7.5.7 SKY WALK

The Tottenham Skywalk is a visitors attraction which will draw visitors to the stadium and Tottenham in addition to the traditional stadium tour. It offers an alternative experience of a stadium, with an adrenaline funded climb to the apex of the roof, vertigo inducing walk across the polycarbonate roof and unique views of the goal line below concluded with a dramatic abseil to the podium below.
7.6 Scale and Massing

The new stadium will sit within the immediate vicinity and in the context of Tottenham as a significant and prominent landmark. It is intended that the developments to the north and the south will serve to mediate the stadium’s mass to Park Lane and Northumberland Park.

The sinuous, flowing lines of the elevation will be created by changes in materiality to break up the overall mass of the elevation with a palette of different surfaces and textures such as a veil of perforated metal panels, glazing, precast concrete cladding and solid profiled metal cladding.

The west stand faces the High Road to address the street frontage with a strong diagonal glazed box to create a dynamic, lively façade with a dramatic entrance that celebrates the journey to the event with escalators that move up the elevation. The escalator box creates a strong linearity to reinforce and continue the urban fabric of the High Road. The linearity will be continued by the glazed shopfront of the Tottenham Experience to the southwest. The stadium and The Tottenham Experience will activate the High Road and regain the former vigorous street scape.

The home end of the stadium is signified by the dramatic south façade which is envisaged as a single glazed elevation that curves around the single tiered south stand. The home stand will be expressed clearly on the envelope of the stadium, allowing views into the underside of the tier through the quadruple height void within the concourse.
7.7 External Appearance

7.7.1 OVERVIEW

The external envelope of the stadium consists of six main elements which have been designed to relate to their function within the building:

Curtain walling is provided to the hospitality entrance areas, bars and restaurants. These areas are concentrated on the east and west elevations where the hospitality areas are located. As well as providing large amounts of light in and views out, the glazing and its design, particularly on the west, is used to express the movement of the spectators through the building to animate the façade on match days – matching the profile of the escalators and revealing the internal lifts.

The roof is primarily clad in standing seam aluminium cladding with the leading edge clad in extruded polycarbonate interlocking sheeting to allow more light to reach the pitch and reduce the contrast issues caused in bright sunlight for the TV cameras. The standing seam aluminium cladding is then used to form the eaves of the roof and the upper portions of the elevations to form the waterproof enclosure to plant and void areas at Levels 6 to 9. This should provide a cost effective solution to a large area of envelope.

The base of the building is predominately constructed of pre-cast concrete panels to give the building the durability it needs where the building touches the ground and podium and where it could be liable to damage and vandalism.

The southern elevation comprises of a 7,000 sqm single glazed facade, which is supported by structural mullions spanning from the podium to a structural truss, which is itself supported off the columns which support the compression ring within the roof structure. This element is a critical part of the design philosophy of developing a 17,000 capacity single tier south stand as the ‘heartbeat’ of the stadium, sitting behind the glazed façade. The use of a transparent material enables spectators to get a sense of the scale of this stand as they approach it from the south podium, as well as drawing natural daylight into the spaces within it. This includes providing natural daylight to the open food court at the bottom of the stand and to the concourses spaces above.

The GA concourses and BOH spaces are clad in a combination of glazed sections and cladding panels. The glazed sections will provide controlled views out and natural light to the upper concourse and the level 4 concourse within the north stand.

The final element is an outer skin made up of perforated panels fitted to modular frames which are fixed back to the building. This perforated skin allows the building to minimise the requirement for expensive cladding systems to enclose the building and also allow for large areas of plant to be open to the elements with the perforated panels acting as a screen over the external plant areas within the building - negating the use of large areas of louvres. This skin wraps around the whole stadium and helps to unify the external façade – creating a dynamic and flowing form that expresses the importance of both the main west entrance and, most importantly the south stand.
7.2 ELEVATION MATERIALS

Perforated metal panels

A major element of the stadium façade is a screen composed of perforated steel panel of varying transparencies and set a varying angles to create a ephemeral veil that flows dynamically around the stadium perimeter. This screen is both a unifying element visually linking the four elevations but rising and falling in differing rhythms to either reveal or conceal responding to conditions specific to each of the elevational settings.

