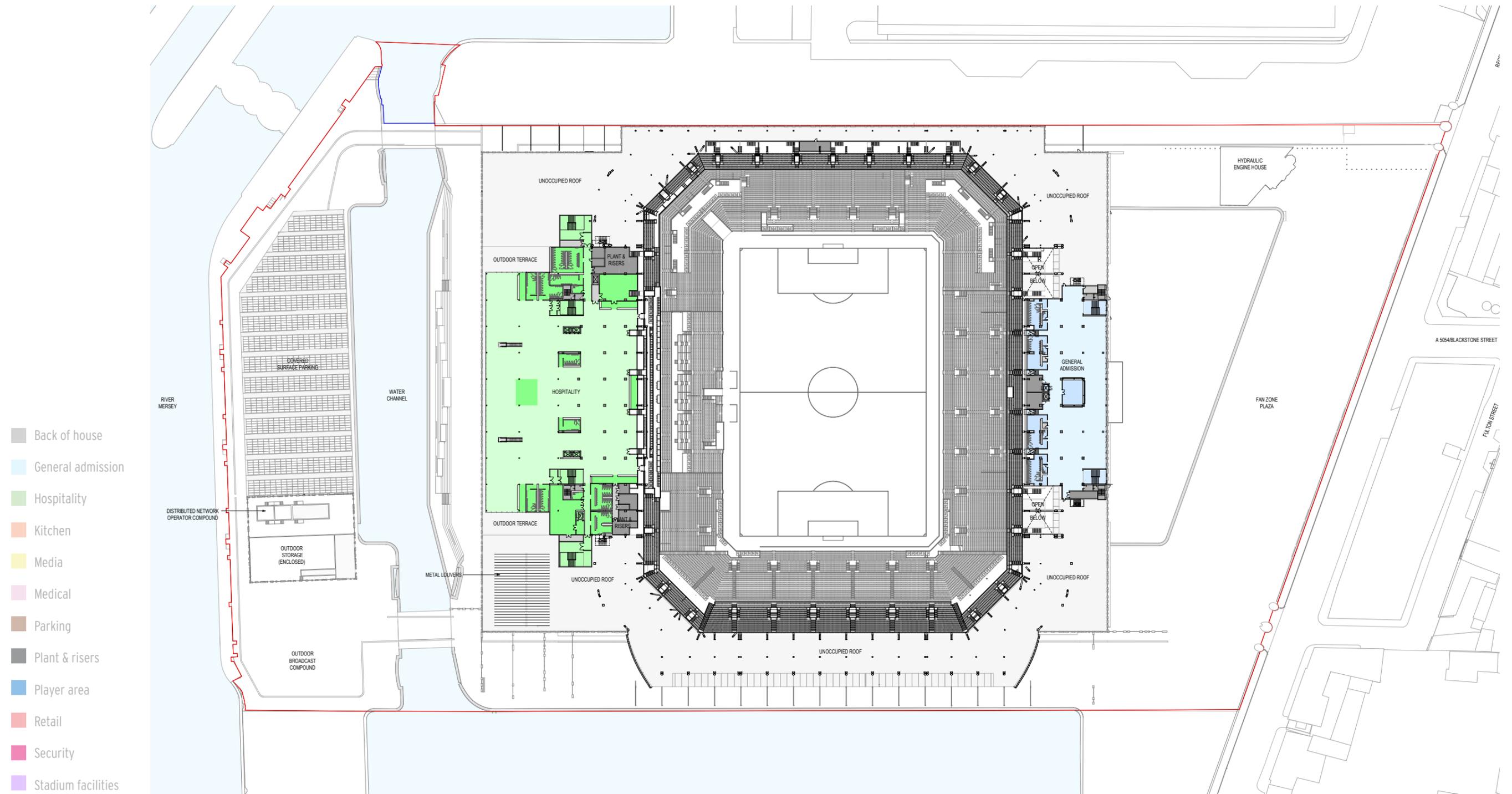
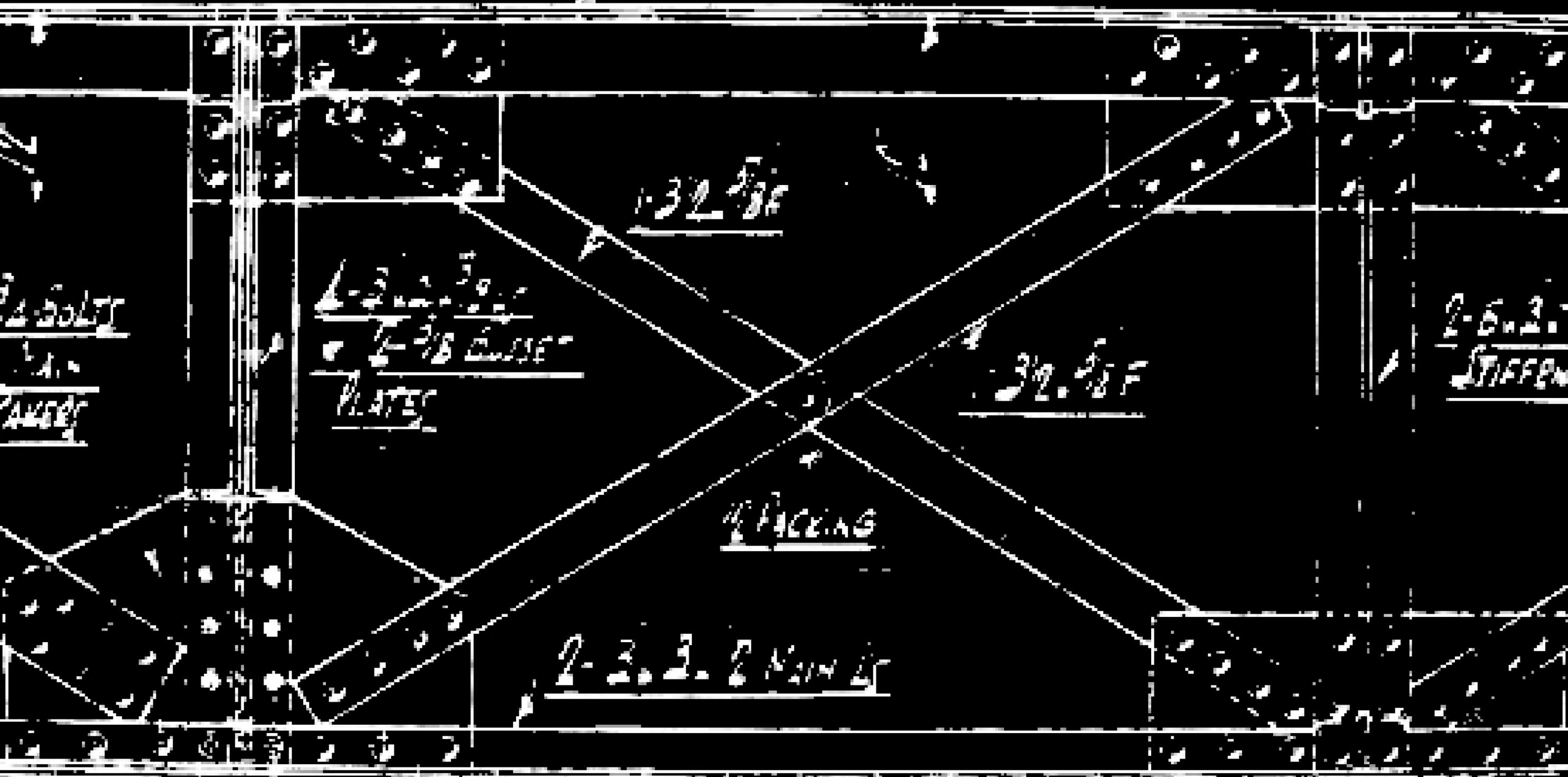


7.8.11 Level 03



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12. 4 RANGE DATE Full LENGTH 3 Lines



EYE PIECE
WATER

OBJECTIVE
WATER

12. 4 RANGE DATE Full LENGTH 3 Lines

12. 4 RANGE DATE Full LENGTH 3 Lines

8.0

Scale & Massing

8.1 Building Height

8.1.1 Bowl and Roof Volume

8.1.2 Stadium and Car Park Massing: Warehouse Typology

8.2 Site Sections

8.1 Building Height

In accordance with the Council's definition, included within the World Heritage Site SPD, the proposed stadium is considered 'high-rise', given that it is 54.16m AOD. This section summarises the guidance of the SPD with regard to building height and the following sections detail how the design evolution process has reduced the massing of the stadium and therefore its building height.

The World Heritage Site SPD notes that the relationship between the River Mersey and the WHS is a 'fundamental aspect' of the OUV of Liverpool's WHS (para. 4.5.1). Due to its impact on views, development on the riverfront has potential to affect the setting and character of the WHS as well as the city's skyline.

However, the SPD also notes that high quality development could contribute in a positive manner to the waterfront.

The SPD states that the new development must be incorporated into the existing key features of the city's skyline, including the Stanley Dock Complex, Pier Head Group and Victoria Clock Tower. Development between these buildings must ensure that new buildings do not dominate existing landmarks or significantly obstruct key views associated with the WHS. This is of particular importance to Character Area 3 of the WHS (para. 4.5.4-4.5.5), in which the application site is located.

Regarding tall buildings, the SPD notes that such development can contribute positively to a city's landscape, often through the provision of legibility (para. 4.6.5). Future tall buildings must be appropriately sited and designed in a manner which ensures minimal impact on the WHS and other heritage assets in the city (para. 4.6.5).

The SPD establishes a set of criteria for high-rise buildings (para. 4.6.19):

- High rise buildings should be mixed use schemes to maximise economic and social regeneration; proposals which deliver sustainable employment and tourism will be preferred.
- The location of high-rise buildings should take account of the grain of the city, including whether situated at a node or gateway.
- Public realm treatment should take account of local context.
- Public access should be provided at higher levels so that the public are not excluded from tall buildings and can share the viewpoints.
- Design solutions should be bespoke to the individual sites and the philosophy needs to be articulated in the Design & Access Statement supporting the application.
- The visual impact of high-rise buildings on the setting of designated heritage assets should be considered, including ways to mitigate the impact through design.
- Consider the vertical proportions and articulation of the tall building and how it can impact the city's skyline and waterfront.
- Buildings should not seek to replicate existing structures.
- The base of tall buildings should have a human scale and should not dominate the streetscape.
- New tall buildings should not have a negative impact on microclimate, particularly key pedestrian routes and public spaces.
- All proposals should be highly sustainable.
- Key views to, from and across the WHS should not be adversely compromised.

- New development should contribute to the city's skyline and not obscure, detract from, overshadow it or result in a lack of legibility.
- New developments in the WHS should not generally exceed the height of the tallest building in the immediate vicinity, with the exception of the area north of Salisbury and Collingwood Docks, where there is little existing development in the WHS to determine the height (para. 5.2.6).
- Where new development is proposed near to listed buildings, special attention will be paid to the potential impact of the new development in terms of its height and design on the setting of the listed buildings (para. 5.2.8).

The remainder of this Design & Access Statement seeks to demonstrate how the design of the proposed development has taken the above criteria into account.

Stadium height

The intent through the design process has been to minimize the building height to the extent possible to minimize the visual impact over the city's skyline, while still providing the target stadium capacity and provide a positive fan experience. With this in mind the top of the stadium has been set just under 47m from the stadium ground level set at +7.3m AOD (on the basis of the Environment Agency's flood level guidance).

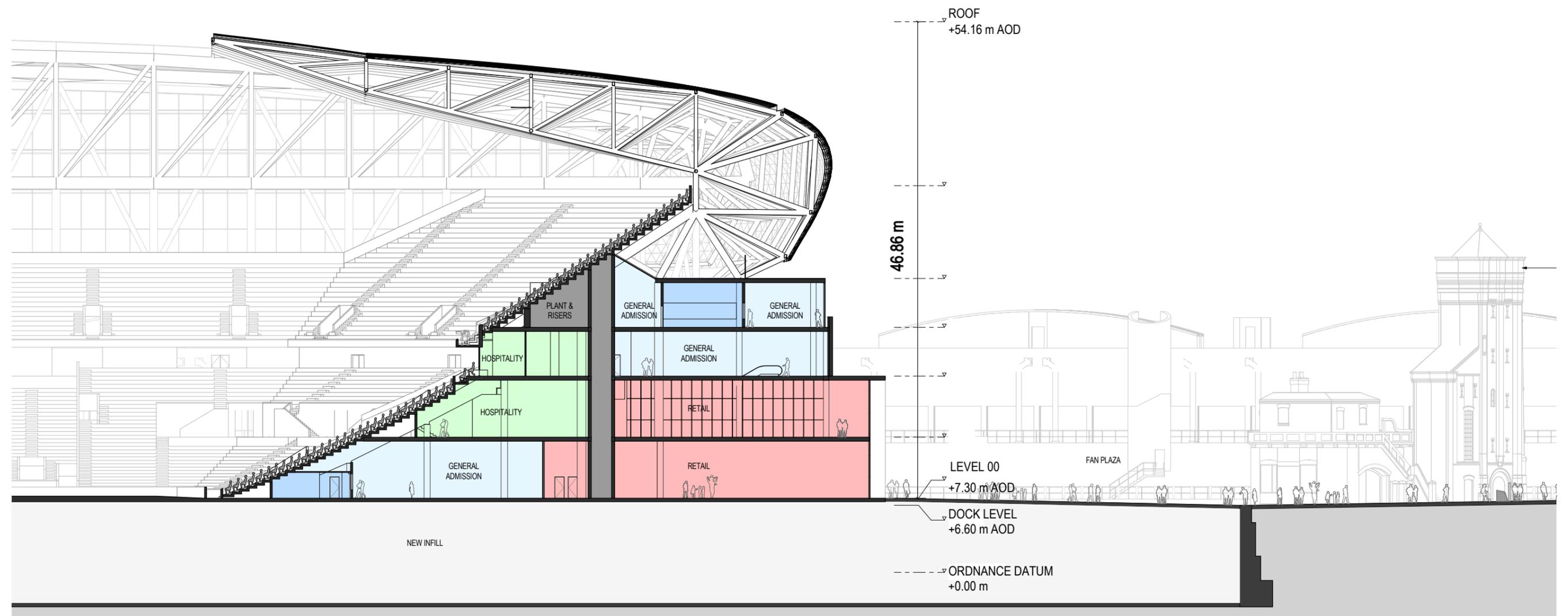


Figure 8.1: Enlarged building section illustrating building height

8.1.1 Bowl and Roof Volume

The design of bowl and roof geometries defines the overall stadium volume, setting the overall height and site footprint areas. These elements were subject to continuous scrutiny during design development, in order to minimise the height and footprint area of the stadium to the extent possible while still satisfying operational and commercial performance criteria.

As the height of the last row of the bowl directly impacts the height of the roof structure, the bowl area has been minimised by adjusting row depths, the quantity and spacing of vomitories, and the geometry of the structural grid. The roof, in turn, has been engineered to minimise structural depth above the last row.

A benefit of reducing the stadium volume is reducing the visual impact on the Stanley Dock Conservation Area, WHS, listed buildings nearby and the setting of these assets.

As shown in figure 6.7.1 in the previous page, the roof is developed as a modern metal object hovering over the more traditional brick base in a juxtaposition of the traditional construction meeting modern design solutions.

The images below show an earlier iteration of the scheme (red outline) compared to the current design (black). Part of the reason for the reduction in volume is the reduction in capacity between the two iterations, which occurred as a result of evolving Club's briefs. In addition, the design of the bowl has become more efficient, thus reducing the bowl volume.

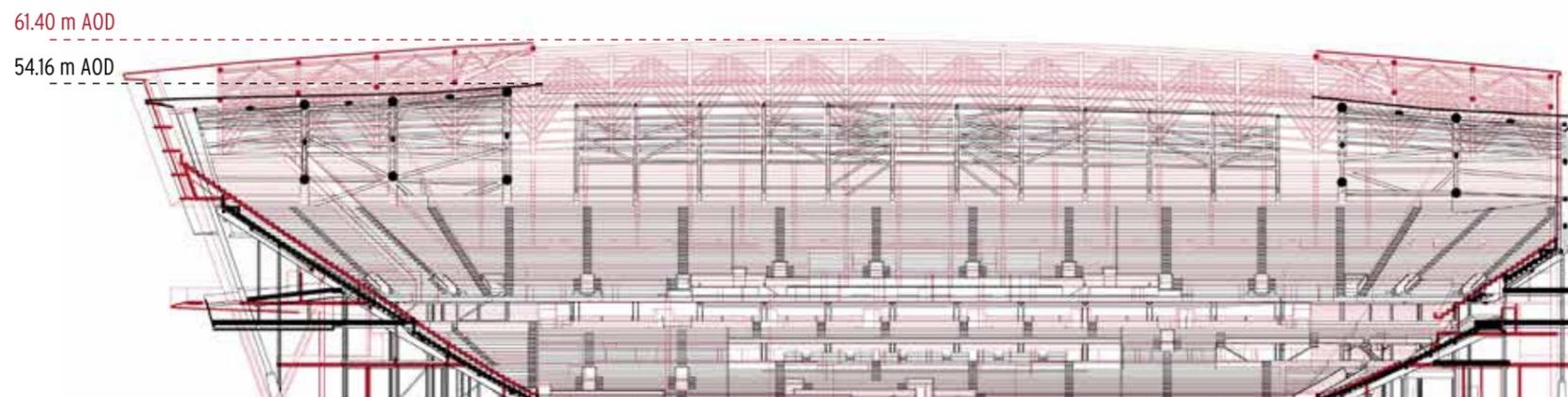


Figure 8.1.2: North-south section comparison of previous stadium geometry (red) and current geometry (black).

