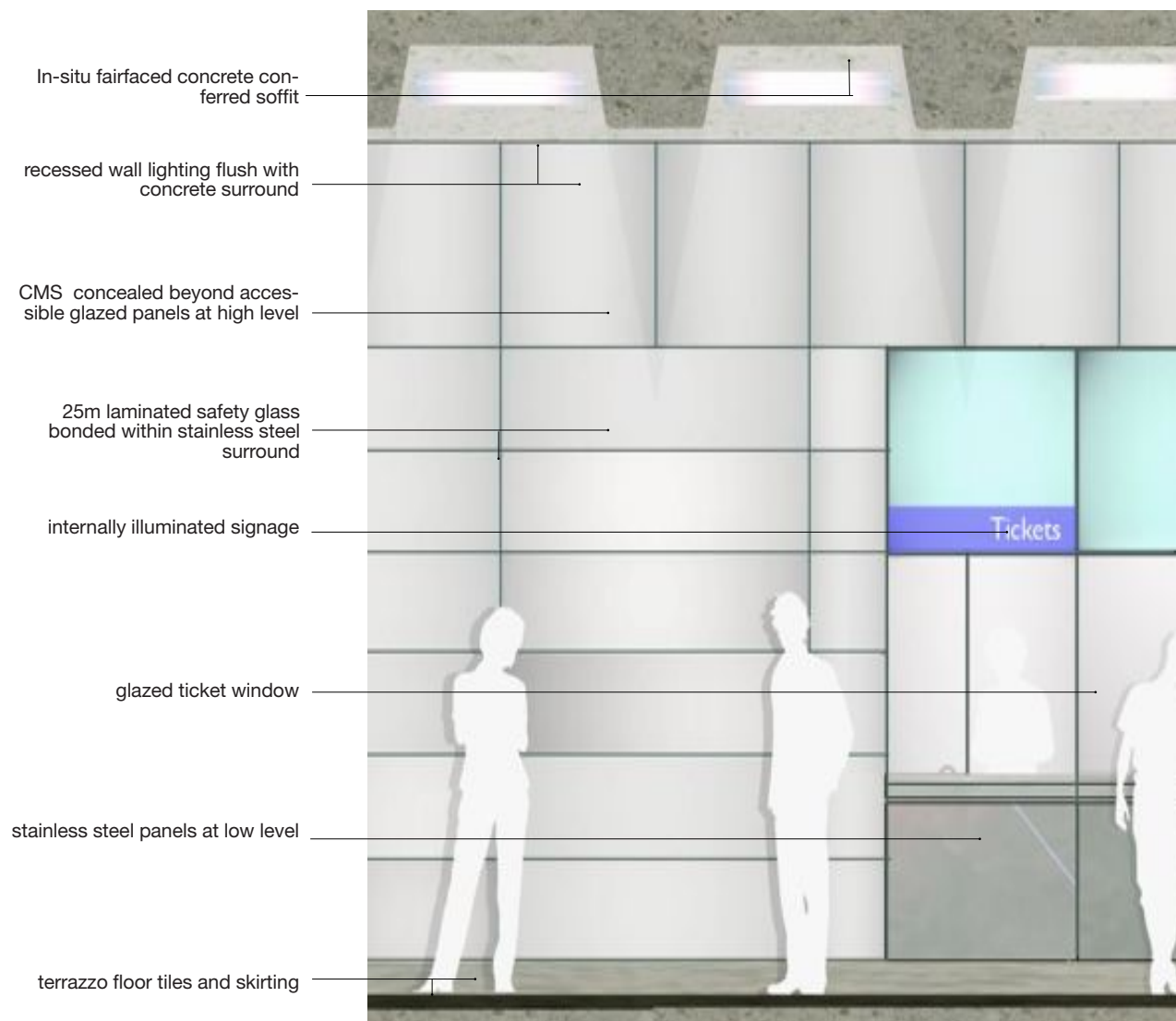
3D Model view of new station layout

Ticket Hall

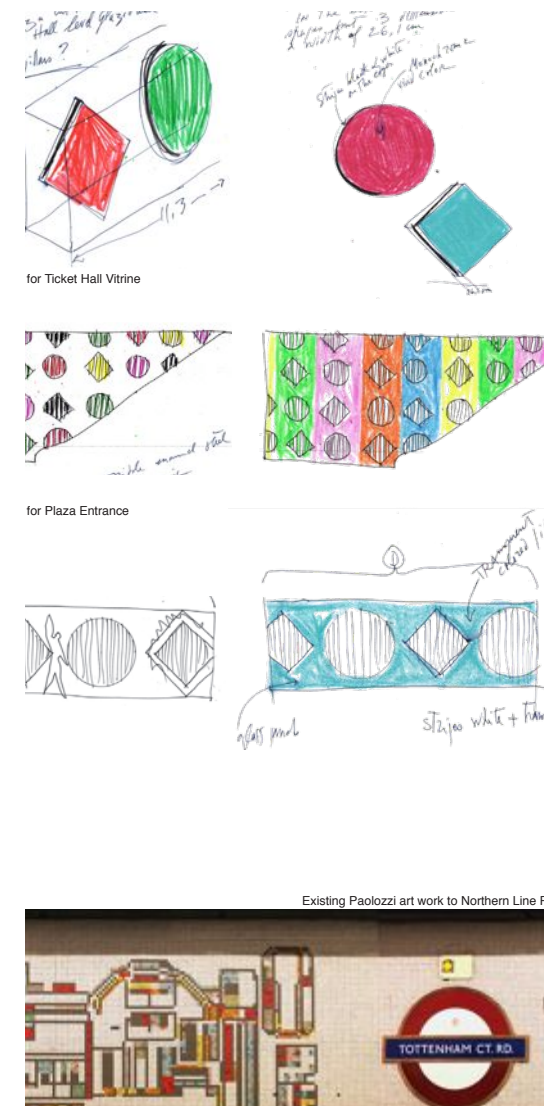
2.3.5. In parallel with creating a world class ambience within the station ticket hall materials have been chosen for their robustness within the station environment and ease of day-to-day maintenance or replacement. Contrasting colours have been utilised to aid the visually impaired. Precast terrazzo tiles 1200x600mm and skirtings are to be used for the floor covering at concourse level. Slip resistance (even when wet) is dependent on surface texture. The finishing elements of the tiles should not provide a glossy reflection as glare and reflections can confuse people with visual impairments. The colour and luminance of the walls is noticeably different from that of the ceilings and of the floor area. The wall cladding generally is laminated glass panelling which has a white colour interlayer. There will be small areas where stainless steel panelling is used. The presence of 6 no. structural columns to the Ticket Hall concourse area have blue and stainless steel banding for the required colour contrast at eye-level to assist visually impaired people of their vicinity. The ceiling is finished with grey and white metal or vitreous enamel paneling and flush lighting.

2.3.6. Public Artworks in the station are being commissioned by Art on the Underground. Daniel Buren has been invited to collaborate with the station Architects to create a series of works within the station public realm. Details of the outline proposals are provided to indicate how this may look in the new ticket hall. Large format forms depicting coloured or monochrome diamonds and circles are arranged within the stations internal glass walls. Art work has specifically been situated within the large glazed screens to the eastern side of the ticket hall and within the Oxford st entrance thus introducing the art into the public realm at grade and within the station interior.

The Paolozzi mosaic tiling has been retained in certain locations at platform levels.