The screen rises to the south in one singular dramatic swoop to reveal the south stand and encapsulate the drama of the single tier home end. In contrast the east and west entrances are more subtly nuanced. In the west the perforated screen is pushed out by the projecting escalator box, whereas in the east it is lifted gently like a piece of fabric to reveal a glazed entrance. In the north the perforated screen runs more calmly round the stadium principally to screen the plant levels.

The screen will unify the stadium into one civic structure, but the detail of this element has been designed reduce the scale and has a series of elements to break up the mass. The panels will create a variety and interest across the elevations to create light and shade, form and texture. As it is perforate, varying proportions of perforations and solid panels will be used to create variations, like a camouflage to temper the building mass. The panels are set in a dynamic, not flat, manner with some set at angles like gills of a fish creating texture and interest to the screen. These gills allow the building to breathe, literally and visually. In some instances the openings allow for ventilation, other offer glimpses out from the accommodation.

The perforated screen will also offer opportunities for the building to change character under differing lighting conditions, offering a constantly changing appearance dependant of the lighting conditions. By day the stadium wears a screen that partially shrouds the activity within, creating an air of mystery to the facades. The screen conceals more than it reveals, any moment beyond hazy and ephemeral. By night the internal lighting will reverse this and what was concealed now becomes revealed.
Glazing

As the perforated screen rises and falls round the stadium it exposes key moments in the stadium behind the glazed curtain walling. To the west the main hospitality entrance is framed and articulated by a dynamic tilted box in which a series of escalators rise up celebrating the movement of the spectators on their journey to their destination in the seating bowl and showcases the five storey high circulation void beyond. Above a dramatic slash in the screen exposes the glazing to the activity of the concourses, offices and Skylounge to enliven the façade.

To the east the screen is peeled up to articulate the main hospitality entrance to the east stand. This glazed entrance will welcome spectators into a double storey entry lobby, and visually links the street level entry with the double height conference and banqueting suite above. A delicate dip in the perforated screen reveals a small portion of the Skylounge glazing.

As the screen progresses to the north, its movement becomes calmer. It rises to reveal the north east and north west corners which are articulated by twisted sculptural glazing that contain double height restaurants, to create light filled interiors. At the north a glazed entry lobby is framed by the precast core walls, with curtain wall glazing above to the accommodation.

Precast concrete

The precast concrete panels that clad the stair cores become the solid base to the stadium grounding it in the streetscape. These cladding panels are appropriately robust for the location and the masonry texture gives the elevations weight.

Single glazed Southern Elevation

The perforated skin flows up to uncover a dramatic single glazed cranked façade to the south which rises 35m above the podium. This elevation is the articulation of the 17,000 spectator single tier stand, glazed to expose the activity inside. The concourses and circulation that lead into the bowl becomes the stage set with the spectators occupying the space the actors on the terraces within.

Roof

The materiality of the roof wraps up from the elevation in a continuous curve of the eaves. The standing seam metal cladding provides a subtle texture at the eaves line as the elevation transitions into the roof. This solid cladding forms the main part of the stadium roof, with polycarbonate towards the leading edge to allow for increased levels of daylight to the pitch for grass growth.

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7.7.3 FACADE BUILD UP (WEST)

Roof
Polycarbonate gives light edge to the roof and extends the daylight conditions below stands. Standing seam cladding provides durable and uniform roof finish. The roof is primarily clad in standing seam aluminium cladding with the leading edge clad in extruded polycarbonate inter-locking sheeting to allow more light to reach the pitch and reduce the contrast issues caused in bright sunlight for the TV cameras.

Eaves
Curved standing seam cladding gives smooth transition between roof and layered façade.

Glazing General
Glazed curtain walling allows internal views through the layered façade and internal lighting to seep through the façade providing façade with lantern lighting effect. Glazed curtain walling is provided to the hospitality entrance areas, bars and restaurants. These areas are concentrated on the east and west elevations where the hospitality areas are located. As well as providing large amounts of light in and views out, the glazing and its design, particularly on the west, is used to express the movement of the spectators through the building to animate the façade on match days – matching the profile of the escalators and revealing the internal lifts.

Glazing General
Escalator box glazing with slender mullions emphasise the escalator box architecture setting it to apart. The glazing is used to express the crowd movement to animate the façade. The side walls, roof and soffit of the box is clad with composite ceramic cladding forming solid and monolithic frame to the double glazed west face of the escalator box.