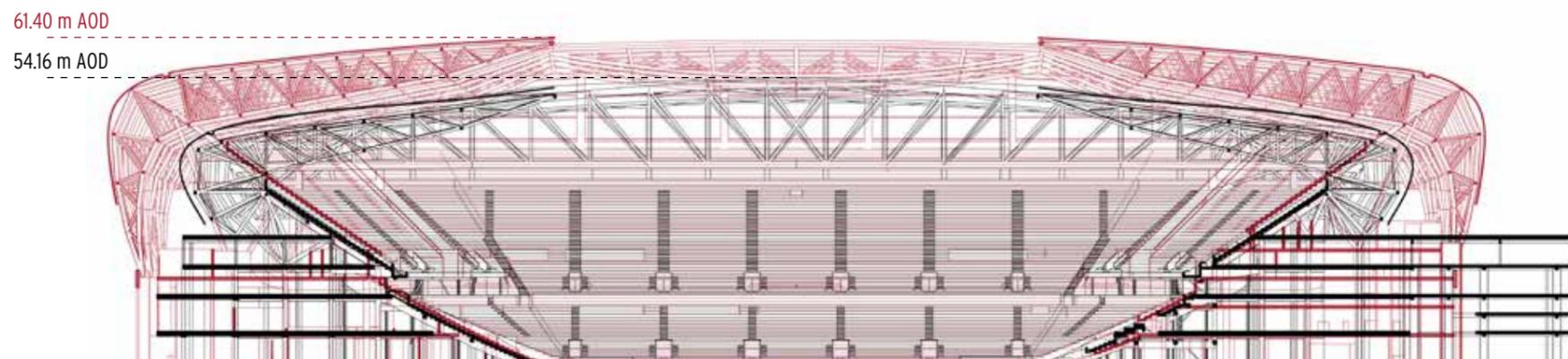


Figure 8.1.3: East-west section comparison of previous stadium geometry (red) and current geometry (black).

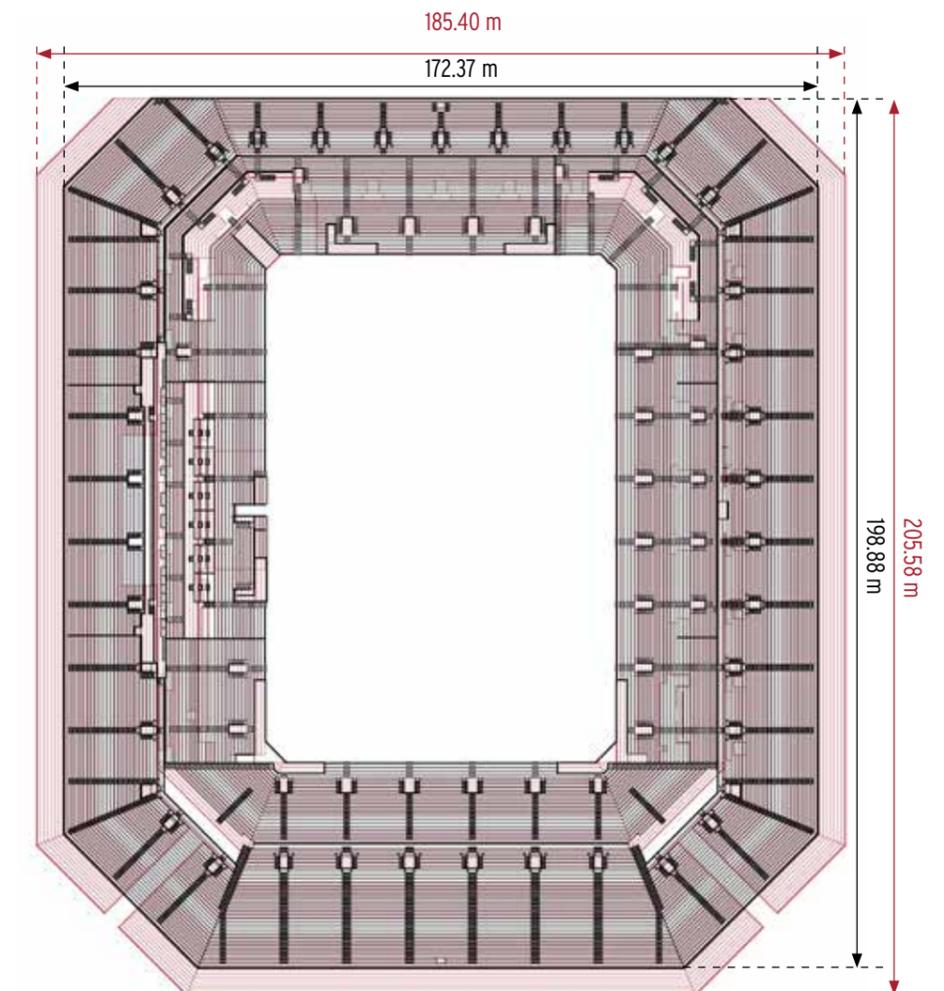


Figure 8.1.4: Comparison of previous bowl geometry (red) and current geometry (black).

8.1.2 Stadium and Carpark Massing: Warehouse Typology

The stadium base volume, comprising of the stadium programme and the multi-storey carpark, is conceived as a structure which grows from the dock, providing the robustness and solid appearance present in multiple warehouses throughout the Stanley Dock Conservation Area. This base is built primarily in brick, replicating the rectangular massing of the warehouse typology, breaking the scale by dividing the brick into vertical piers by the use of recessed metal panels from that brick facade.

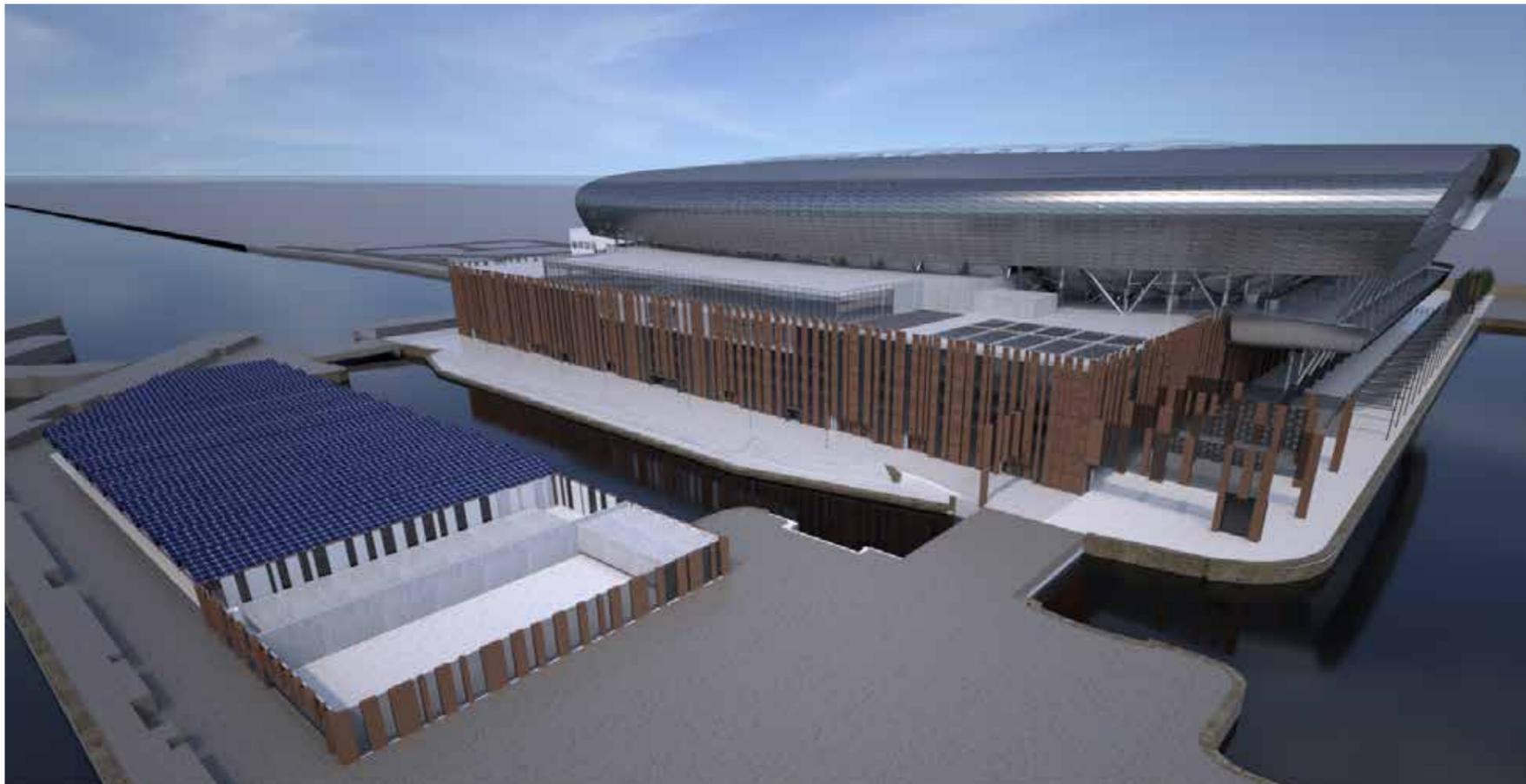


Figure 8.1.5: Aerial south west image showing the stadium as well as the car park surface study



Figure 8.1.6: Grade II listed building, Bonded Tea Warehouse

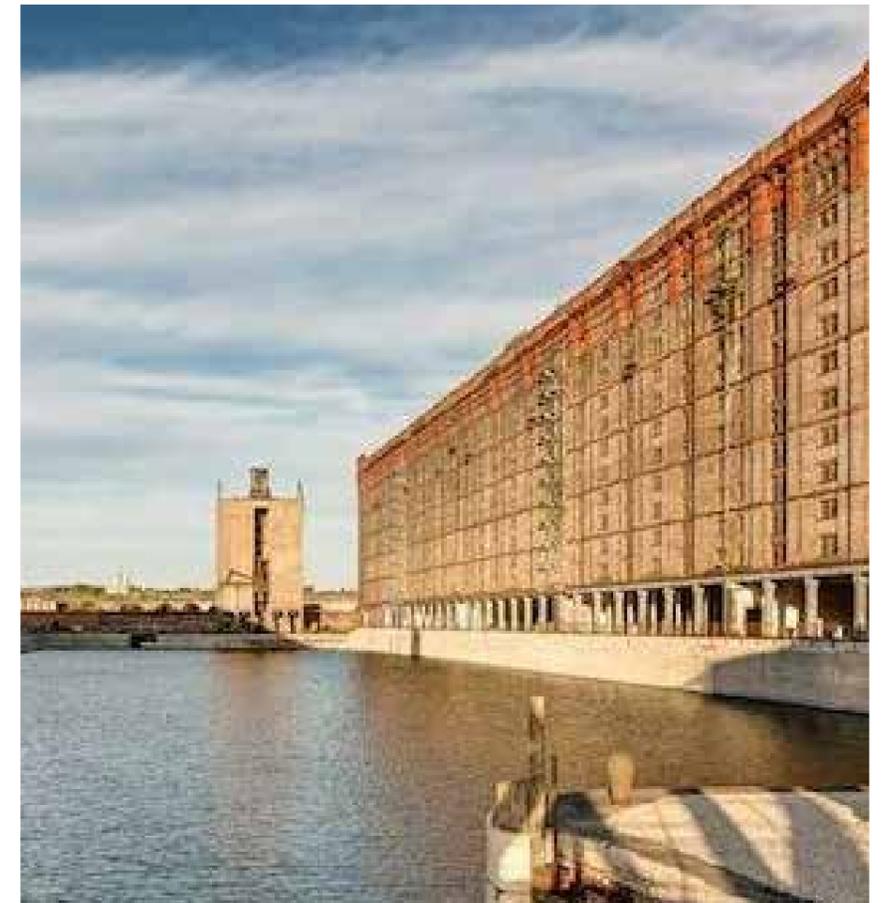


Figure 8.1.7: Grade II listed building, Tobacco Warehouse

8.2 Site Sections

Out of sensitivity to the visual impact of the stadium on the surrounding waterfront, and to maximise the area of public realm on site, the stadium volume is designed to fit as tightly as is practicable around a bowl of minimum size required to accommodate the capacity of the Club Brief.

At 38m high above ground, the Tobacco Warehouse is the tallest nearby building. The structures planned for Bramley-Moore Dock as part of the consented Liverpool Waters scheme would reach a maximum height of 38m above dock level, falling within the parameters of a Medium-rise Building (any building over 21m and under 45m). By comparison, the top of the stadium roof is under 48m above dock level.

In the East-West direction, a section facing South shows the site and the elevation of the Titanic Hotel and Tobacco Warehouse. In addition to being the structure nearest to the new stadium in height, the footprint of the Tobacco Warehouse (visible to the left, below) is also similar in dimension to the width (in the East-West axis) of the new stadium.

- 01. The Stanley Dock Tobacco Warehouse *
- 02. The Stanley Dock North Warehouse - Titanic Hotel *
- 03. Regent Road Dock Wall *
- 04. Hydraulic Engine House *
- 05. Bramley-Moore Dock Retaining Wall *
- 06. Victoria Tower *

**Grade II listed structures*

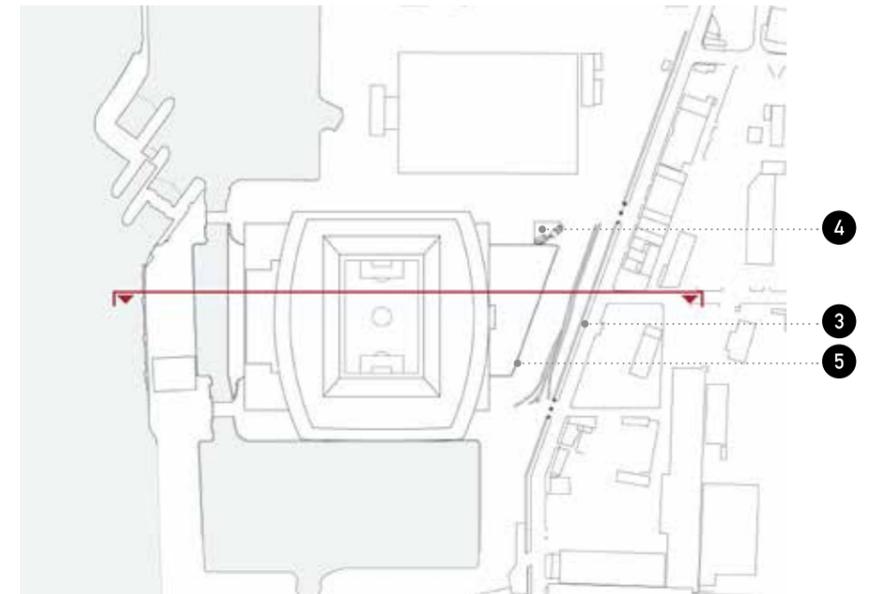


Figure 8.2.1: Key plan

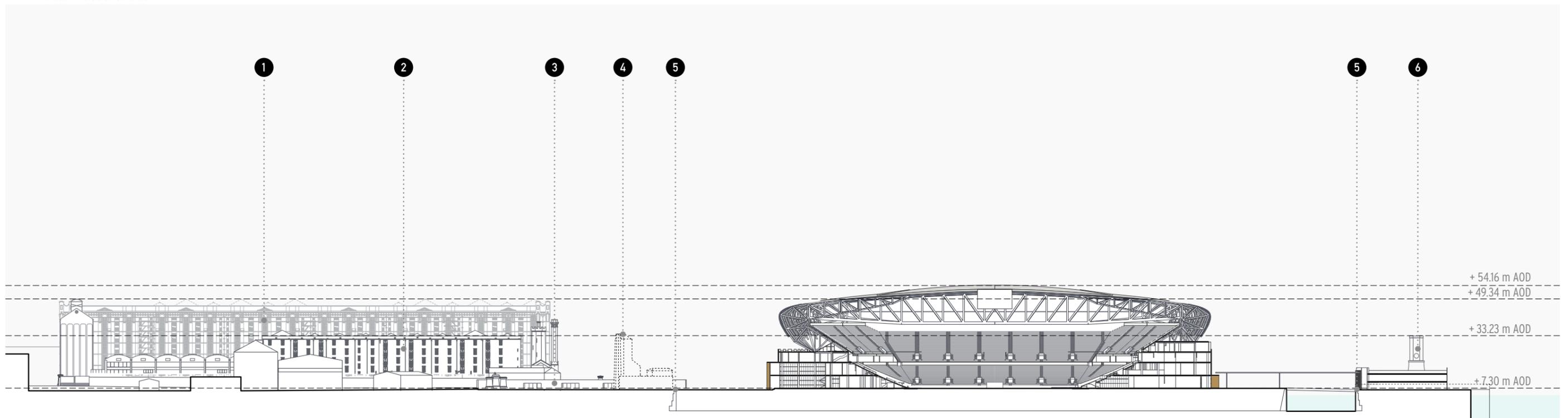


Figure 8.2.2: East West section illustrating the surrounding context in relation to the new stadium

In the North-South direction, a section facing East shows the site and captures the respective heights of the Titanic Hotel and Tobacco Warehouse to the South of the site. No existing structures on Bramley-Moore Dock are of comparable height to the new stadium. The Tobacco Warehouse, opposite the adjacent Nelson Dock to the South, is the closest in height of any nearby structures. At a height of +49m AOD, the top of the Tobacco Warehouse is approximately 5m lower than the highest roof level of the new stadium (+54m AOD).