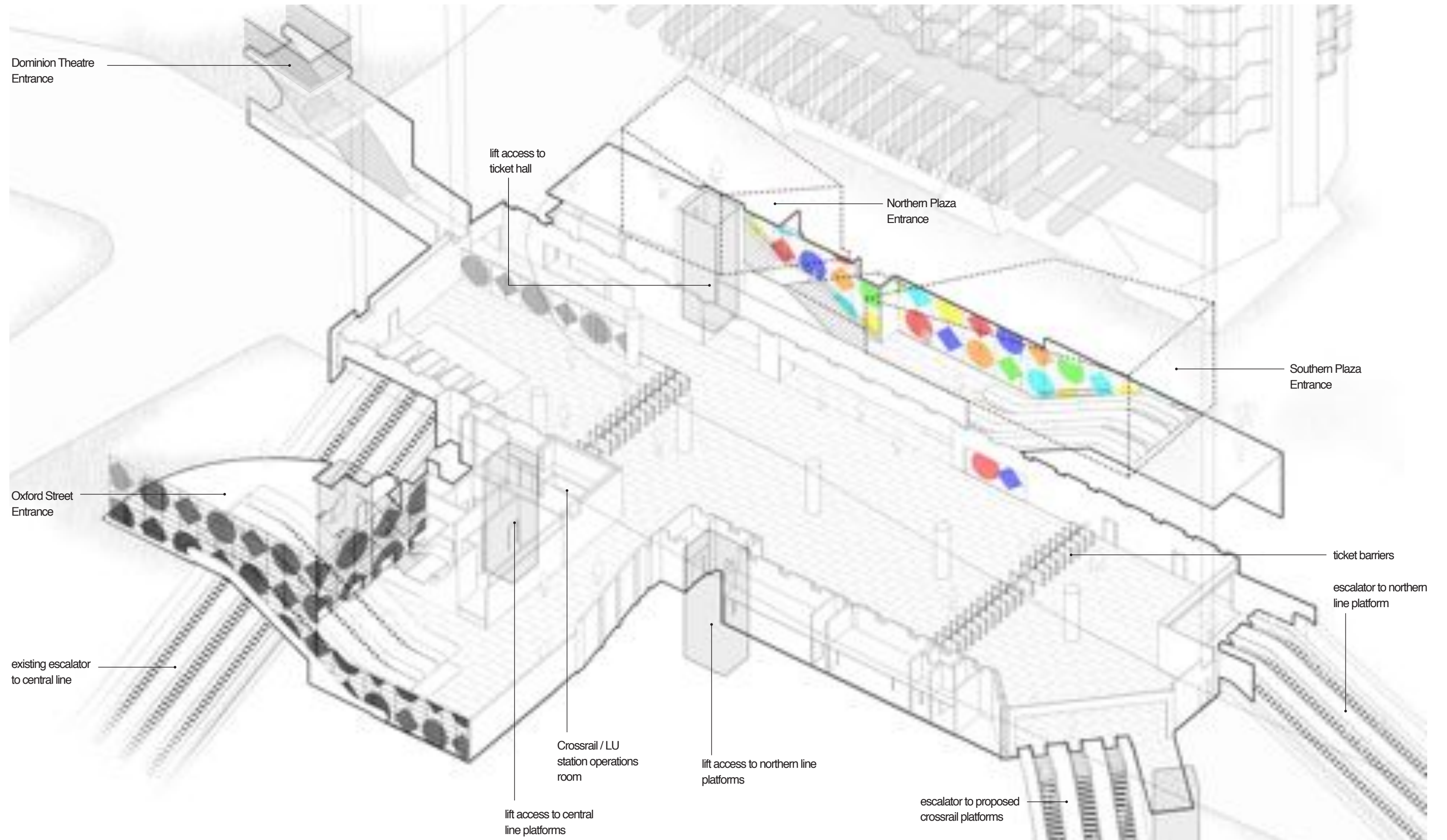


Drawing of internal finishes in new ticket hall generally



Images of existing Paolozzi Artwork and new proposed Daniel Burién glass paneling





3D view of proposed Artwork locations in station

Internal view of the ticket hall from Central line escalators



2.4 Landscaping

2.4.1. Landscaping does not form part of the current submission but it is important to state that the design takes full account of emerging proposals for the creation of high quality public realm at surface level. Therefore it is useful to give some contextual information.

