Crystal Palace FC

DESIGN AND ACCESS STATEMENT

Selhurst Park Stadium - Main Stand Development

02 February 2018

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CONTENTS

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1.0 Introduction

1.0 Introduction

1.1 Design and Planning Team

This Design and Access Statement (DAS) forms part of a planning application for the redevelopment of Selhurst Park, home of Crystal Palace Football Club (CPFC). It has been prepared on behalf of Crystal Palace Football Club, the Applicant.

The DAS has been prepared to meet the requirements of section 42 of the Planning and Compulsory Purchase Act (2004) and the structure and content of the DAS has also been informed by Department for Communities and Local Goverment (DCLG) "Guidance on Information Requirement and Validation" (March 2010) and CABE, "Design and Access Statement: How to write them" (2006).

The core design consultants have been assembled by CPFC, and has a wealth of professional experience of delivering similar redevelopment projects:

Client
Crystal Palace Football Club

Architect and Principal Designer
KSS

Structural Engineers /Transport
Mott MacDonald

Cost Consultant
Core 5

Planning Consultant
Martin Robeson Planning Practice

Building Services Engineers and BREEAM Consultant
ME Engineers

1.2 Club Aspirations

Selhurst Park, the application site, has been one of the epicentres for South London football for over 90 years. CPFC wishes to maintain the football heritage within the borough of Croydon and in the locales of Norwood, Selhurst and Thornton Heath as well invoking it's historical roots in nearby Sydenham.

Crystal Palace is a bold and proud football club, supported by some of the most loyal and vocal fans in the Premier League. The club's desire for a striking new development at Selhurst Park, for something that they and the community can be proud of, is overwhelming The club wanted to reflect this in a bold design by looking towards their own history and enhancing the atmosphere, already one of the best at a Premier League ground.

The existing stadium capacity is currently significantly lower than many Premier League and Championship clubs. Many of it's facilites are in need of improvements. CPFC recognised that in order to be financially competitive and sustainable, and in order to provide its players staff and supporters with match day facilities commensurate with its Premier League status, the Club should expand the existing Selhurst Park stadium.

As part of the initial feasibility study, the viability of redevelopment of each of the four existing stands at Selhurst Park stadium was considered. Elements of that analysis is included within this report. Through this process, CPFC identified that the focus of the development should be confined to the Main Stand only, incorporating some minor works to the adjacent stands.

The client brief is to significantly improve and increase matchday facilities in the ground, introducing a further 6,000 general admission seats and 2,000 hospitality seats, bringing the total capacity for the new Main Stand to 13,500. The overall capacity of Selhurst Partk would thereby increase from c.26,000 to approximately 34,000

1.3 External Stakeholder Consultations

In developing the proposals, consultation meetings / presentations have been conducted with CPFC's own internal stadium management, hospitality, operation and catering teams, and the following external stakeholders:

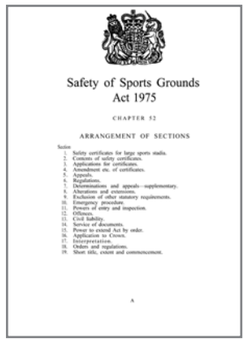
- Greater London Authority
- London Borough of Croydon Strategic Policy and Planning Department
- Transport for London
- Secure by Design
- Counter Terrorism Meeting
- Places Review Panel
- London Borough of Croydon Planning Committee
- Public Exhibition

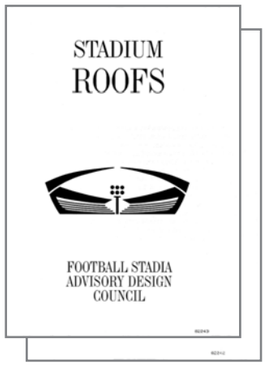
1.4 Design Standards and References

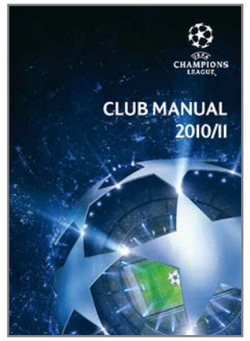
Stadia are complex technical buildings, and reference has been made to the following key stadium design legislation and design guidance documentation in preparing the redevelopment proposals:

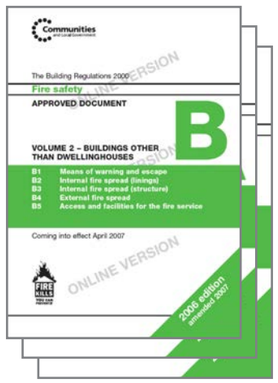
- Safety at Sports Ground Act 1975
- DCMS Guide to Safety at Sports Grounds 4th and 5th Editions (known as the "Green Guide")
- Football Stadia Advisory Design Council (FSADC) & Sports Council design guidance
- Football Licensing Authority (FLA) Sports Grounds and Stadia Guides
- Premier League Handbook 2010-11, Rules Section I - Ground Criteria
- UEFA Stadium Infrastructure Regulations 2010
- UEFA Champions League Club Manual 2010/11
- Building Regulations 2010 and Approved Documentation Guidance
- British & European Standards and Codes of Practice
- London Housing Design Guide
- Sporting Events (Control of Alcohol etc) Act 1985 plus amendments
- Equality Act 2010

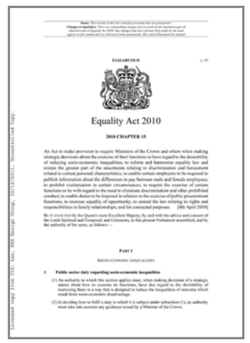
In complying with the above documentation, it has been necessary for the design team to go into stadium specific technical detail in order to ensure that the stadium seating and back of house accommodation is both sufficient and appropriate for its purpose.











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2.0 Existing Site

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2.1 Selhurst Park

Typically the external appearance of the ground is of a number of stands of varying heights and styles, set into the steep slope of the site against Park Road to the east.

The Main Stand was designed by prominent stadium designer Archibald Leitch and was opened in 1924. Unlike a number of existing Leitch stands, which are typically listed, the one at Selhurst Park is not. It is considered that the architectural merit of the original Leitch stand has been lost, due to numerous subsequent modifications to the building, including extensions and over-cladding refurbishment.

The Holmesdale Road Stand is the most recent stand development, and comprises a large monolithic stand and cantilever roof (complete with mansard roof), with a number of smaller out-buildings that form the turnstile access and egress routes.

The Arthur Wait Stand is almost entirely set behind the slope of the site and a low rise brick wall, but this modest outward appearance conceals the largest of the stands at the ground.

Similarly, the Whitehorse Lane Stand is almost invisible from the street after which it takes it's name.

Main Stand


Whitehorse Lane Stand

Arthur Wait Stand


Holmesdale Road Stand

2.2 Site Arrangement

The existing four stands of Selhurst Park are arranged as follows:

North - Whitehorse Lane Stand

East - Arthur Wait Stand

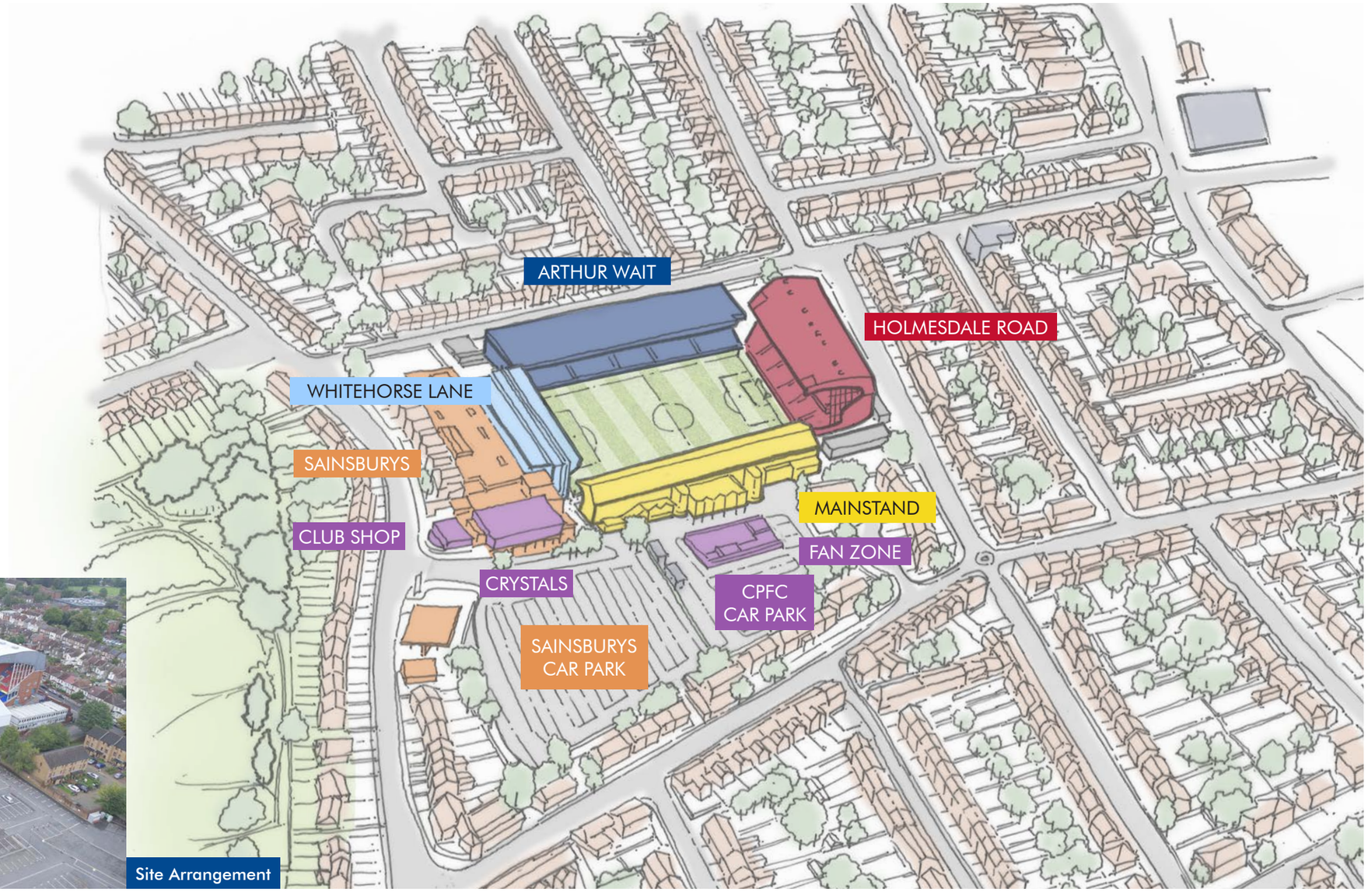
South - Holmesdale Road Stand

West - Main Stand

Other distinguishing features of the immediate Selhurst Park site are the Sainsbury's supermarket and petrol station, CPFC Club Shop and Cystal's nightclub, to the north of the site.

Dedicated car parks for CPFC and Sainsbury's are located along the western fringe of the site. A CPFC 'Fan Zone' experience, located within the Club car park, provides pre-match entertainment facilities for spectators on matchdays.