- 01. The Stanley Dock Tobacco Warehouse *
- 02. The Stanley Dock North Warehouse - Titanic Hotel *
- 03. Regent Road Dock Wall *
- 04. Hydraulic Engine House *
- 05. Bramley-Moore Dock Retaining Wall *
- 06. Victoria Tower *
- 07. Waste Water Treatment Works

* Grade II listed structures

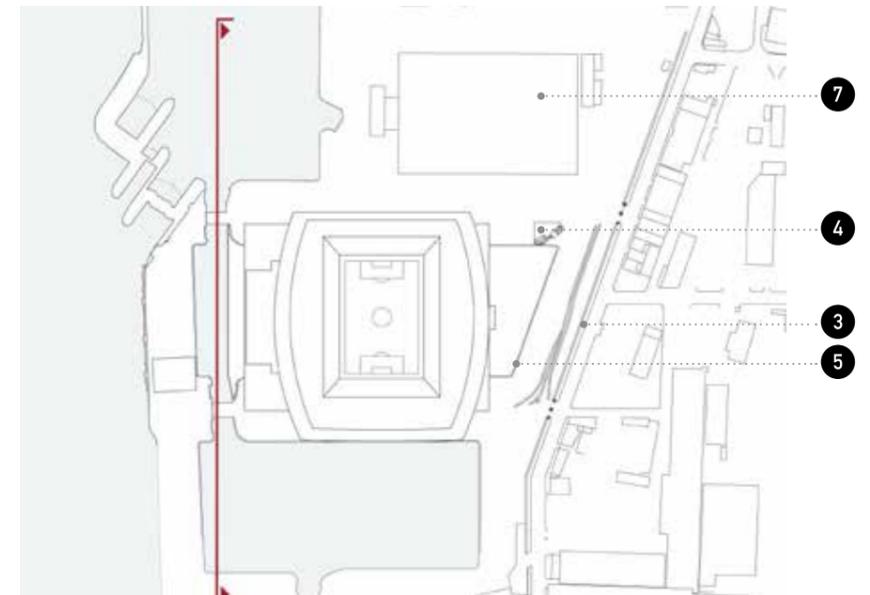


Figure 8.2.3: Key Plan

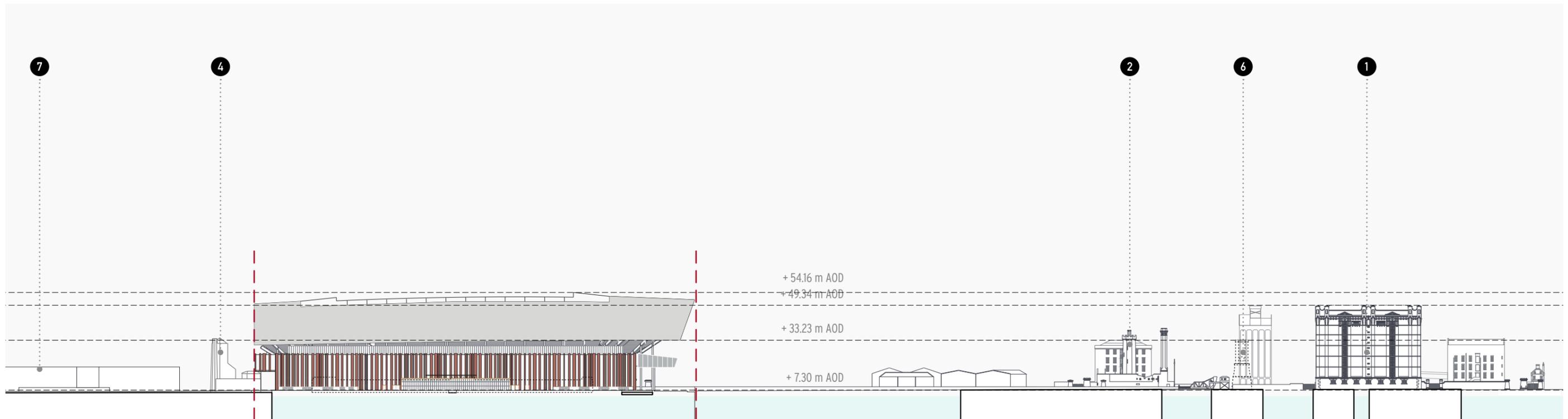


Figure 8.2.4: North-South elevation illustrating the surrounding context in relation to the new stadium

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9.0

Appearance / Materiality

9.1 Facade Design Study

- 9.1.1 Facade Design Iterations
- 9.1.2 Brick Type
- 9.1.3 Brick Pier Dimensions
- 9.1.4 Brick Coursing
- 9.1.5 Brick Colour: SDCA Precedents
- 9.1.6 Brick Colour: Design Study
- 9.1.7 Brick Colour: Specification
- 9.1.8 Facade Base: Grounding
- 9.1.9 Facade Base: SDCA Precedents
- 9.1.10 Facade Base: Grounding Study
- 9.1.11 Facade Metal Panel
- 9.1.12 Facade Metal Panel: Dimensions
- 9.1.13 Facade Metal Panel: Colour Study
- 9.1.14 Leitch Truss Pattern
- 9.1.15 Leitch Truss Pattern: on Brick
- 9.1.16 Leitch Truss Pattern: on Metal Panel
- 9.1.17 Leitch Truss Pattern: on Glazing
- 9.1.18 Leitch Truss Pattern: on Facade Base
- 9.1.19 Metal Portals

9.2 Stadium Roof

- 9.2.1 Roof Structure: Cantilever and Long span Truss Systems
- 9.2.2 Roof Structure: Cablenet System

- 9.2.3 Flat Roof
- 9.2.4 Barrel Roof
- 9.2.5 Glazing: North and South Windows
- 9.2.6 South Balcony

9.3 Stadium Elevations

9.1 Facade Design Study

Site Heritage Considerations

The Liverpool Maritime Mercantile City Site Management Plan (LMMCSMP) describes the structures of Area 3 of the SDCA, which includes BMD, as “constructed from a limited palette of materials - brick, stone, iron and mortar - innovative buildings and structures represent the pinnacle of industrial dock architecture of the Victorian period” (LMMCSMP, p. 11).

The design of the stadium draws inspiration from the palette of its historic context, as well as from the spirit of innovation that characterises the period of its construction. At the base and facade of the stadium, brick is the primary material, in proportions derived from surrounding structures, notably the Tobacco Warehouse. Steel structure and aluminium panels form the barrel roof floating above the facade, evidencing both the engineering and aesthetic potential of modern methods of fabrication and assembly.

Engineering considerations and modern construction methodologies are also brought to bear on the preservation of heritage elements, particularly to ensure that the dock walls will not be damaged where they fall within the stadium footprint.

The brick warehouses within the WHS and Conservation Area are recognised in the World Heritage Site SPD as being of a highly distinctive style and being ‘monumental’ in terms of scale (para. 3.1.10). The warehouses use materials in a consistent manner and are considered to be fairly homogenous, which reflects that many were developed in a short period and influenced by Jesse Hartley.

The SPD notes that the materials which define Character Area 3 of the WHS include hard surface, edges, stock brick, stone and iron (para. 6.4.3).

This information has been taken into consideration in the design of the proposed stadium and the choice of materials.

As detailed in Section 6, the Window Scheme developed during the initial Brief for Walton Hall Park became the starting point for stadium design studies at Bramley-Moore Dock. During the third Brief, with the emergence of the Principle to reflect heritage at BMD, the stadium design concept transformed. Instead of a historically-derived interior enclosed by a modern, curvilinear external form, the facade of the stadium becomes an element in which the brick materiality and proportions of the warehouses of the historic North Docks area is expressed.

This section captures the evolution of different design iterations, and the intent for the stadium base to grow from the dock and be solidly rooted to the ground.

9.1.1 Facade Design Iterations

Large Singular Openings

Facade study featuring large, singular openings in brick facade, with solid brick fascia across top of facade. This concept was not pursued further because it was not considered to effectively break down the scale of the monumental facade to pedestrian-friendly proportions.

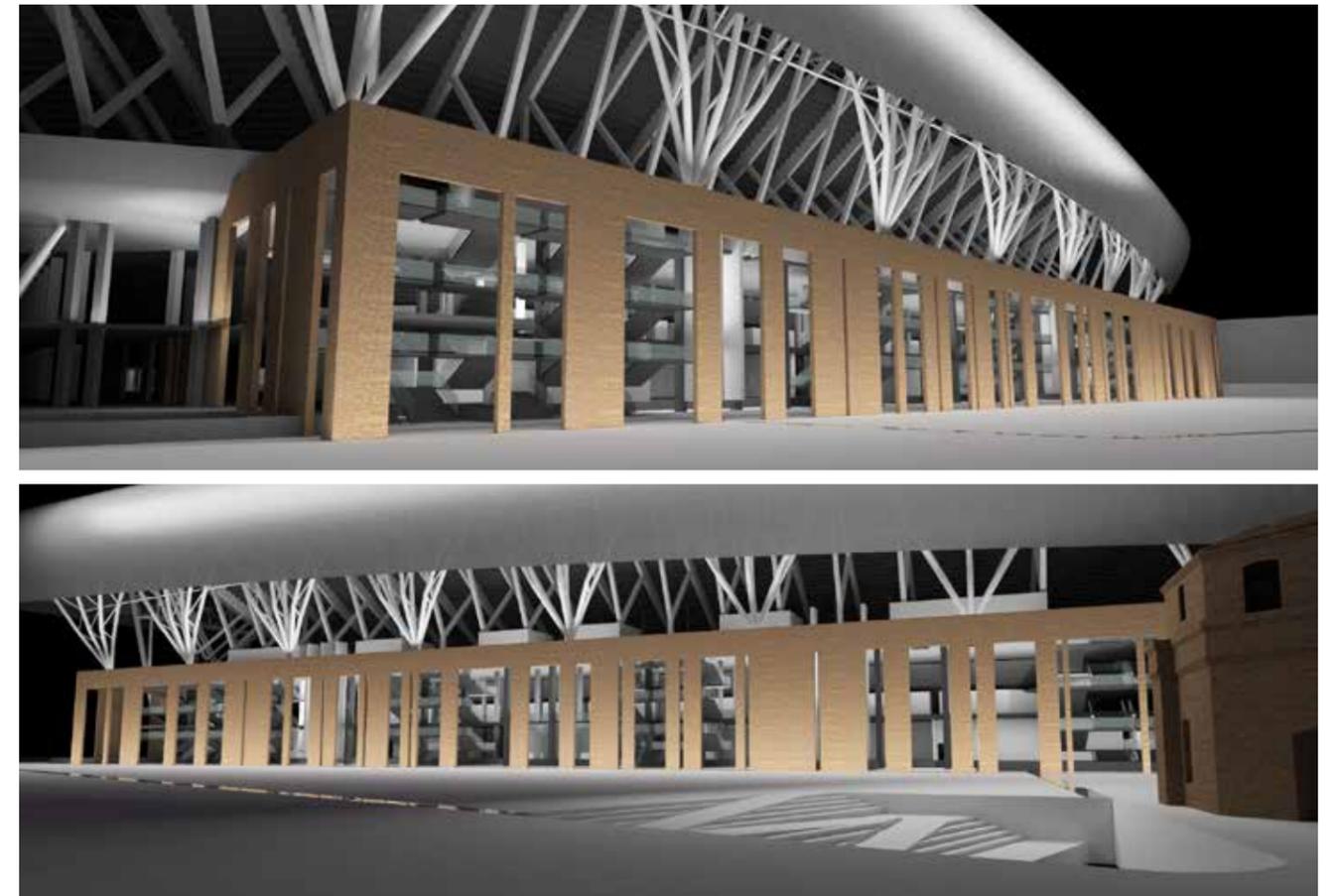


Figure 9.1.1: Facade study: iteration with large, singular openings

Mesh Brick Facade

Facade study of checkerboard solid/open brick surface. This concept was not pursued further because the checkerboard visual effect was considered incongruous with the natural weightiness and solidity of brick.

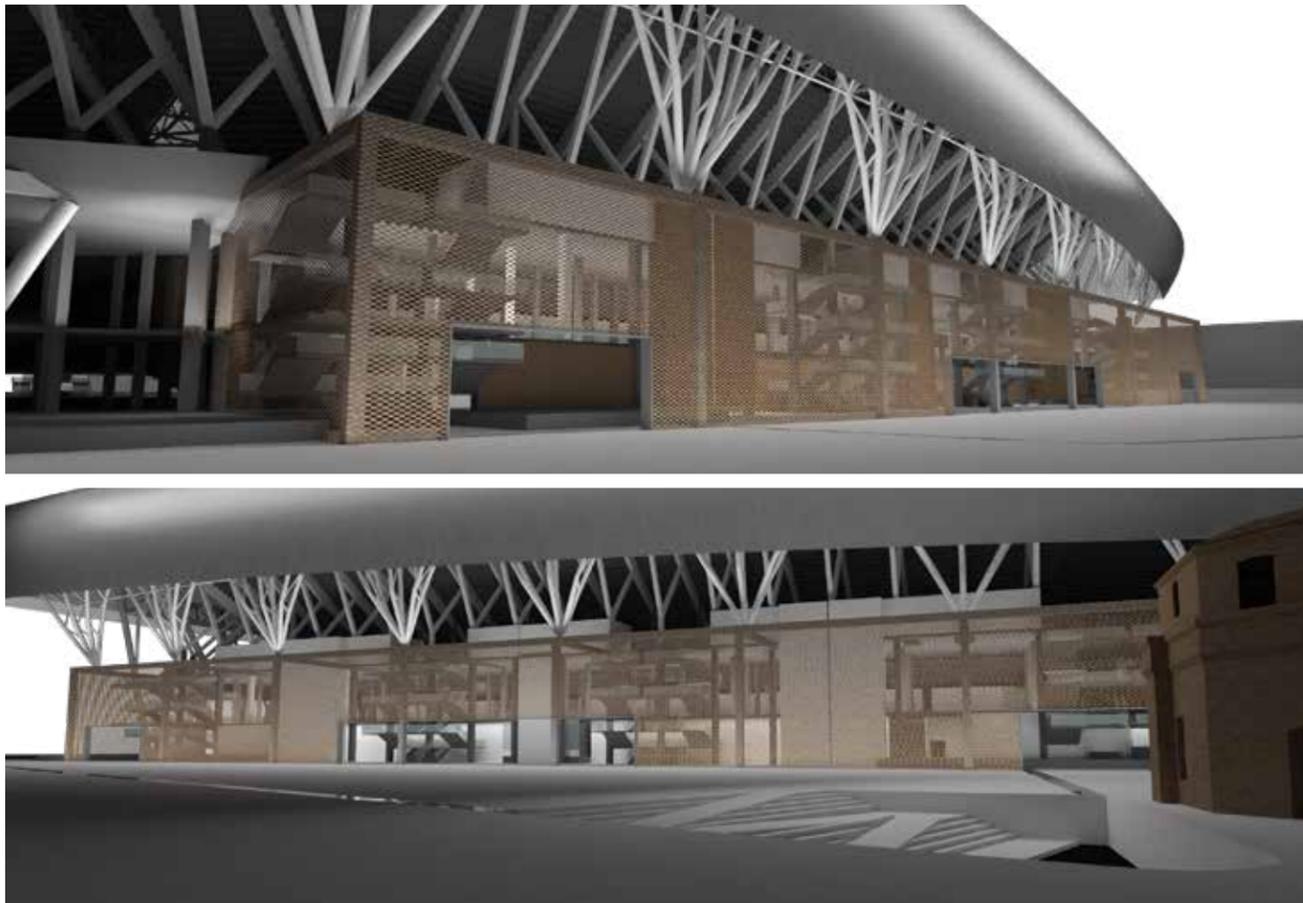


Figure 9.1.2: Facade study: mesh brick iteration

Faceted Facade

Facade study of triangular panel facets. This concept was not pursued further because the aesthetic lacked any obvious tie back to Bramley-Moore Dock context and the Club.

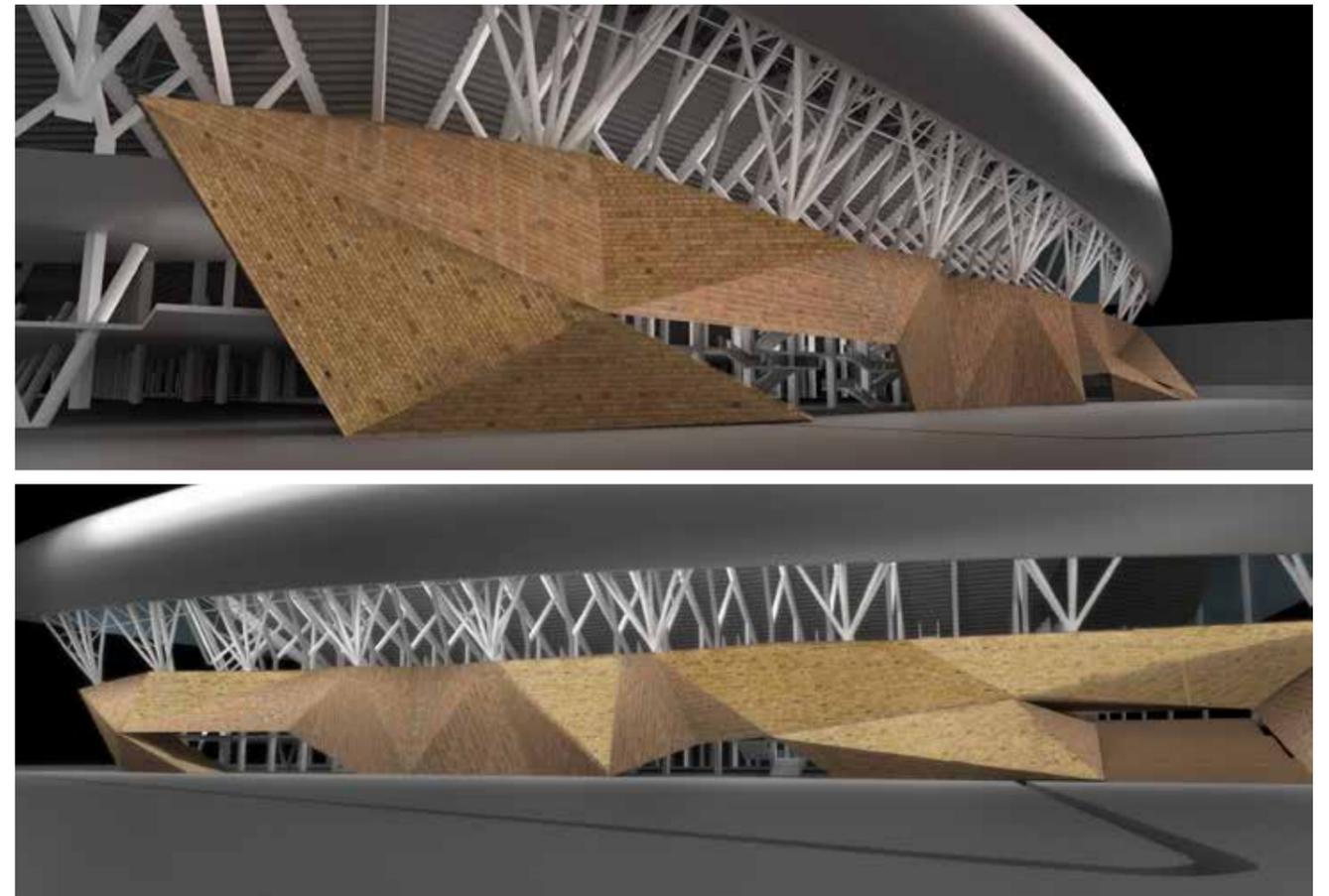


Figure 9.1.3: Facade study: faceted iteration

Vertical Pier Facade

Facade study of vertical brick piers, as a modern interpretation of facade precedents identified in the Stanley Dock Conservation Area. This concept was chosen for progression because of the relationship to surrounding context, and because the vertical brick piers were considered to effectively break down the scale of the facade to pedestrian-friendly proportions.

This was presented to HE and LCC as the Club's preferred option and was positively received as a concept. Further design development was required in order to increase the solidity of the facade by altering the ratio of brick to non-brick piers and developing the thickness of the piers.