2.4.2. LU is working with the London Borough of Camden, City of Westminster, Design for London, Crossrail, TfL and other interested parties to develop a high quality area of public realm in the Plaza area including its integration in terms of its linkage, both visually and as regards ease of pedestrian movement, with:

- Oxford Street & New Oxford Street
- Tottenham Court Road
- St Giles High Street to Covent Garden
- Charing Cross Road / Sutton Row / Soho

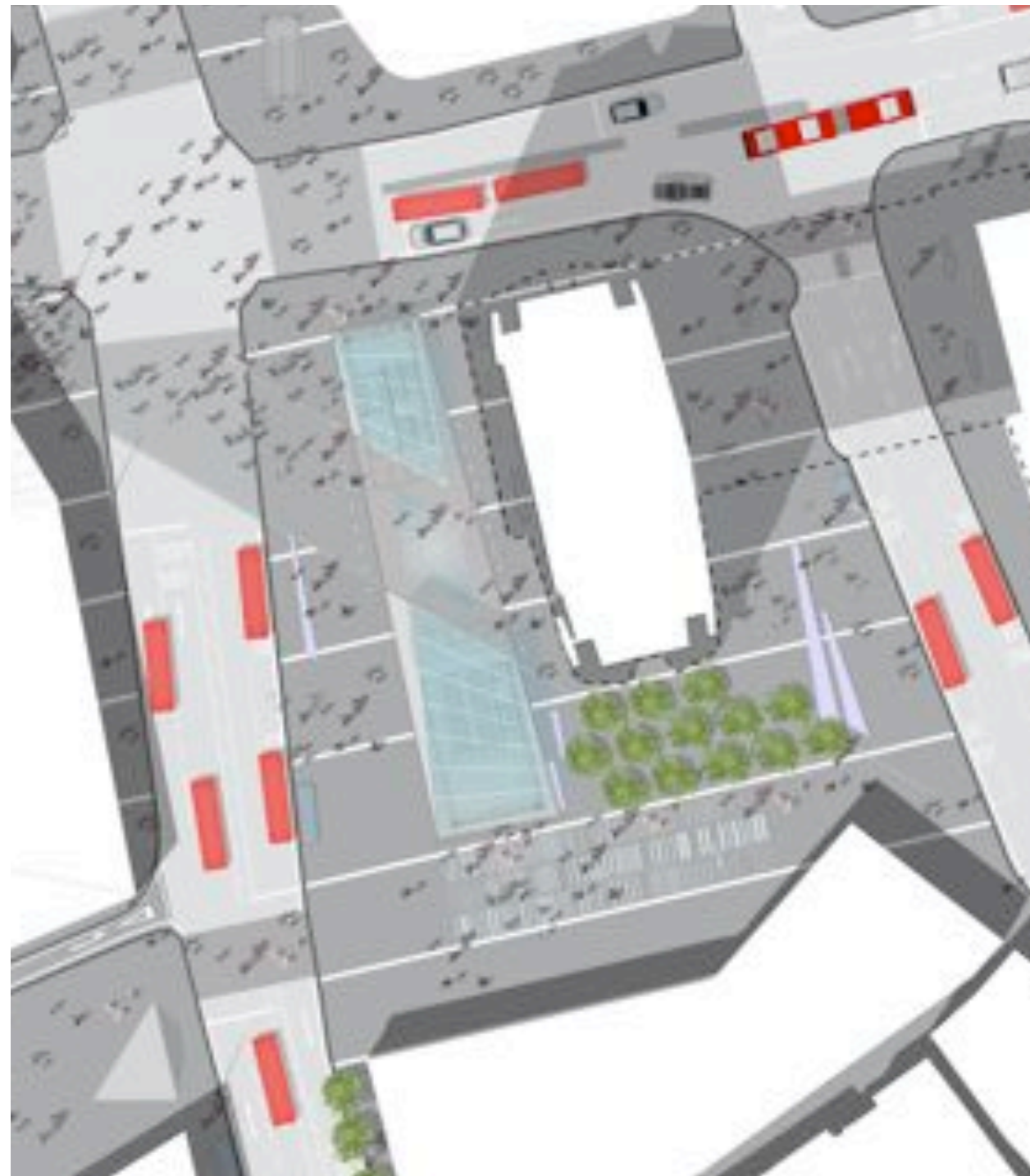
2.4.3. It is proposed that a large level pedestrian area will be created featuring high quality surface materials and planting. The positioning of the station entrance structures and the planting are designed to provide free flow of movement and easy wayfinding for pedestrians, in particular for those moving across the plaza in a NW-SE direction between Oxford Street /St Giles Circus and St Giles High Street / Covent Garden.