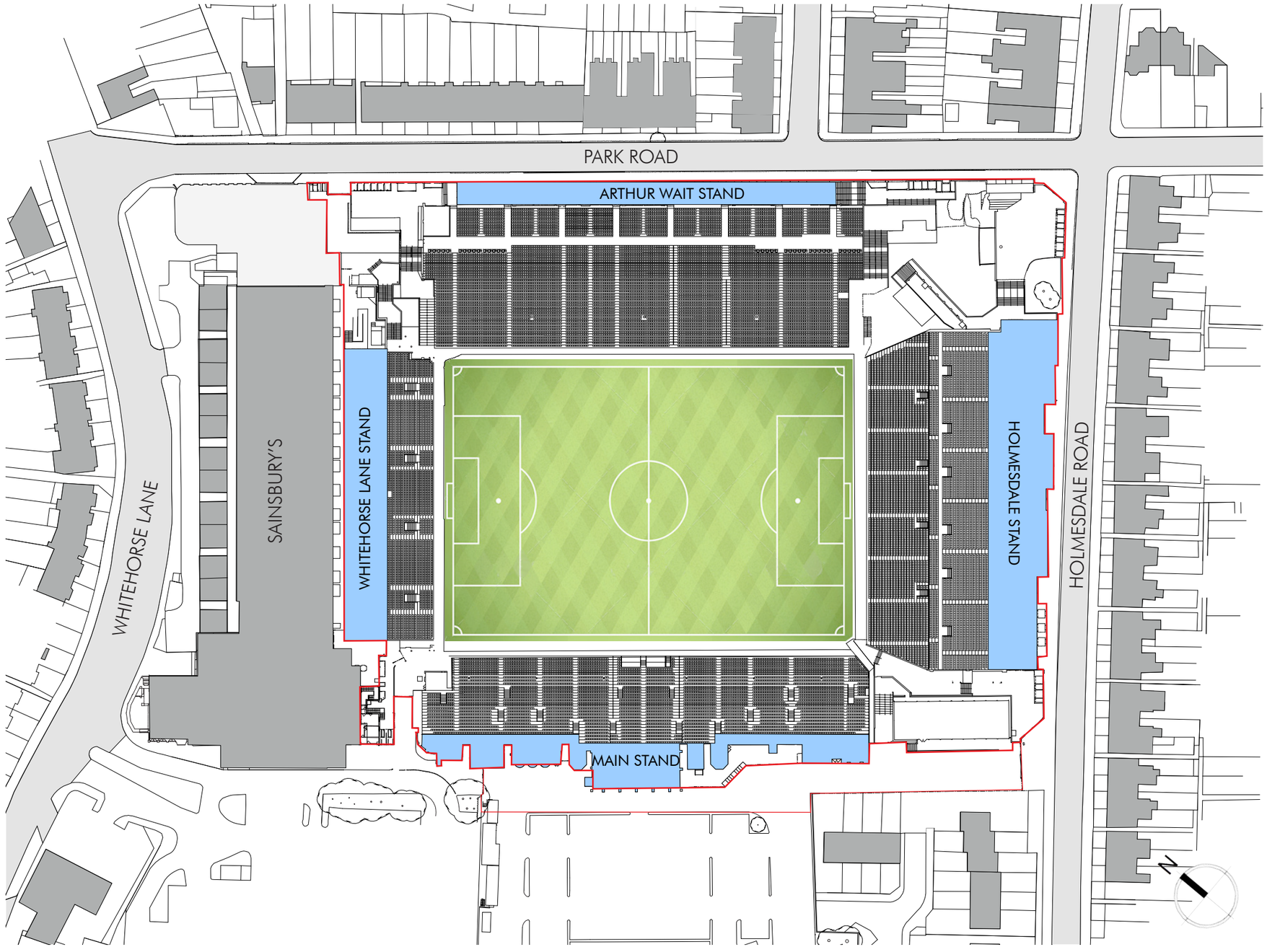
Selhurst Park Aerial View



Site Arrangement

2.3 Existing Stadium Capacity

The existing Stadium capacity figures shown below are in accordance with the General Safety Certificate (2010) Licence (although this does not take into account closed season works completed as part of the Accessible Stadium review in 2017).



Main Stand (West)	5,627
Whitehorse Lane Stand (North)	2,725
Arthur Wait Stand (East)	9,769
Holmesdale Road Stand (South)	8,176
Total (including WUP)	26,297

2.4 Stadium Capacities Comparison

The existing ground, Selhurst Stadium, and it's surrounding site area, extends to approx. 5ha (12.4 acres) and is located within a predominantly residential area.

The site is bounded by an existing Sainsburys supermarket (on Whitehorse Lane) to the north, Park Road to the East, Holmesdale Road to the South and the rear of residential properties on Clifton Road and Wooderson Close to the West.