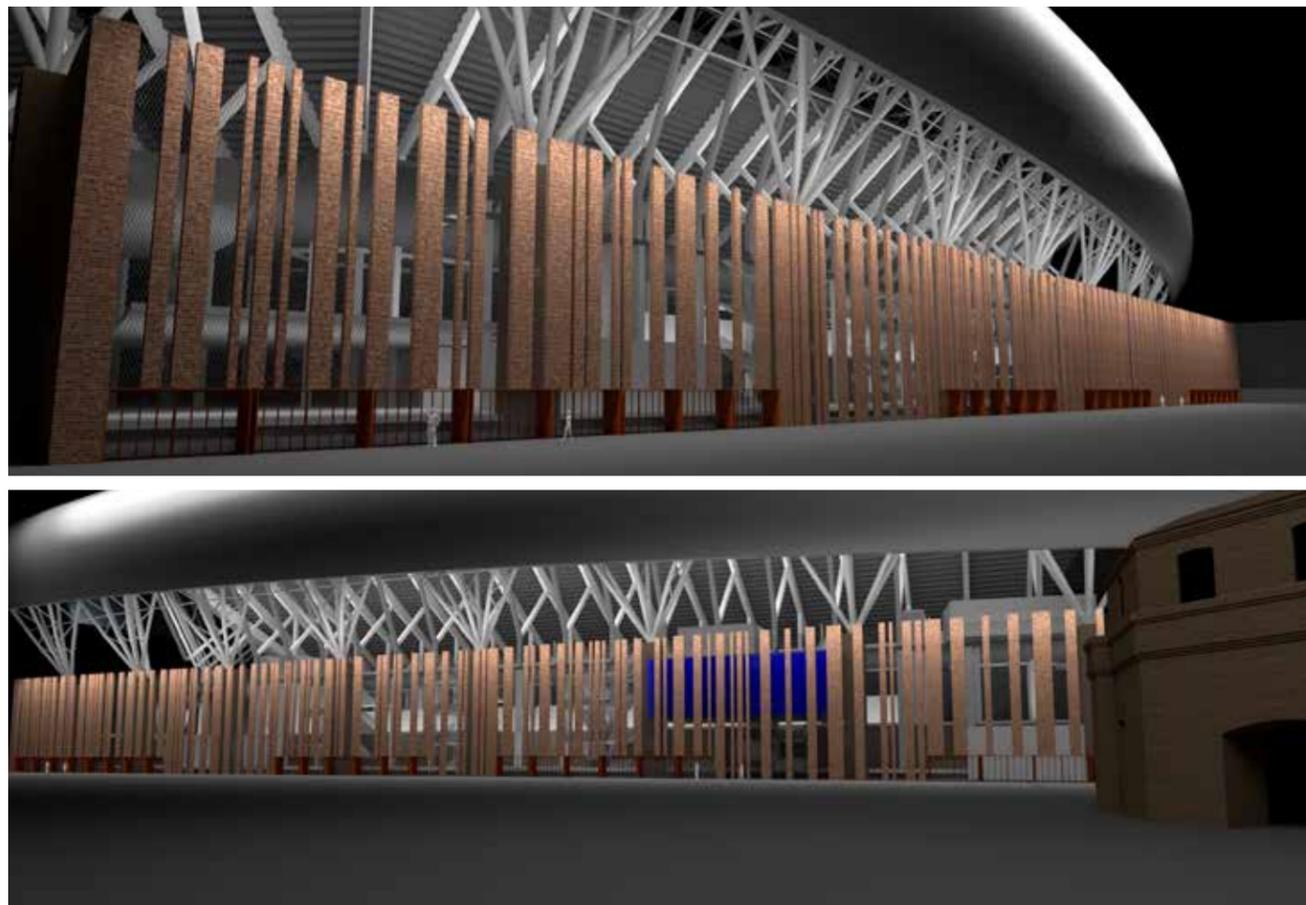


Figure 9.1.4: Facade study: vertical brick pier iteration

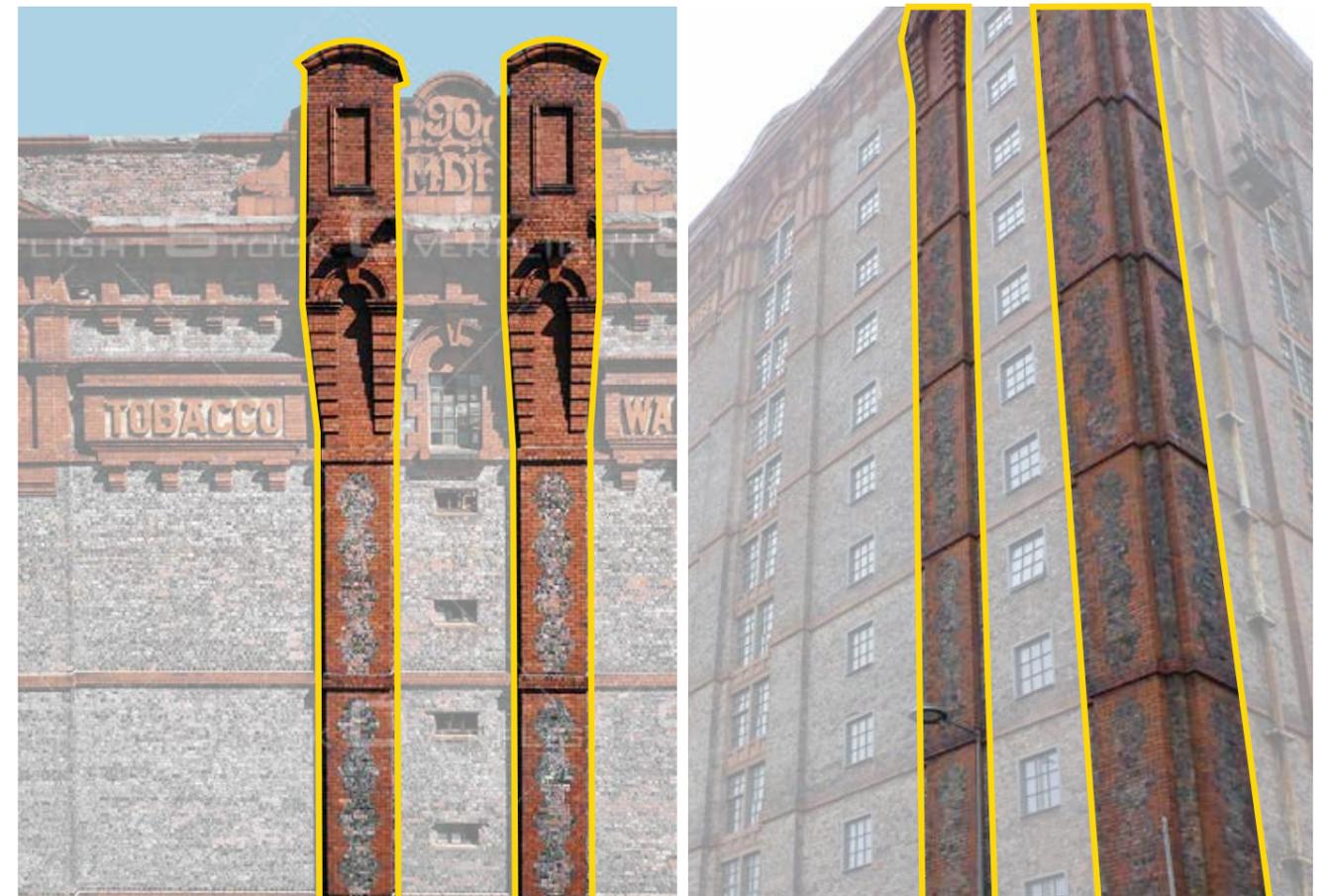


Figure 9.1.5: Tobacco Warehouse facade precedent

The proposed design for the stadium facade is both inspired by, and a departure from, the techniques of Victorian era warehouse construction. Traditional brick coursing was analysed to understand the most efficacious method of expression of the iconic Leitch truss associated with the Club (detail is expressed later in this section); the manner in which warehouse facades reach the ground and stop short at loading bays was used to establish the principles by which the stadium facade reaches the ground and stops short at portals; and the traditional dock palette of brick and iron is reflected in the coloration and materiality of the stadium palette, through modern means of fabrication and assembly.



Figure 9.1.6: Facade extent



Figure 9.1.7: Process view of west elevation



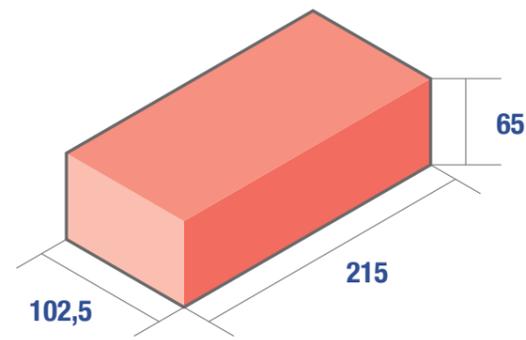
Figure 9.1.8: Tobacco Warehouse elevation

9.1.2 Brick Type

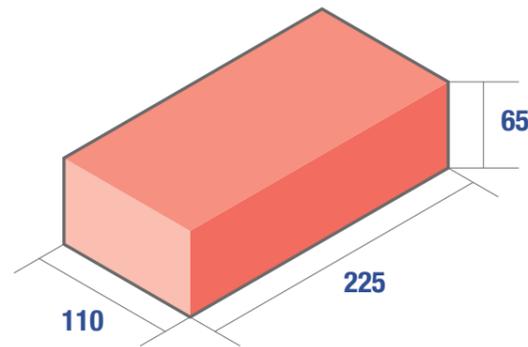
A critical part of the facade design development process has been applying the design principle of the facade representing, but not replicating, historic brick buildings in the World Heritage Site and Conservation Area specifically. Pre-application advice from HE/LCC steered the design development to ensure the facade reflects a feel of industrial heritage but that it can still be clearly read as a modern building.

Four of the most commonly used brick types comprised the design studies for pier dimensions and coursing. The brick types considered were: Farmstead Nori, Early Georgian, Modern, and Elizabethan.

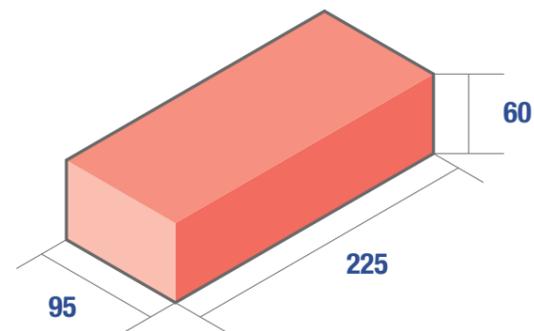
Farmstead Nori was chosen due its proportions being more 'square' in proportion than the other brick types studied, providing more flexibility in the coursing and the patternisation of the new façade.



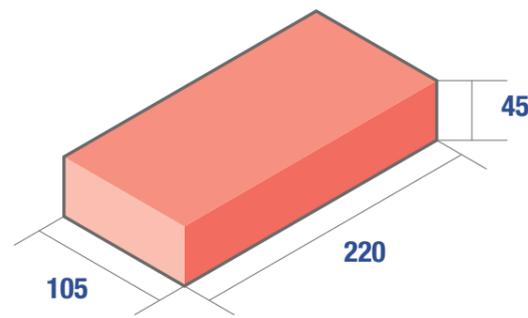
Farmstead Nori brick



Early Georgian brick



Modern brick



Elizabethan brick

Figure 9.1.9: Brick types

9.1.3 Brick Pier Dimensions

For the purpose of breaking down the scale of the facade to pedestrian proportions, and to rationalise the facade exterior and substructure for constructability considerations, four different brick pier widths were derived from brick type and coursing studies.

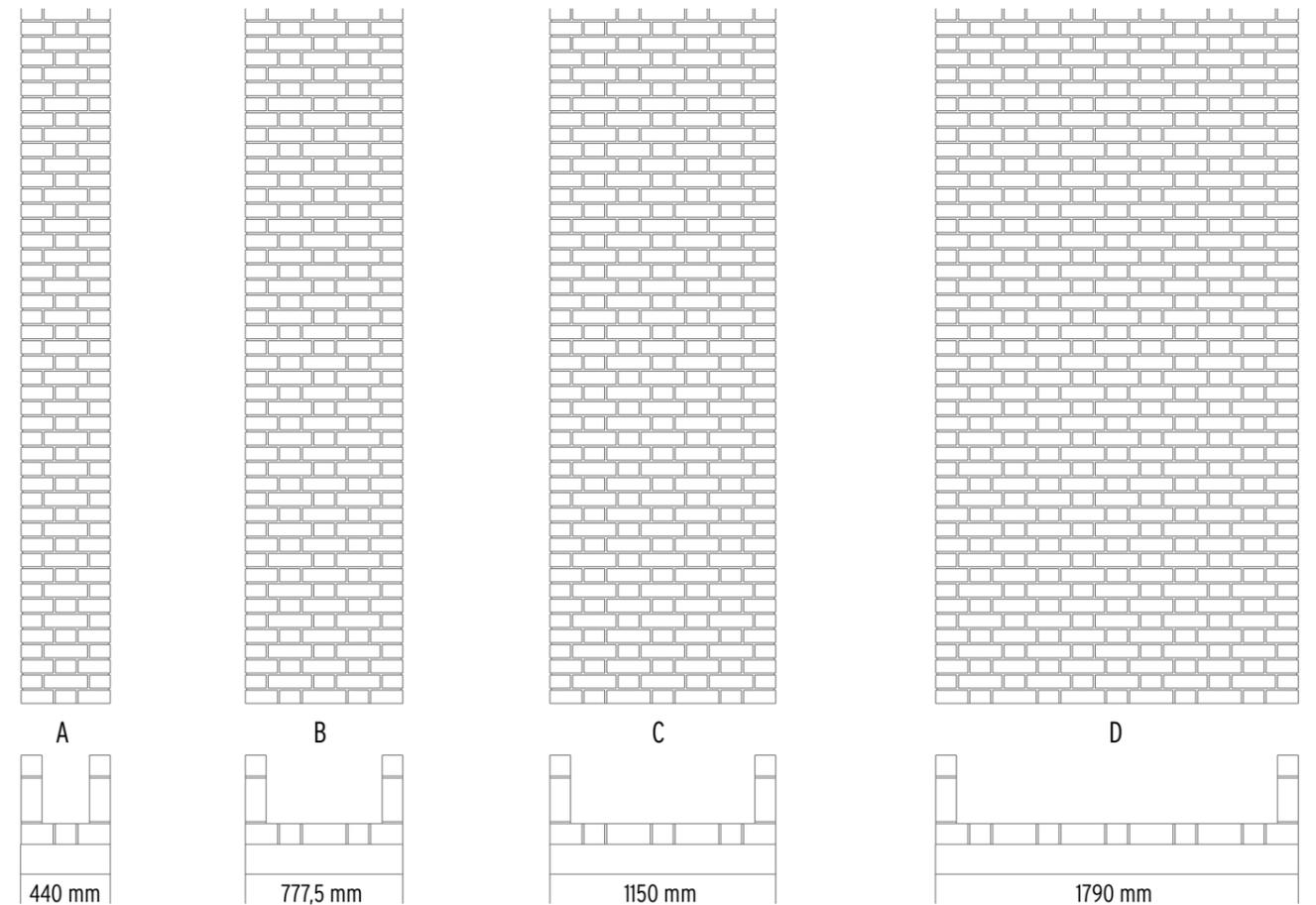


Figure 9.1.10: Brick pier dimensions

9.1.4 Brick Coursing

Five coursing options, modeled with each of the four candidate brick types, comprised the coursing study. Along with rationalising the brick pier widths, the primary purpose of the coursing study was to understand which coursing pattern could most readily be adopted to express the patternisation of the Leitch truss across the exterior of all sides of the stadium. The five course (bond) types studied were: Running, Common, Flemish, Stack, and English.

The Flemish Bond was adjudged most suited to expression of a pattern, given the uniform spacing of brick 'ends' within its coursing.

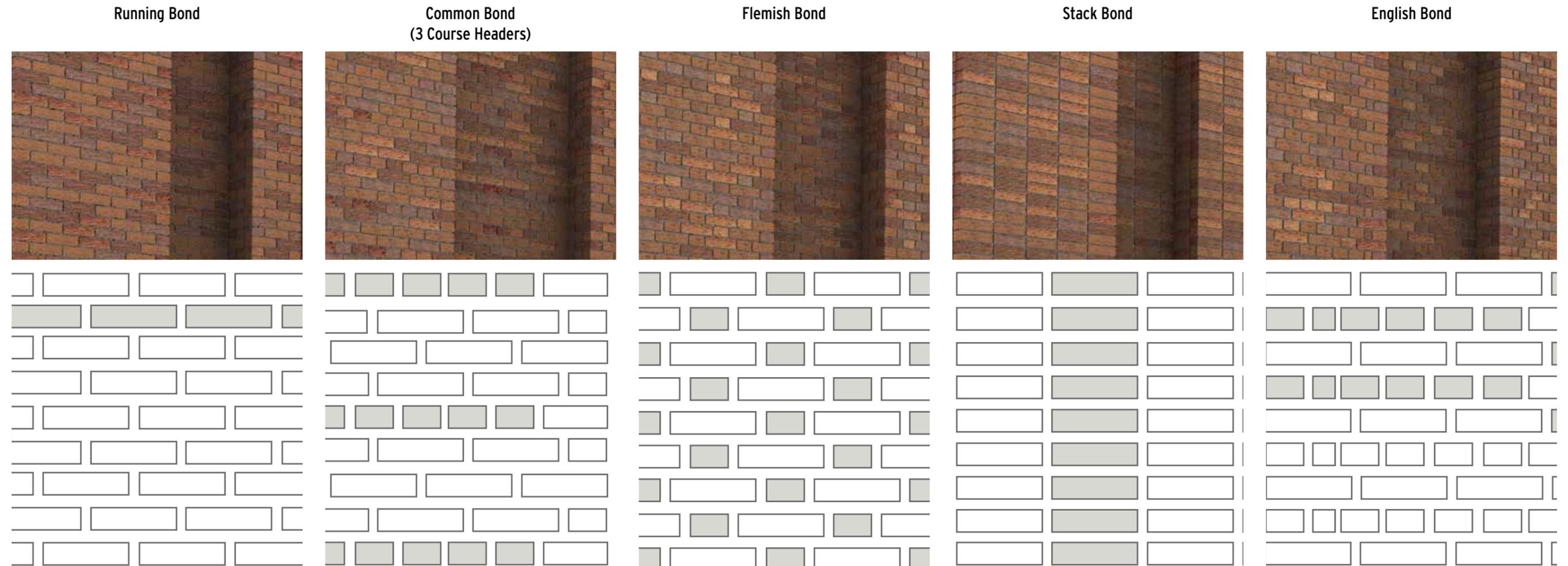


Figure 9.1.11: Brick coursing

9.1.5 Brick Colour: SDCA Precedents

The facades of key Grade II listed structures within the Stanley Dock Conservation Area were documented as precedents for the study of the brick colour of the new stadium facade. The below list is not comprehensive of all Grade II listed structures within the SDCA; rather, only structures that inform the facade colour study have been included here.