2.4.4. Details of implementation and means of delivery remain in development. LU acknowledges its responsibility for reinstating areas affected by its works and a submission will be made in due course under paragraph 11(2) of Schedule 7 to the Act

2.4.5. It is important to recognise that in operational terms the Southern Plaza entrance would not be possible without undertaking the strategic step to close Andrew Borde Street and change traffic management in the area. The benefits are not only integral to the operational layout of the ticket hall but relate to the greater context of the station. These can be summarised as follows:

- The area in front of Centre Point is currently an island dominated by traffic on all sides. The proposals will overcome this problem by taking traffic out of Andrew Borde Street on the south side.
- Creation of a walking link east to Covent Garden, to improve the quality of access to Covent Garden and possibly provide some relief to Covent Garden Station.
- Proposals have followed liaison with London Transport Buses and a new bus layout has been agreed for an improved and safer interchange for passengers.
- Reinstatement of the North/South walking route on the eastern side of Charing Cross Road and Tottenham Court Road.
- Enhancement to the setting of Centre Point, a listed structure enabling views of the building to be enjoyed.
- Provision of a Pedestrian space in a busy central London location increasing passenger safety in the area.
- The later will make it much easier and safer for pedestrians/passengers to cross the busy roads. The area acts as a crossroads for pedestrians as part of the busy commercial area and the enhancement will improve and encourage the use of walking routes within the district.

- Enhancement to the setting of a new commercial development to the Denmark Place site. This allows the current proposal for the development to address the new public space and profit from a new entrance to the enhanced station.