- 01. Hydraulic Engine House at Bramley Moore Dock
- 02. North Warehouse at Stanley Dock (Titanic Hotel)
- 03. Tobacco Warehouse
- 04. South Warehouse at Stanley Dock
- 05. Bonded Tea Warehouse
- 06. Waterloo Warehouse

Stanley Dock Conservation Area (SDCA) 

Grade II listed buildings documented for the study 

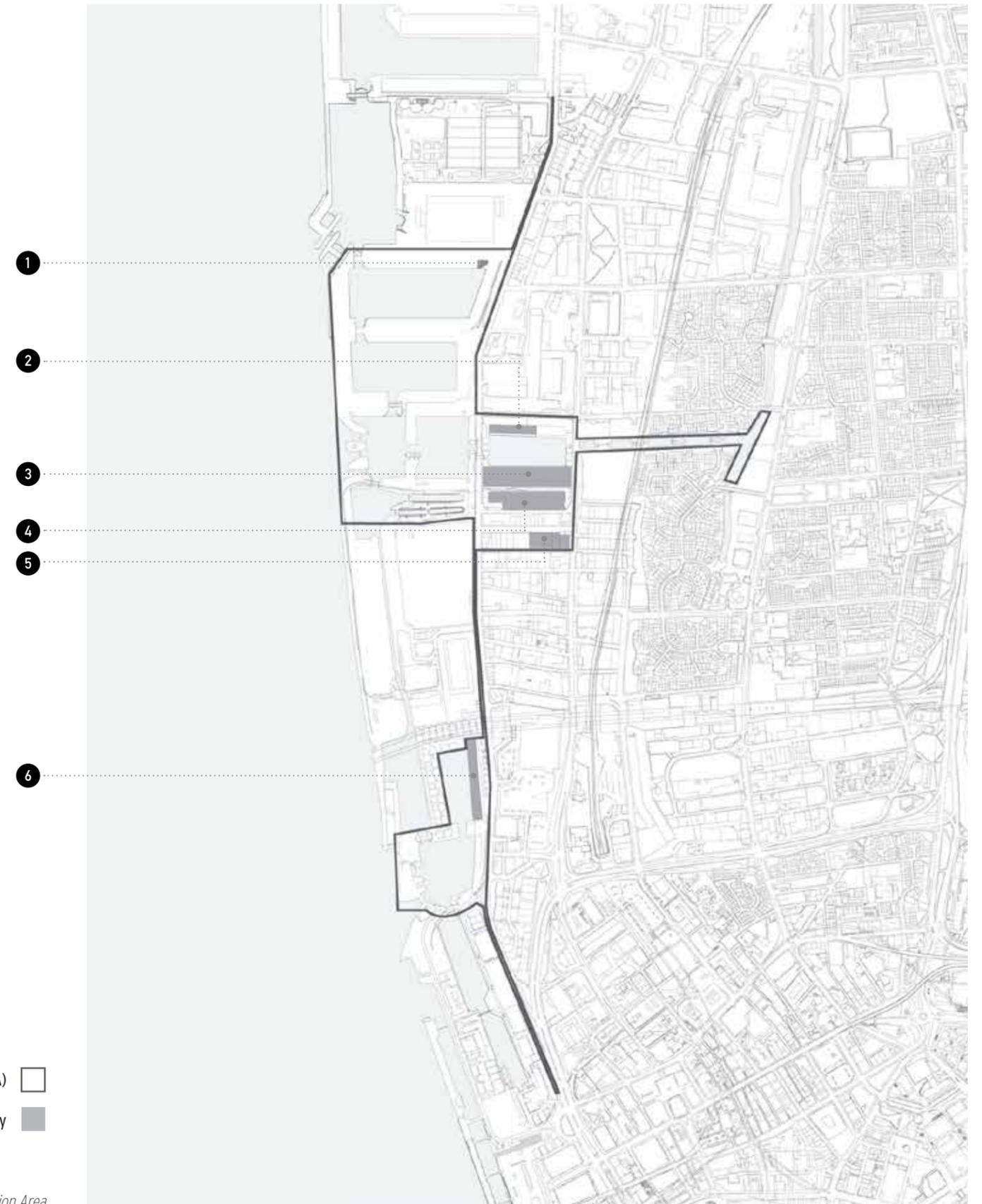


Figure 9.1.12: Stanley Dock Conservation Area

Hydraulic Engine House

The Hydraulic Engine House features a brick palette of pale brown hues with darker accent banding.

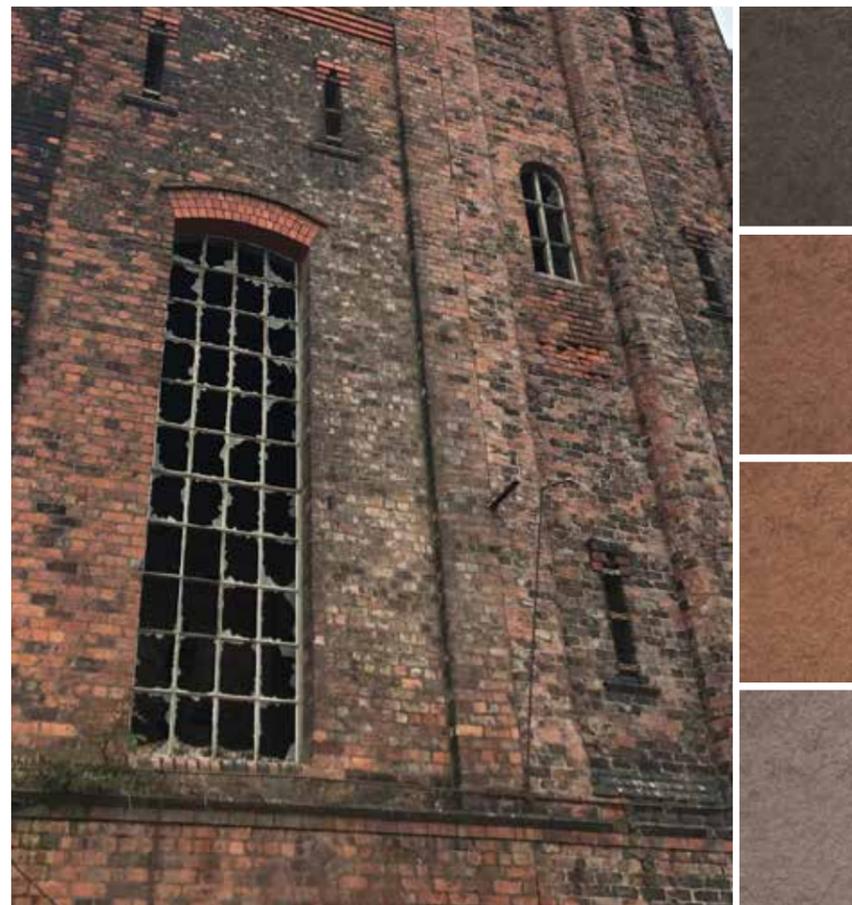


Figure 9.1.13: Hydraulic Engine House

Stanley Dock North Warehouse (Titanic Hotel)

The Titanic Hotel features a brick palette of orange and salmon hues.



Figure 9.1.14: The Stanley Dock North Warehouse (Titanic Hotel)

Tobacco Warehouse

The Tobacco Warehouse features a brick palette of primarily gray hues, with red brick used on piers and parapet flourishes.



Figure 9.1.15: The Tobacco Warehouse

Bonded Tea Warehouse

The Bonded Tea Warehouse features a brick palette of red, brown, and orange hues.

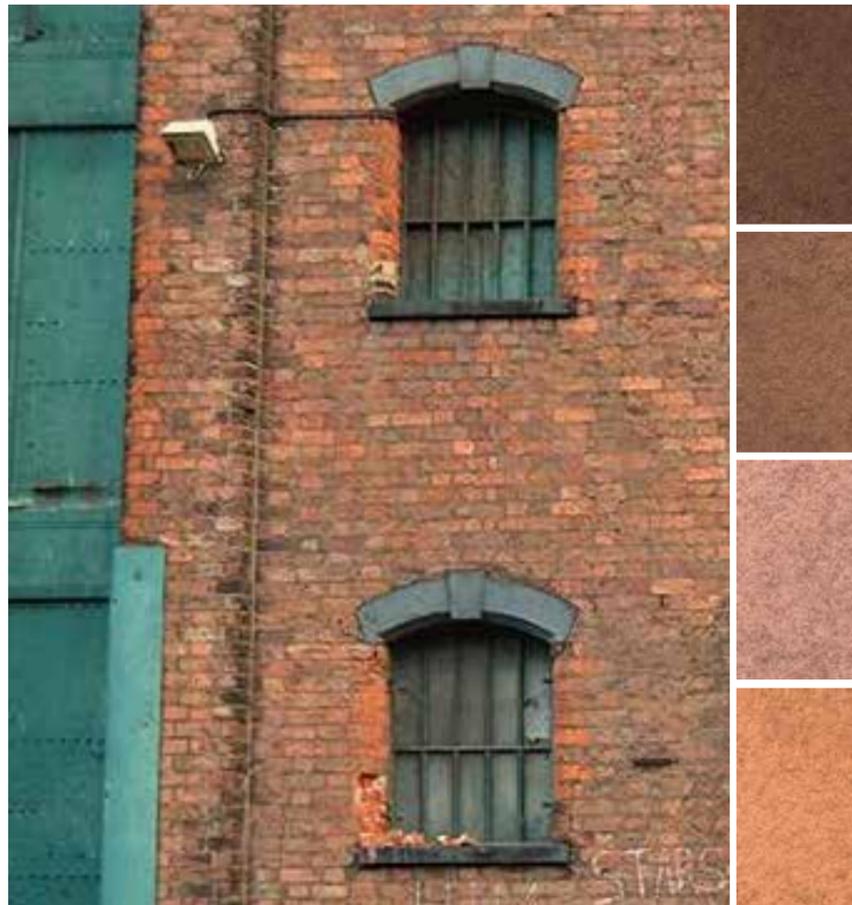


Figure 9.1.16: Bonded Tea Warehouse

Waterloo Warehouse

The Waterloo Warehouse features a brick palette of red and brown hues.



Figure 9.1.17: Waterloo Warehouse

South Warehouse

The South Warehouse features a brick palette of red and orange hues.

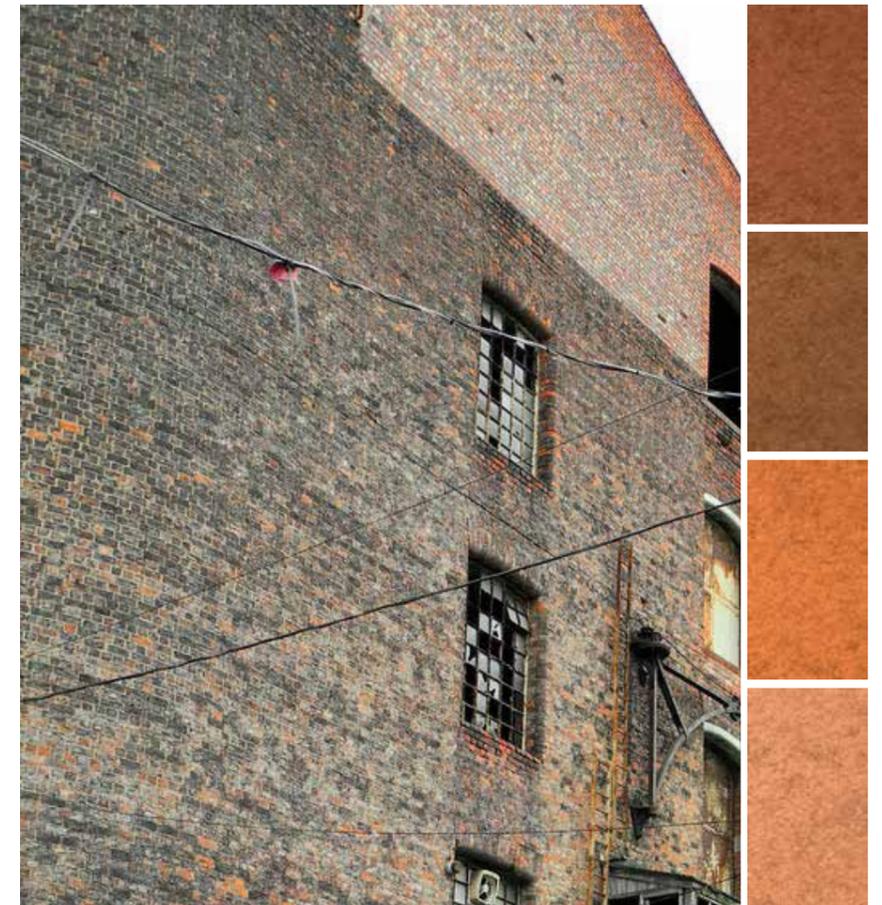


Figure 9.1.18: The South Warehouse at Stanley Dock

9.1.6 Brick Colour: Design Study

Pale Brown Brick

The stadium facade is rendered in a more pale brown colour brick, closer to the colour of the Hydraulic Tower on Bramley-Moore Dock.



Figure 9.1.19: Pale brown brick study - view from southeast of fan plaza



Figure 9.1.20: Pale brown brick study - view from northeast of fan plaza

Orange / Salmon Brick

The stadium facade is rendered in a more orange, salmon brick, closer to the colour of nearby buildings such as the Titanic Hotel.



Figure 9.1.21: Orange/Salmon brick study - view from southeast of fan plaza



Figure 9.1.22: Orange/Salmon brick study - view from northeast of fan plaza

Gray / Brown Brick

The stadium facade is rendered in a more gray, brown brick, closer to the colour of nearby buildings such as the Tobacco Warehouse.



Figure 9.1.23: Gray / brown brick study - view from southeast of fan plaza



Figure 9.1.24: Gray / brown brick study - view from northeast of fan plaza

Red Brick

The stadium facade is rendered in a more red brick, closer to the colour of nearby buildings such as the Waterloo Warehouse.



Figure 9.1.25: Red brick study - view from northeast of fan plaza



Figure 9.1.26: Red brick study - view from northwest of fan plaza

9.1.7 Brick Colour: Specification

A palette of predominantly red brick, with coloured shade differences varying from orange and brown, was chosen for the stadium. This palette was adjudged to best complement the Hydraulic Engine House (HEH) by way of contrast, effectively distinguishing the two structures from each other.

This was agreed with HE & LCC as part of the pre-application discussions.

The next steps are for the design team to work with potential brick suppliers to produce samples of the proposed brick colours, to be constructed on site prior to determination.



Figure 9.1.27: Selected brick colour option



Figure 9.1.28: Selected brick colour option

9.1.8 Facade Base: Grounding

The design intent for the brick base following warehouse precedents in the area is to provide a solid and robust grounding to the stadium as it appears to grow from the dock. It is then imperative to provide a thoughtful detail of how this brick base meets the ground while still allowing for the building to account for the multiple access points for a safe and functional event operation.

Precedents were studied within the Stanley Dock Conservation Area to help arrive to an informed decision, and engagement with HE and LCC through the design process provided a clear way forward.

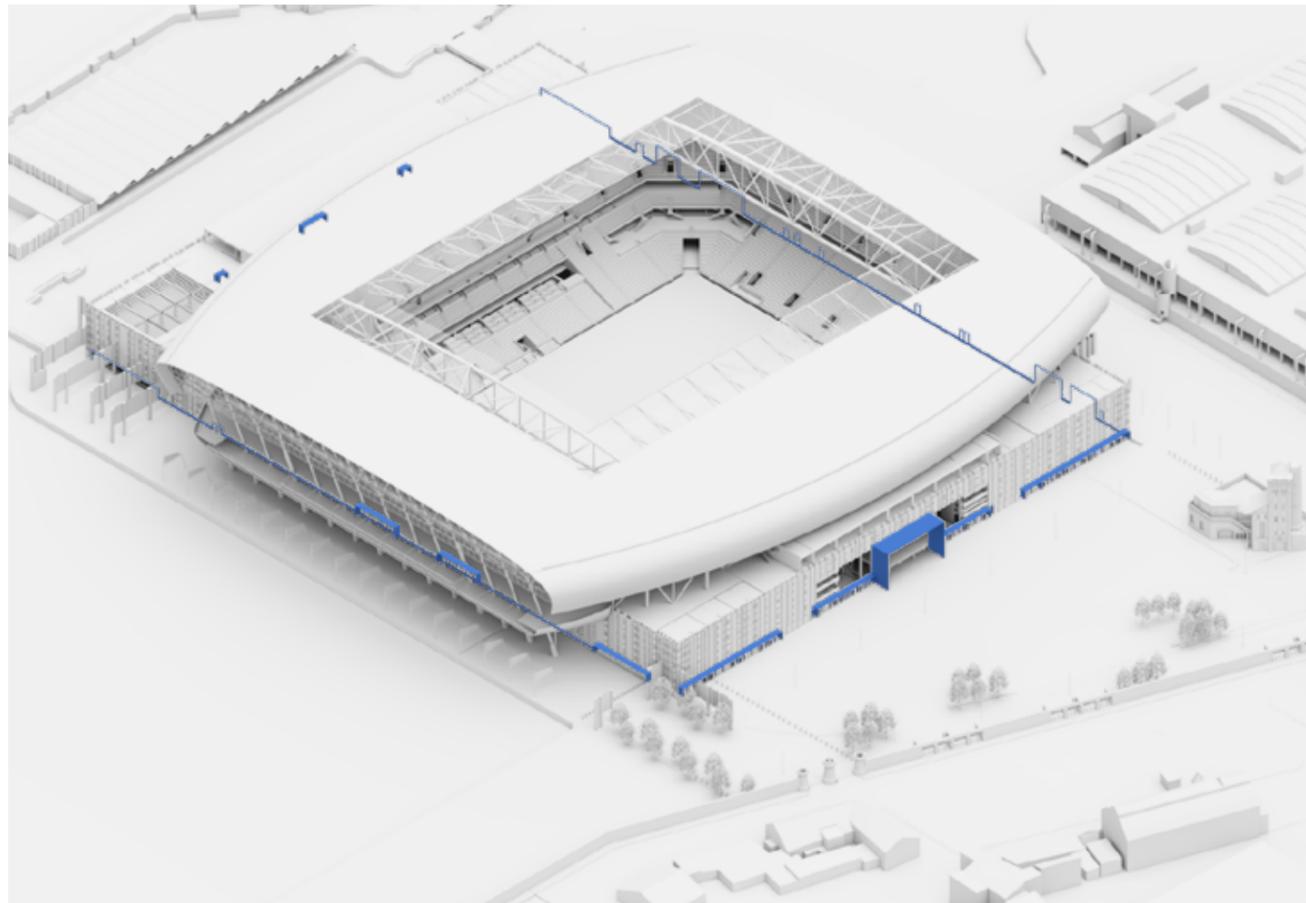


Figure 9.1.29: Diagram illustrating the portals / entrances and base of the building (in blue)



Figure 9.1.30: Reference image of Waterloo Warehouse, outlining the way the building touches the ground

9.9.9 Facade Base: SDCA Precedents

The facades of key Grade II listed structures within the Stanley Dock Conservation Area were documented for study as precedents for the way in which the facade meets the ground of the new stadium facade. The list is not comprehensive of all Grade II listed structures within the Conservation Area; rather, only structures that inform the facade basic study have been included here.