Indicative Landscaping design at street / plaza level

3.0 ACCESS ISSUES

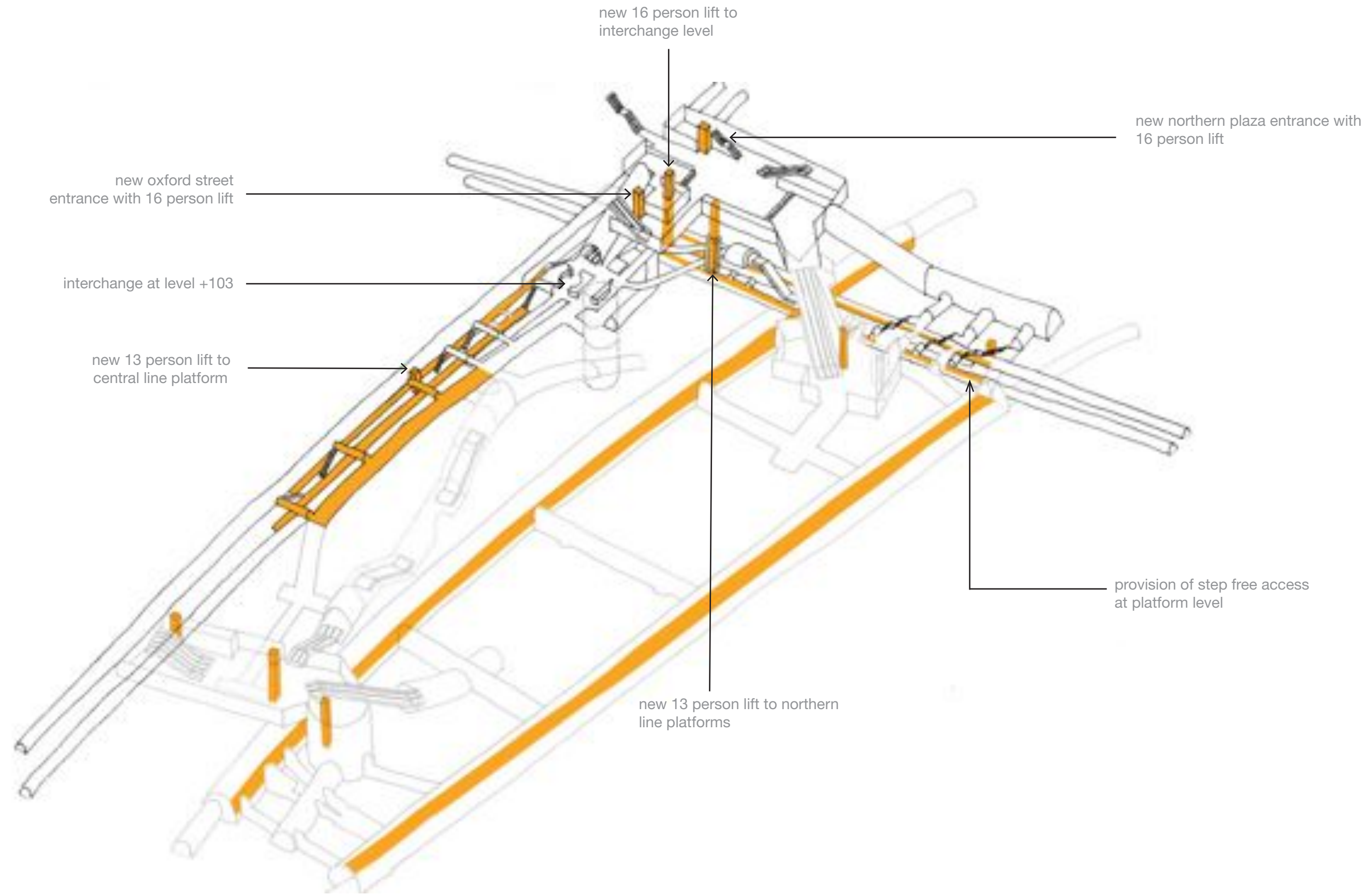


Diagram of step free access

3.1 External Access

3.1.1. One of the main aims of the scheme is to significantly improve external access to the station for all users including for persons of reduced mobility. As well as improving the ease and quality of access the works will provide the additional capacity needed to meet increasing demand including that forecast following the introduction of Crossrail services.

Existing Access Difficulties

3.1.2. The Underground Station currently suffers from major congestion, particularly within the existing ticket hall and main bank of escalators which must currently be used by all customers. This congestion detrimentally affects access to London Underground services. Temporary closures and gateline restrictions compound this problem. In addition there is only limited pedestrian circulation space at surface level in the vicinity of the existing accesses on the south side of Oxford Street and at Hornes Corner.

Passenger Demand

3.1.3. Tottenham Court Road station is heavily used throughout the day. Current assessments shows 147,000 passengers per day using the station. This is projected to rise to over 200,000 per day when Crossrail opens. The tables below show in more detail the numbers of people entering and exiting Tottenham Court Road station at peak times The peak periods are:
AM Peak, 7am – 10am
PM Peak, 4pm – 7pm

	AM Peak 2001	AM Peak 2016 Plaza (without Crossrail)	AM Peak 2016 Plaza Crossrail
Eastern Ticket Hall (Existing/Plaza) Entering	1650	1930	1650
Eastern Ticket Hall (Existing/Plaza) Leaving	12450	19200	19000
Western Ticket Hall Entering	-	-	700
Western Ticket Hall Leaving	-	-	9250
Total Entering AM	1650	1930	2350
Total Leaving AM	12450	19200	28250

	AM Peak 2001	AM Peak 2016 Plaza (without Crossrail)	AM Peak 2016 Plaza Crossrail
Eastern Ticket Hall (Existing/Plaza) Entering	17600	20084	18701
Eastern Ticket Hall (Existing/Plaza) Leaving	11897	12013	13799
Western Ticket Hall Entering	-	-	5500
Western Ticket Hall Leaving	-	-	5750
Total Entering AM	17600	20084	24201
Total Leaving AM	11897	12013	19549

3.1.4. The only means of vertical movement within the existing Underground station is via a single bank of three escalators or a spiral staircase. There is no step-free provision and this is a significant disadvantage for persons of reduced mobility.