- 01. North Warehouse at Stanley Dock (Titanic Hotel)
- 02. Tobacco Warehouse
- 03. South Warehouse at Stanley Dock
- 04. Bonded Tea Warehouse
- 05. Waterloo Warehouse

Stanley Dock Conservation Area (SDCA) 
Grade II listed buildings documented for the study 

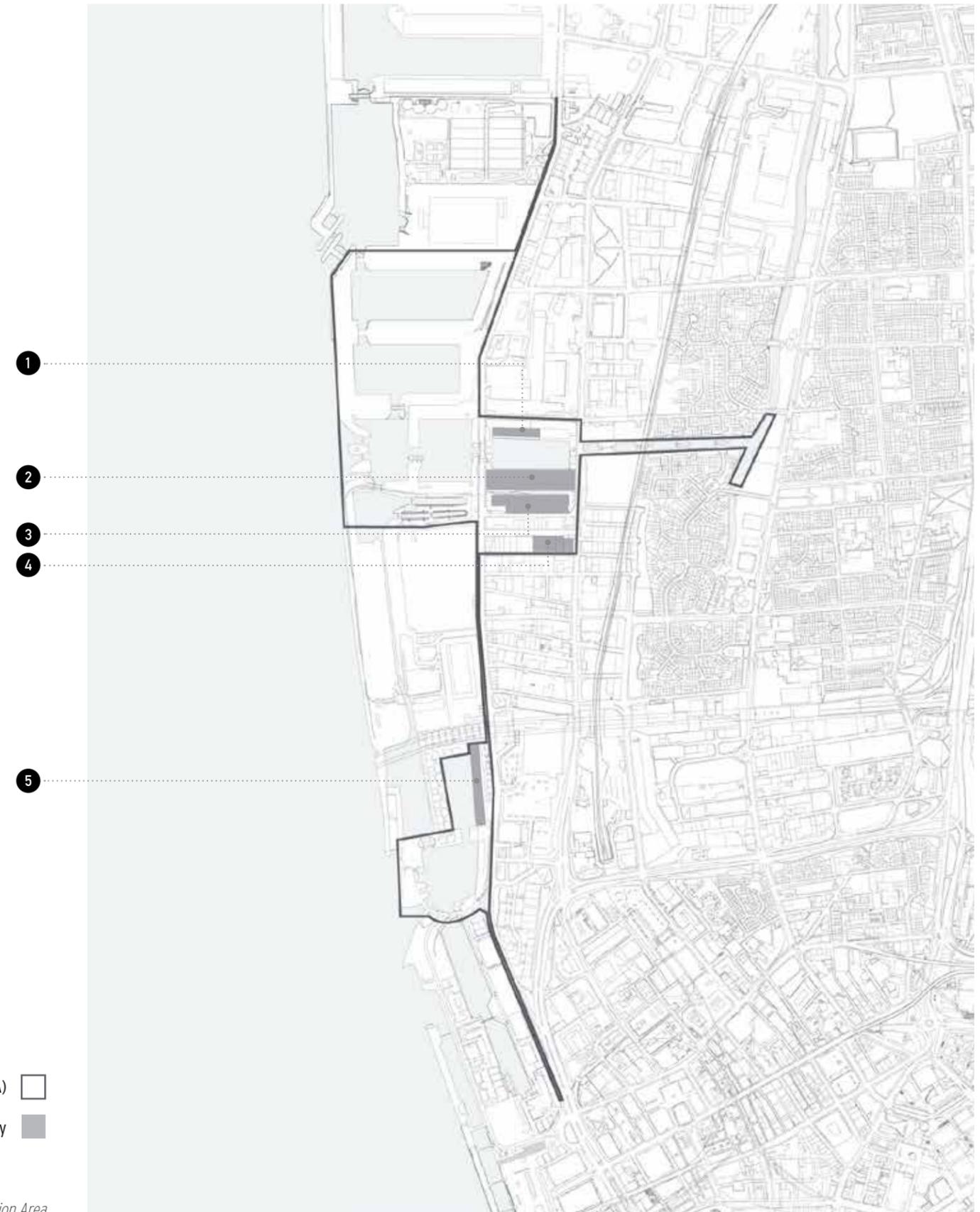


Figure 9.1.31: Stanley Dock Conservation Area



Figure 9.1.32: Image of the Titanic Hotel dock facade



Figure 9.1.34: Image of base of the Tobacco Warehouse dock facade



Figure 9.1.33: Image of the entrance to the Titanic Hotel

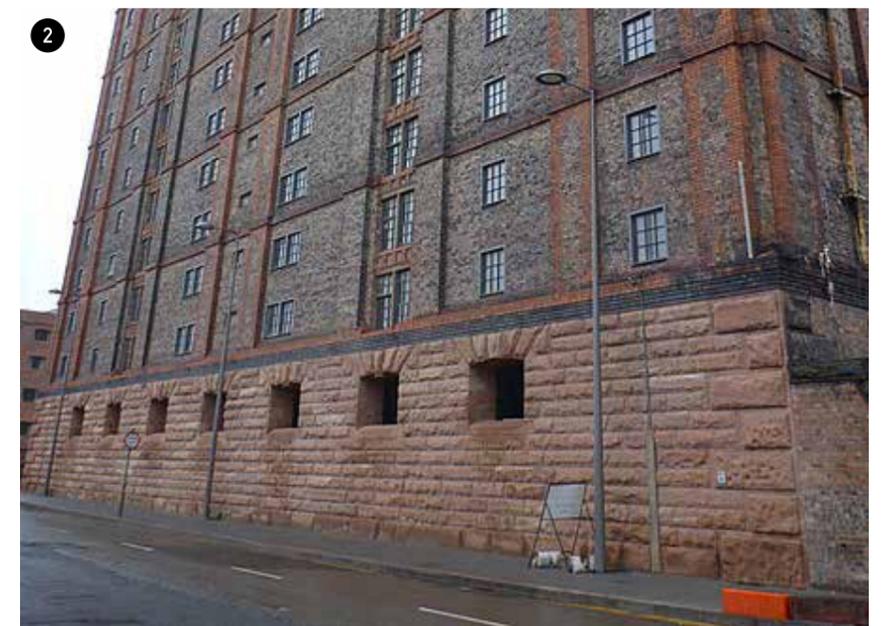


Figure 9.1.35: Image of base of the Tobacco Warehouse



Figure 9.1.36: Image of the South Warehouse at Stanley Dock



Figure 9.9.38.: Image of the Bonded Tea Warehouse



Figure 9.1.40: Image of the Waterloo Warehouse



Figure 9.1.37: Image of the South Warehouse at Stanley Dock



Figure 9.1.39: Image of the Bonded Tea Warehouse



Figure 9.1.41: Image of the Waterloo Warehouse

9.1.10 Facade Base: Grounding Study

The following facade base options were explored and presented to HE and LCC during the pre-application process.

Recessed Base

The principle is for a raised, recessed metal base to mediate between the varying site levels and brick facade. This option was discarded by the Club because the raised base was perceived by HE & LCC to undermine the solidity of the brick facade.

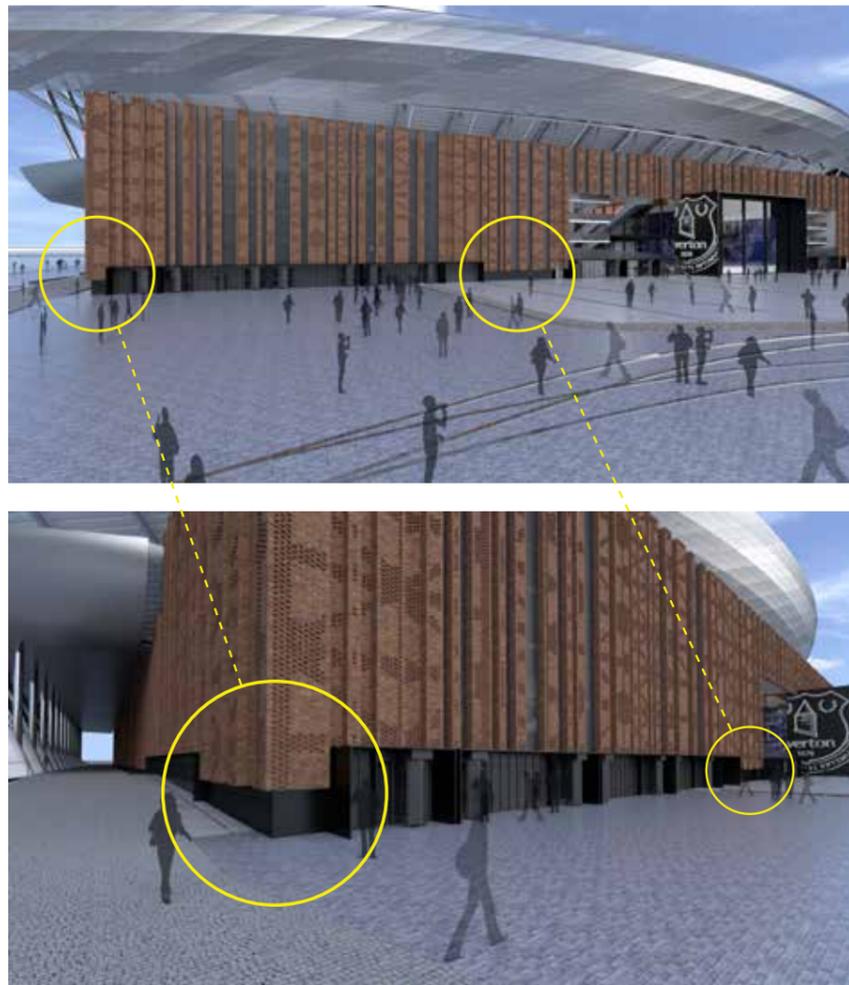


Figure 9.1.42: Visual showing a recessed base iteration throughout the whole building

Brick Base & Recessed Base

The 'hybrid' approach is for the brick to reach the ground at the north and south ends of the facade, while remaining raised at the east and west facades. This option was also discarded by the Club due to HE & LCC's view that there was a lack of solidity of the brick facade in all locations.

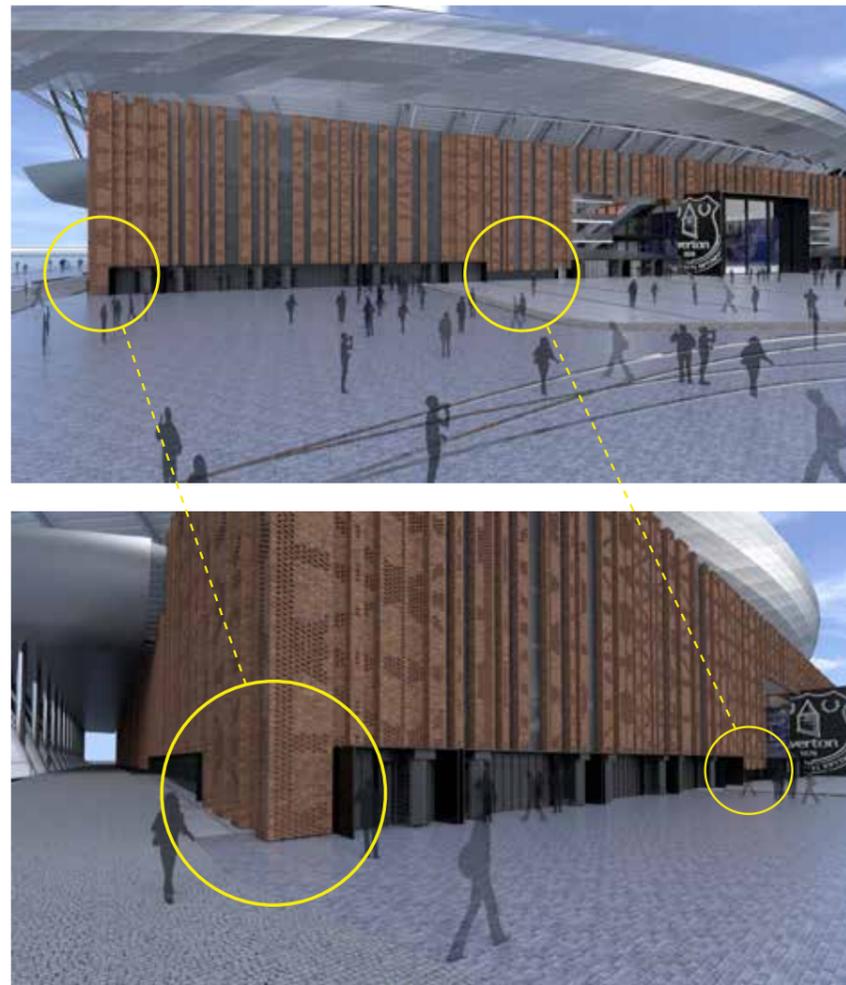


Figure 9.1.43: Visual showing a 'hybrid' iteration of brick and recessed metal base

Brick Base

The principle for a brick base is to retain the continuous brick facade down to the ground, and raise it above the ground only where portals are required in the facade. This option was chosen for its perceived solidity, and for its consistency with SDCA precedents, in which the facades of warehouse structures are typically raised to create openings at loading bays.

This was HE & LCC's preferred approach.

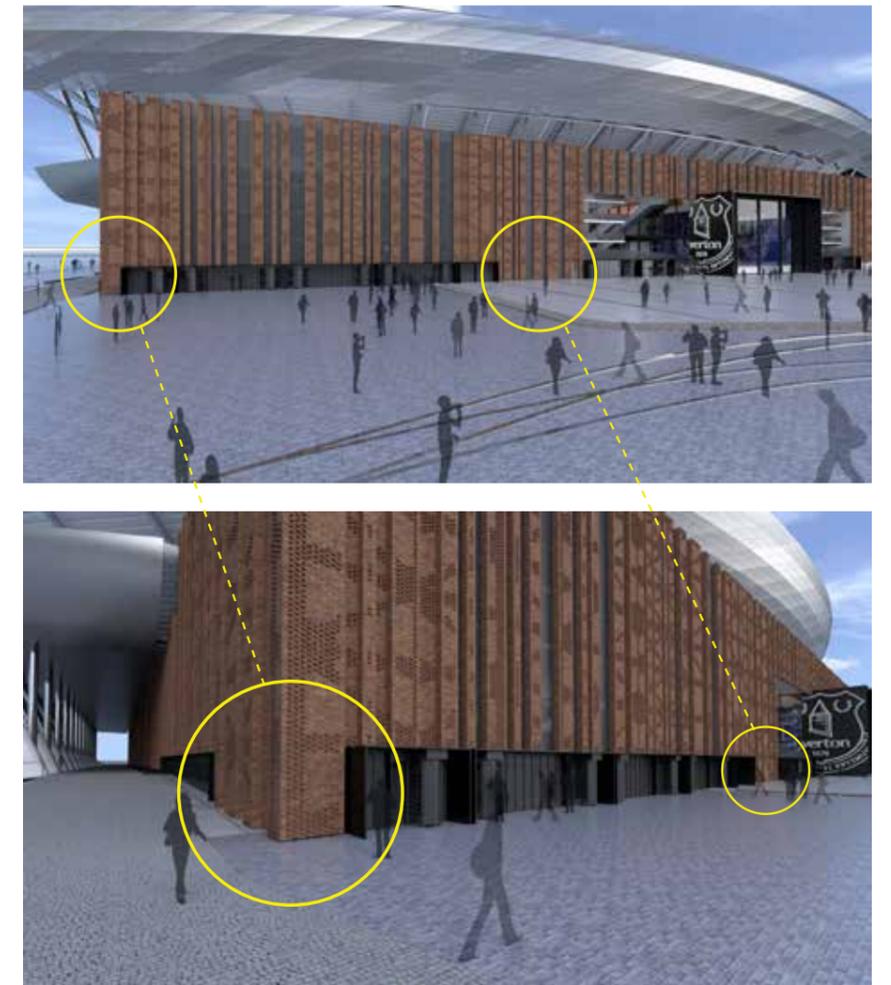


Figure 9.1.44: Visual showing a continuous brick facade down to the ground

9.1.11 Facade Metal Panel

Metal panels have been proposed to pair with the brick as a traditional material which is to be inserted between the brick piers, set back from the brick face to enhance the presence and robustness of the brick piers and providing some depth to the facade.

In order to empower the contrast to the brick these panels are proposed to be perforated to allow for air and light to permeate them appearing in contrast more lightweight than the brick piers. Subsequent sections will describe the use of these perforations to describe a pattern in the facade as shown on *Figure 9.9.45*.

Several different metal finishes were considered being anodized aluminium the material best suited to sustain the environmental conditions of the site and provide the desired aesthetics of the facade.