How the proposals will improve matters

3.1.5. A comprehensive approach is being taken that involves an integrated design strategy for the sub-surface parts of the station, the new and retained entrances and the approaches to them.

3.1.6. As described in 2.4 above the new Plaza is being designed to improve links for pedestrians between the station and surrounding areas. In the immediate vicinity of the new entrances conditions for pedestrians will be much improved as part of the wider proposals that are emerging for St Giles Circus and the Plaza. These will include improved arrangements for pedestrians to cross roads by a combination of measures including alterations to kerblines to widen pavements, co-ordinated high quality surfaces (incorporating tactile surfaces etc as appropriate) and revised traffic signal phasing. There will generally be a very significant increase in the amount of space for pedestrian circulation at surface level. This is due to a number of factors and in particular is a result of the removal of the fountain outside Centre Point and the closure to vehicular traffic of Andrew Borde Street.

3.1.7. The removal of the Hornes Corner entrance to the Underground station will improve pedestrian circulation at what is currently a pinch point on the NW corner of St Giles Circus.

3.1.8. The new Plaza and Oxford Street south side entrances are designed to current LUL standards and will provide access down to the ticket hall by means of escalators and lifts. They will be easily visible from the surrounding area and signage will reinforce easy way-finding. All the entrances (including the retained Dominion Theatre entrance) will have good circulation space at street level and will lead to the spacious new ticket hall.

3.1.9. Whilst the ‘paid’ areas of the station are outside the scope of this statement it is relevant to state that once persons of reduced mobility have arrived at the ticket hall level from surface level via the new lifts and stairs they will have the option of step free access to all platforms.

3.1.10. London Underground follows industry best practice and national standards, among them the DfT Train and Station Services for Disabled Passengers: “A Code of Practice” and BS 8300:2001, “Design of Buildings and their approaches to meet the needs of disabled people – Code of practice”. The TCR Scheme will conform to these standards.

Security and safety issues

3.1.11. The station will generally be open and accessible to the public during normal traffic hours with no barriers between the entrances and the gatelines. The station will be staffed at all times it is open to the public. All areas of the station will be monitored by CCTV (with station staff observing) in accordance with LU standards to safeguard the safety and security of customers and staff.

3.1.12. In accordance with LU standards, Bostwick Gates (the steel concertina gates found at most LU stations) will be provided at the entrances to keep the station secure outside traffic hours and also to allow closure at other times when necessary for safety, security or operational reasons. The Bostwick Gates will be location as follows:

- The Dominion Theatre entrance access corridor - sub surface / ticket hall level
- In the North and South Plaza entrances - plaza / street level
- To the perimeter of the Oxford Street entrance - plaza / street level