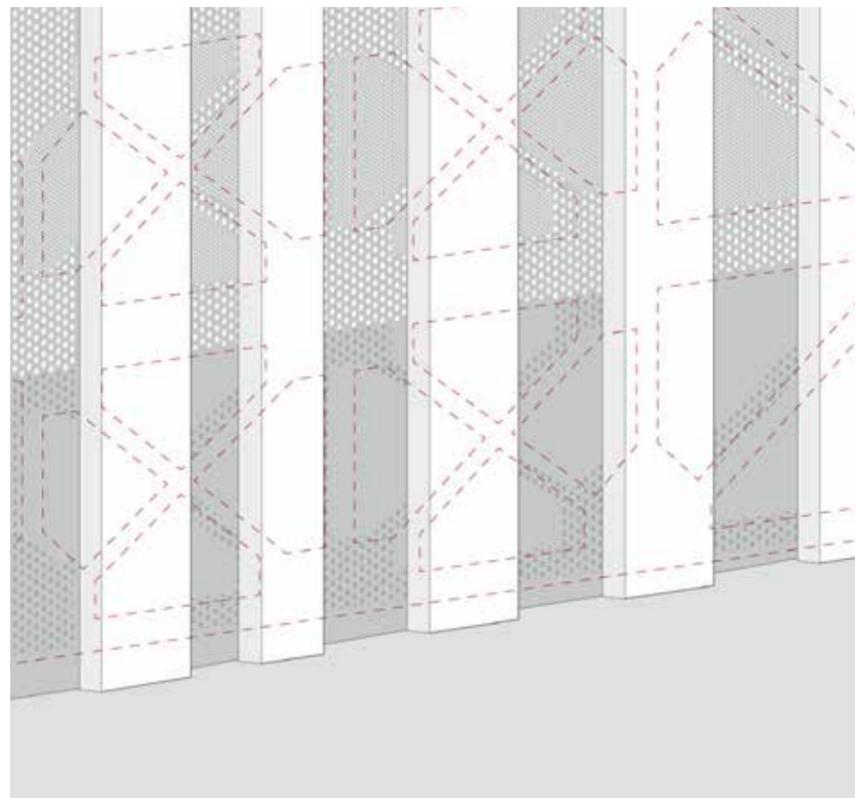


Figure 9.1.45: Red dotted overlay of Leitch Truss, illustrating the varying perforation sizes on the panels

9.1.12 Facade Metal Panel: Dimensions

Similarly to the brick pier modulation, the perforated metal panels have been rationalized and modulated considering the recommended maximum panel dimensions, for ease of construction. A divisible module identified up to five different metal panel widths to combine with the brick pier modules and provide the desired balance between facade dynamism and repetitive rhythm.

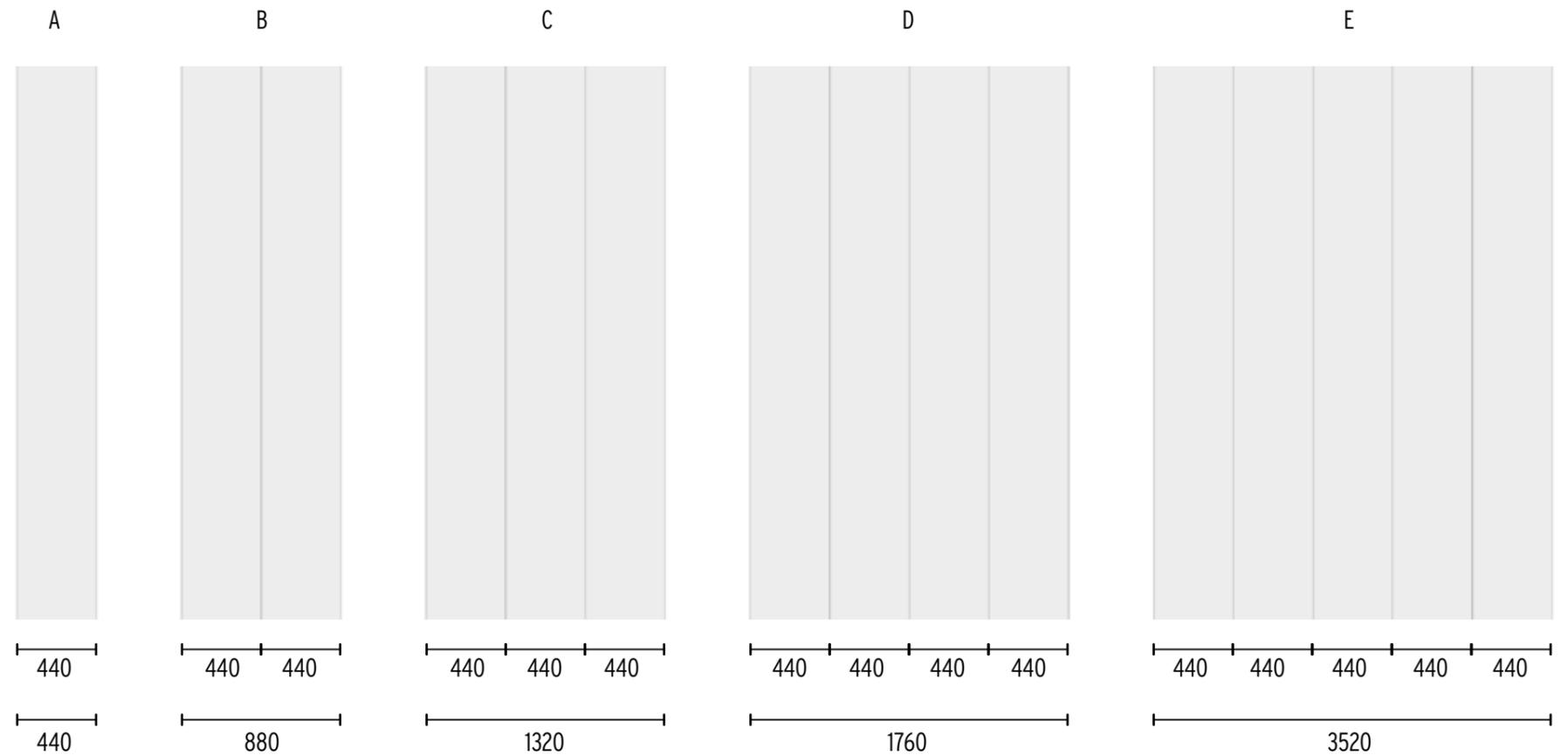


Figure 9.1.46: Metal panel dimensions

9.1.13 Facade Metal Panel: Colour Study

Several options were considered and presented to HE and LCC for discussion.

Light Gray Metal Panel Colour

The metal panel fill between piers is rendered as a light gray. This option was discarded, as the light gray colour was adjudged to stand out from the brick piers.



Figure 9.1.47: Light gray metal panel

Medium Gray Metal Panel Colour

The metal panel fill between piers is rendered as a medium gray. This option was discarded; whilst it was considered an improvement over the light gray metal panel colour, the medium gray metal panel colour was adjudged to not offer enough of a contrast with the brick piers.



Figure 9.1.48: Medium gray metal panel

Dark Gray Metal Panel Colour

The metal panel fill between piers is rendered as a dark gray. This option was chosen, as it was considered visually subordinate to the brick piers.

This was the preferred choice of HE and LCC.

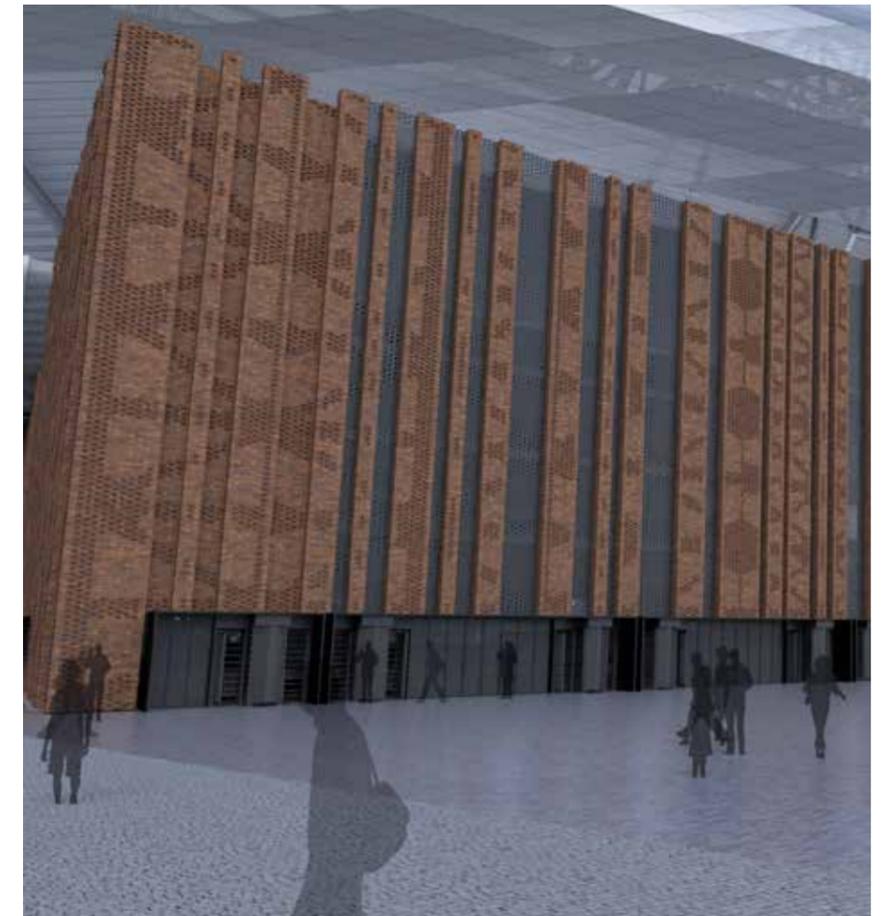


Figure 9.1.49: Dark gray metal panel

9.1.14 Leitch Truss Pattern

In a nod to one of the iconic design legacies of Goodison Park, the Leitch truss, an abstracted version of the pattern will be articulated in the facade of new stadium, through the different facade materials.



Figure 9.1.50: Images of Goodison Park's Leitch Truss (top and bottom)

9.1.15 Leitch Truss Pattern: on Brick

Within the brick the pattern would be achieved by selecting individual bricks that collectively make up the whole pattern. Those selected bricks would have a different, darker red hue to enhance this contrasting pattern. As noted in previous sections the Felmish coursing was selected to better allow for this pattern representation within the brick facade.

The brick detailing to provide further richness to the facade is also present in several other listed buildings within the SDCA which have been referenced through the design process, such as the Tobacco Warehouse.

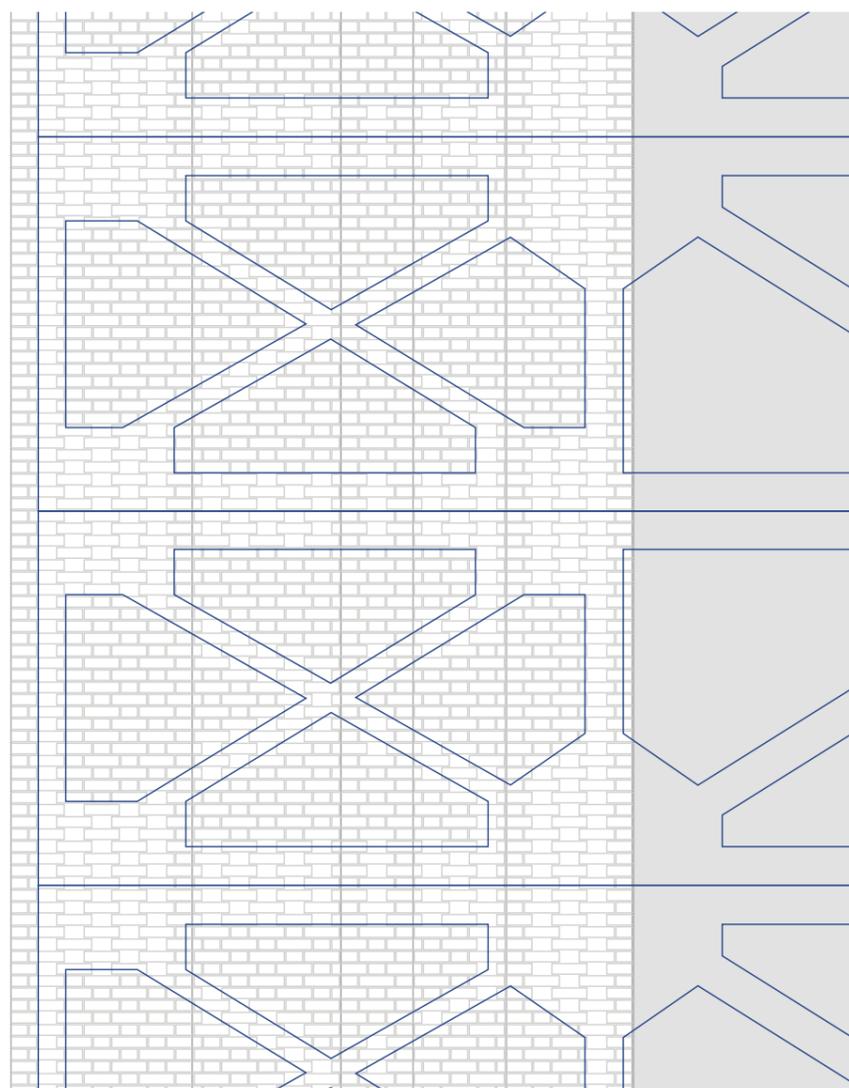


Figure 9.1.51: Linework overlaying the Leitch Truss pattern on the facade

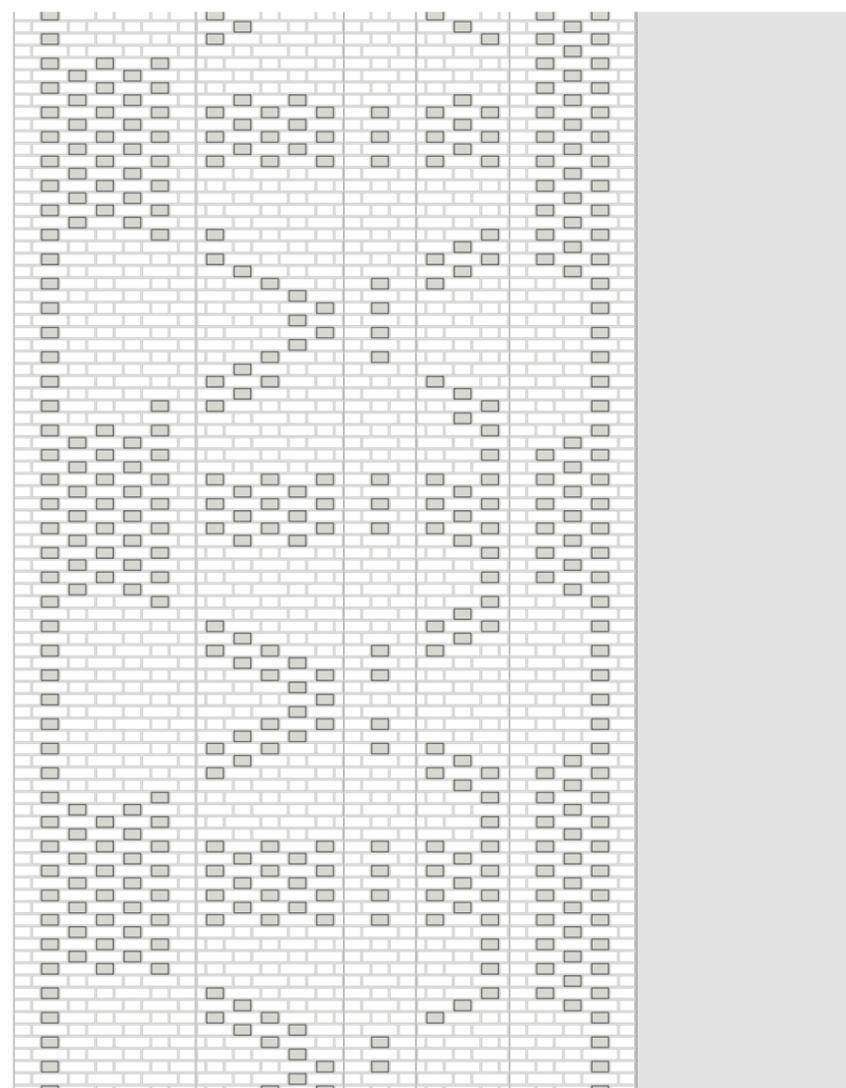


Figure 9.1.52: Linework and shadowed bricks illustrating (in gray) selected bricks that conform the Leitch Truss pattern

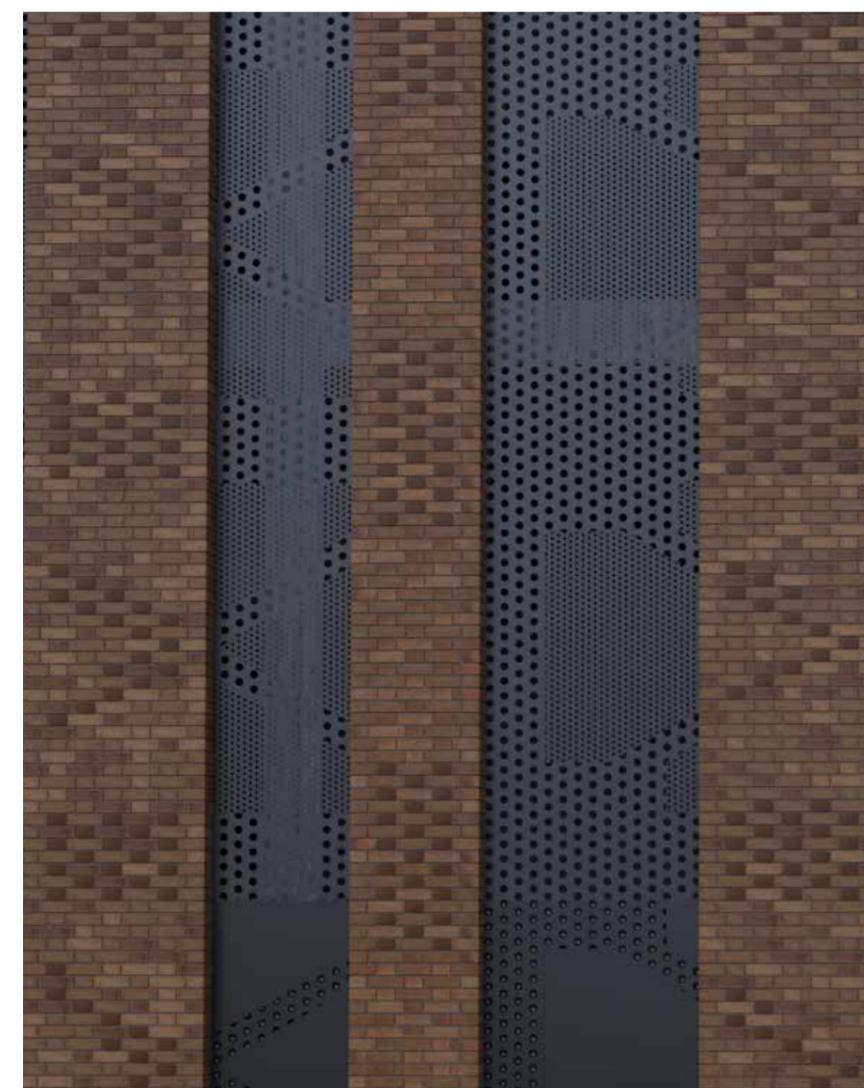


Figure 9.1.53: Visual illustrating selected bricks and the different perforations in the metal panels, creating an overall Leitch Truss pattern on the facade

9.1.16 Leitch Truss Pattern: on Metal Panel

To provide a successful representation of the Leitch truss on the facade this pattern is to be represented also in the metal panels. This is achieved by providing perforations of different sizes to illustrate those areas which represent truss members (larger perforations) from those which represent voids (smaller perforations). Similarly to the brick pattern, confirmation of exact perforation sizes will be better determined by visual mock-ups of these areas.

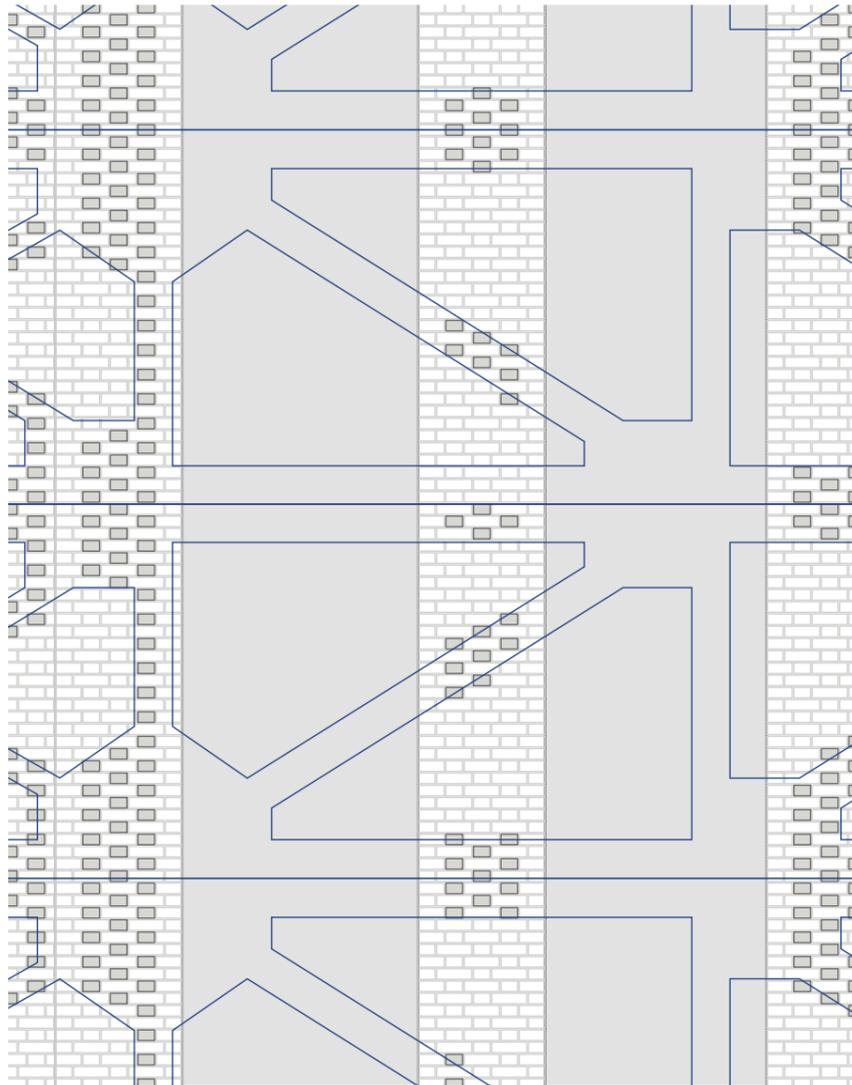


Figure 9.1.54: Linework overlaying the Leitch Truss pattern on the facade

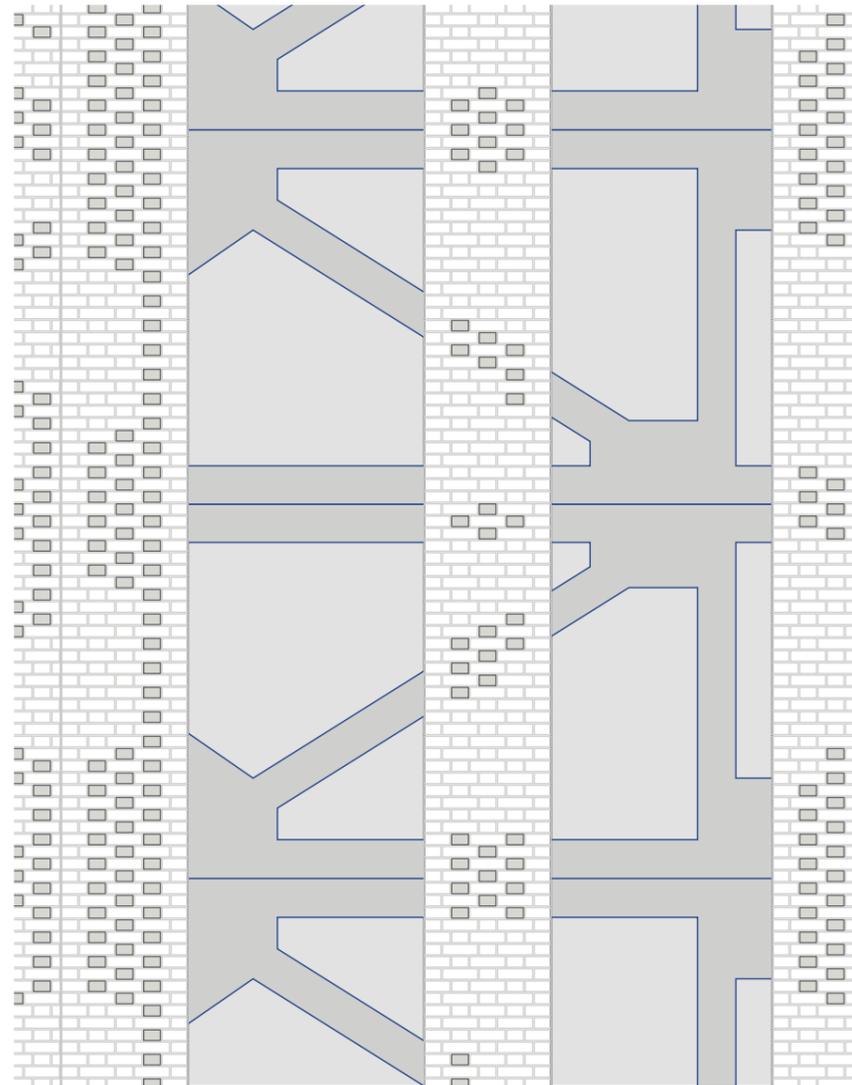


Figure 9.1.55: Linework illustrating (in grey) different perforation metal panel sections that conform the Leitch Truss pattern

9.1.17 Leitch Truss Pattern: on Glazing

Along the west facade on level 02 the perforated metal panel between the brick piers is replaced with glazing units enclosing the conditioned hospitality spaces beyond them. To maintain the intent of the Leitch truss to read through the full facade as an homogeneous gesture through all materials, a frit pattern is proposed within the insulated glass units.

9.1.18 Leitch Truss Pattern: on Facade Base

In order to provide the adequate functionality and safety in a building which will be visited and occupied by large numbers of supporters within a short period of time, and also bearing in mind it is intended to allow year round access to the public within the site, the expression of the truss has to be modified at ground level at the metal panels to avoid the potential of climbing the facade. In order to prevent this the design proposes a datum which ties the access portals which occur at different elevations throughout the facade due to the slight ground slopes below which the pattern in the metal panels is captured through dimples on a solid metal panel. These measures will prevent supporters from reaching the areas where metal panel perforations are present.

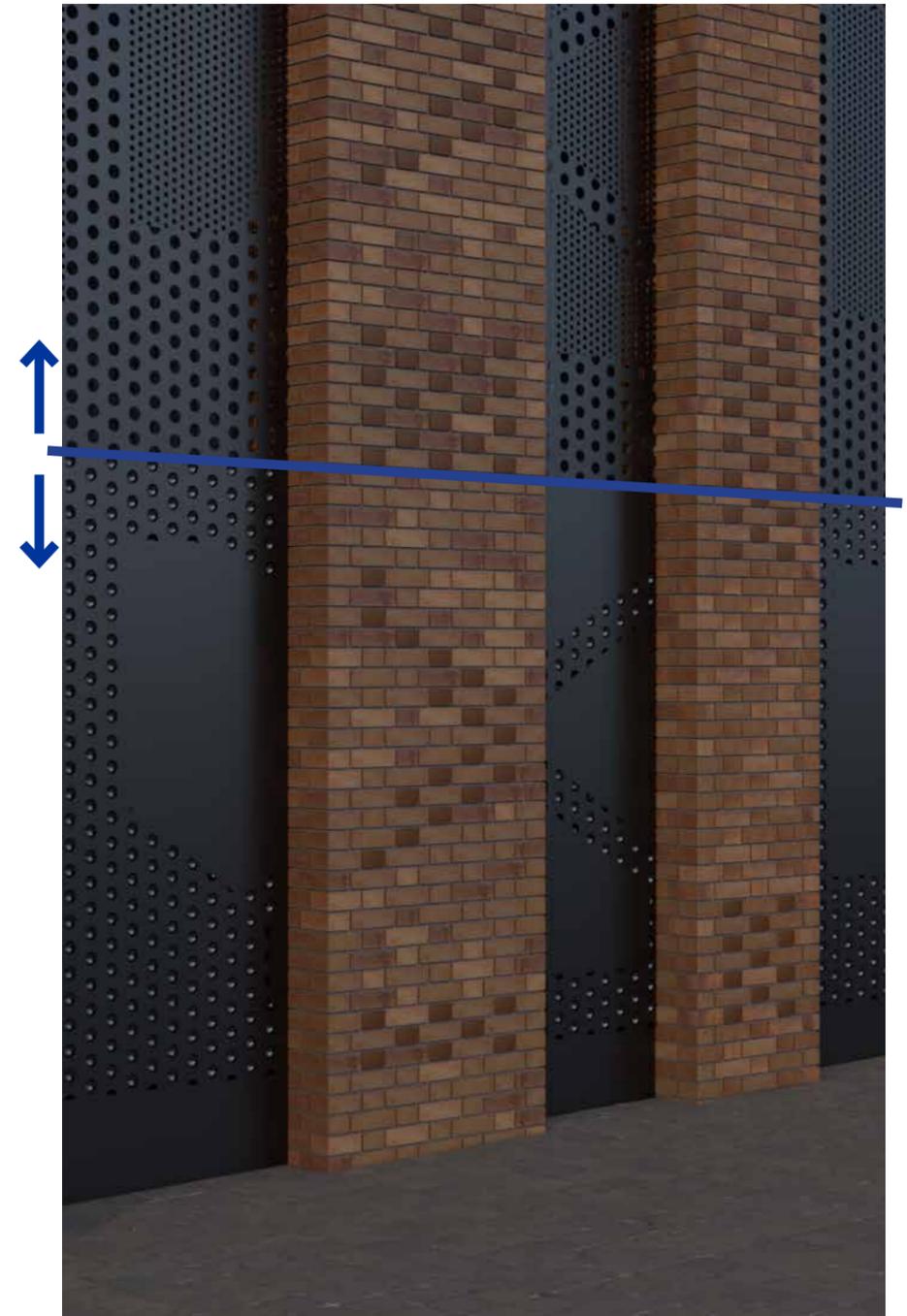


Figure 9.1.56: Visual illustrating the vertical brick piers, and different representation of the Leitch truss pattern on the metal panels when they reach ground level



Figure 9.1.57: East facade close-up

9.1.19 Metal Portals

The brick and metal infill facade is intended to go to the ground to solidly sit the building on site as described in earlier sections. In order to provide the required access and egress into and out of the stadium portals have been proposed to frame these access points and chosen to be metal to align with the traditional material language. These portals are proposed as black metal and provide a solid base for the brick to sit on when not reaching the ground. The darker expression of the metal portals, similarly to the perforated metal panels, were selected to enhance the presence of the brick.

As a larger expression of this metal access the team store acts as a main entrance centered on the east facade open to the fan plaza. In similar fashion this team store is defined by a black metal portal which bridges the scale between the smaller access portals and the stadium mass.

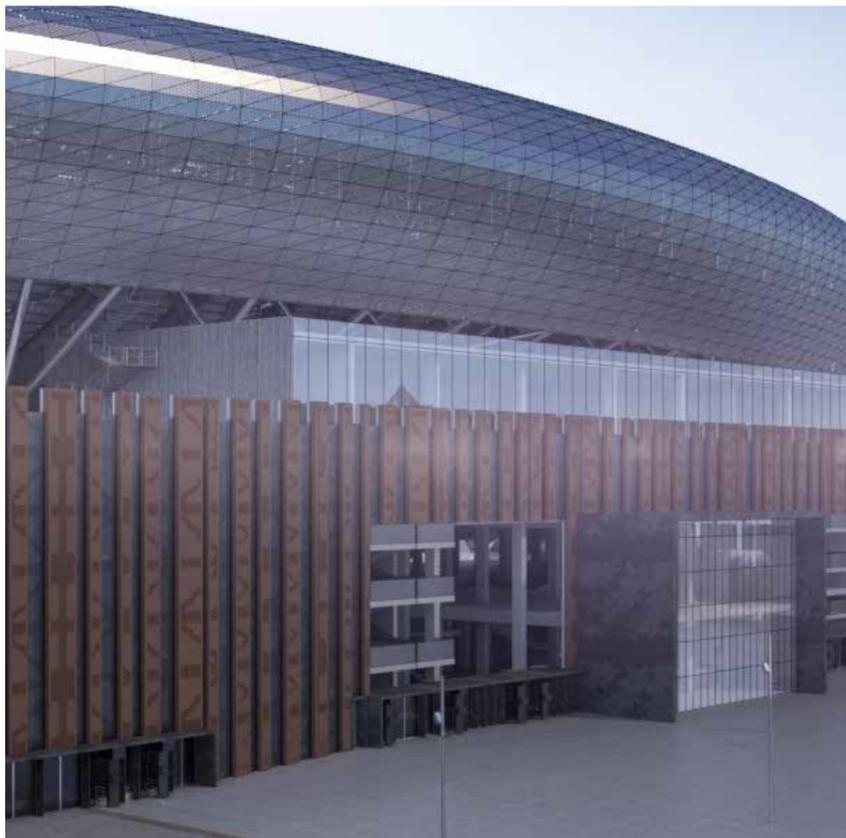


Figure 9.1.58: East facade showing the metal portals at ground level and the team store portal

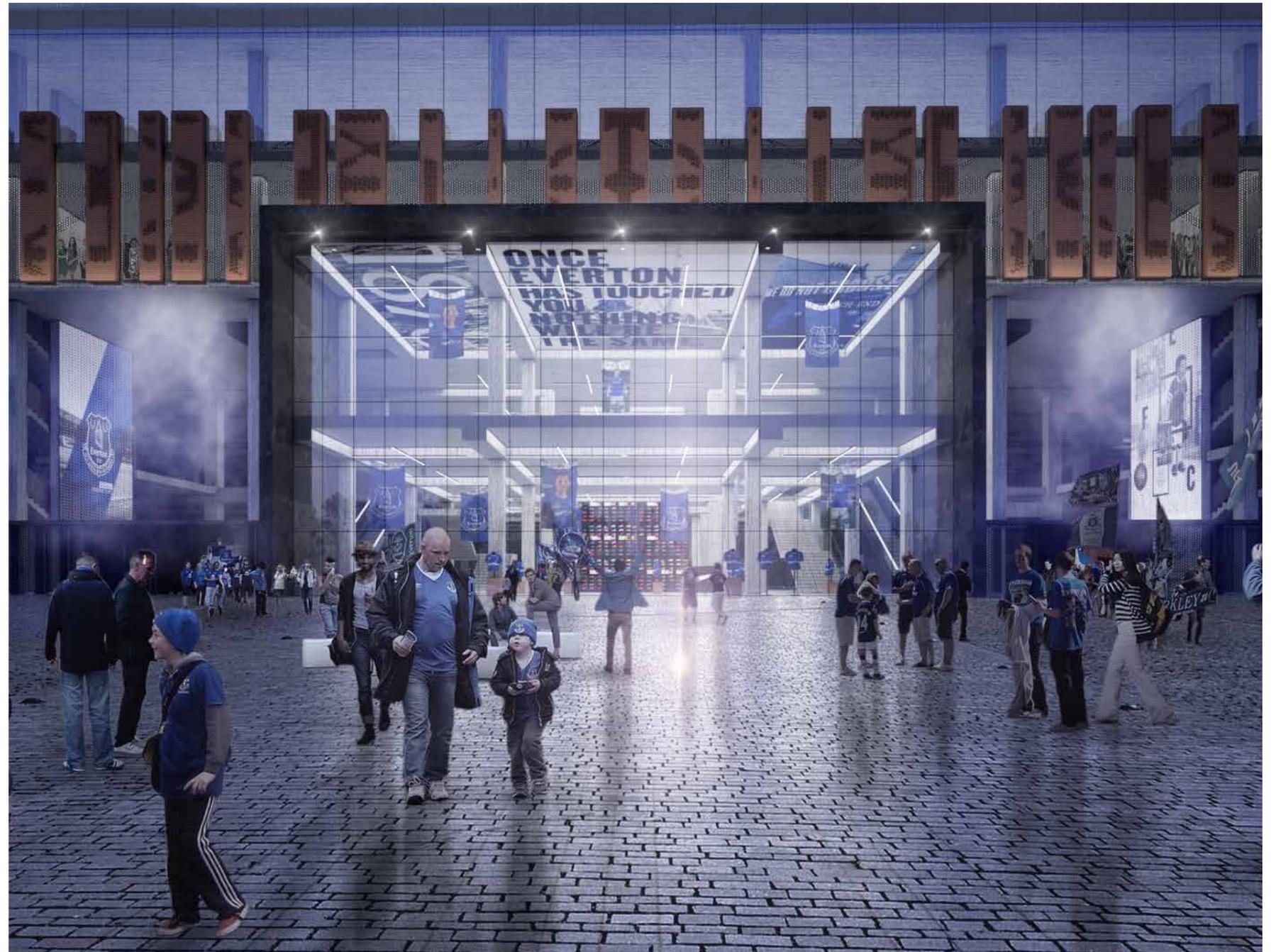


Figure 9.1.65: Front visual of the Team Store (landscaping shown is not representative of final design)