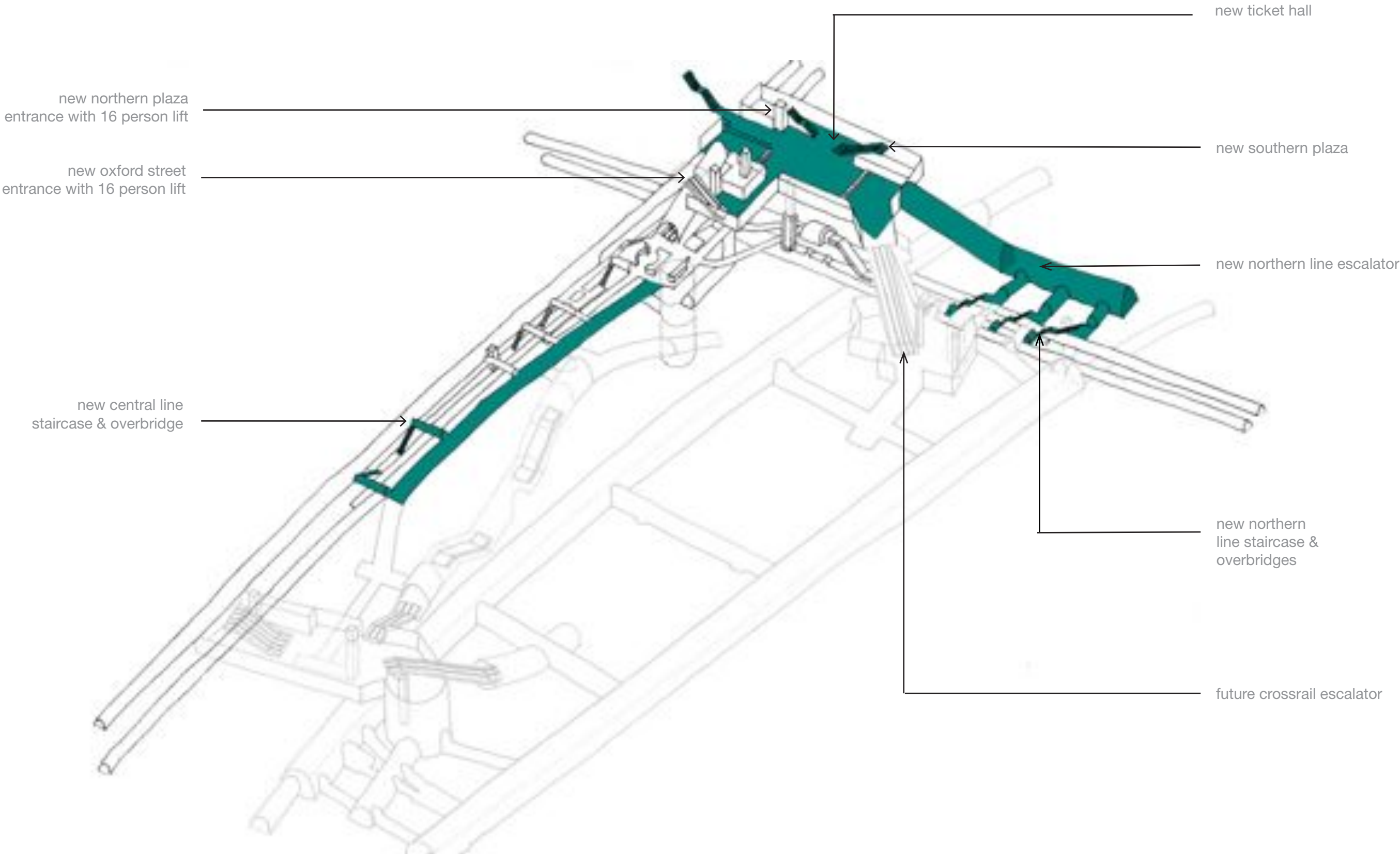


Diagram showing congestion relief

4.0 CONCLUSION

Internal view of the ticket hall from North Plaza Entrance at ticket hall level



4.1 Main points in conclusion

- 4.1.1. The proposals offer an integrated solution that will:
- Resolve existing capacity and access issues including the provision of step free access to two Underground lines and Crossrail.
 - Provide the capacity needed to meet future demand including the increase that is forecast to occur as a result of the opening of Crossrail.
 - Form an architectural and communications focus for the transformation of a strategic location in Central London.
 - In combination with emerging proposals for the public realm around the station entrances, improve access to and between important areas of Central London including Covent Garden and Soho.
 - Provide additional public realm in an area where this will be a major benefit.
 - Meet relevant current safety and security standards.
 - The addition of the new fire shaft is an improvement for fire fighting and evacuation in the Tottenham Court Road station.