The history of the site is described in detail in the Planning Statement. In summary:

- Selhurst Stadium Ground has been home to CPFC since 1924. At the time of construction in 1924, the Main Stand was the only stand at Selhurst Park, with terracing on the remaining three sides.
- The Main Stand to the West of the pitch, has been subseequently modified and extended, such that it now provides 5,627 seats, and incorporates the team dugouts and hospitality facilities.
- To the north of the ground, the Whitehorse Lane Stand has a capacity of 2,725 including 480 hospitality seats in 48 ten-person boxes.
- The Arthur Wait Stand to the east, opened in 1969, holds 9,769 spectators including 2,600 away fans.
- The newest stand is the Holmesdale Road Stand to the South, completed in 1995, which is a two-tier 8,176 capacity stand.

The current 26,000 Stadium capacity is one of the lowest in the football Premier League 'top flight', and is significantly below the stadium capacities of a number of local rival London teams:

- Emirates Stadium, Arsenal 59,867*
- White Hart Lane, Tottenham Hotspur 36,284 (Now Closed)
- White Hart Lane, Tottenham Hotspur 61,000* (Proposed 2018)
- London Stadium, West Ham United 60,000*
- Stamford Bridge, Chelsea 41,631 (Existing)
- Stamford Bridge, Chelsea 60,000*(Proposed)

* denotes new Stadia (built in the last 10 years) *
denotes Stadia in Construction /Planning Approved

In addition, the capacity of Selhurst Park is substantially lower than those of numerous Clubs that currently play outside the Premiership:

• Stadium of Light, Sunderland	48,707*
• Villa Park, Aston Villa	42,680
• Hillsborough, Sheffield Wednesday	39,732
• Elland Road, Leeds United	37,890
• Riverside Stadium, Middlesbrough	34,742*
• Pride Park Stadium, Derby County	33,597*
• Bramall Lane, Sheffield United	32,702
• Molineux, Wolverhampton Wanderers	31,700
• City Ground, Nottingham Forest	30,445
• Portman Road, Ipswich Town	30,311
• St Andrews, Birmingham City	30,016

Those marked * are all new Stadia

2.5 Client Brief Requirements

Project Drivers

The key project drivers as defined by CPFC are:

- increase 26,000 capacity to approximately 34,000
- improve matchday experience for general admission spectators, increasing concourse areas and concession provisions to meet current Green Guide recommendations
- increase area and improve quality of player's changing areas, that are currently too small for Premier League needs
- new premium seat hospitality facilities should be at the forefront of the Premier League in terms of quality and range of offer
- increase the hospitality provision to circa 2,500 covers, in line with the Premier League typical standard provision of 8-12% (compared to the current <5% at Selhurst Park)
- suites and boxes should be linked directly to seating, and maximum advantage should be taken of pitch view locations
- provide new seats, all under roof cover, which provide code-compliant, unrestricted views in every position
- retain and maintain all existing lower tier seats as fully operational during the construction period, to avoid loss of revenue, preventing negative impact on the spectator experience and loss of Stadium atmosphere
- retain and enhance the existing stadium configuration of four separate stands with individual identities, making the Main 'West' Stand the most visibly dominant
- reinforce the intimidating sporting experience and home team advantage in the current stadium
- reflect and respect the Club's heritage with a striking and bold architectural form

2.6 Spectator Seating

The football pitch is bounded on four sides by the four existing spectator stands, and has a north-south orientation which ensures that low setting winter afternoon sun does not shine directly down the long axis of the pitch and create glare problems for players and spectators.

The quality of seating in all Stands is far from ideal and does not entirely meet with current best practice standards.

The Main Stand and Arthur Wait Stand both have seating with poor quality views, due to the presence of structural columns, TV gantries and overhanging low roofs. The 'C-values' (the industry standard measure of the quality of spectator views at sporting arenas) are below standard in a number of positions in the stadium. Many seats have obstructed views of the 'high-ball line' (the theoretical maximum height of the ball from a goal-kick). Other seats are located beyond the line of the roof, which exposes spectators to bad weather. These conditions are described in more detail below.

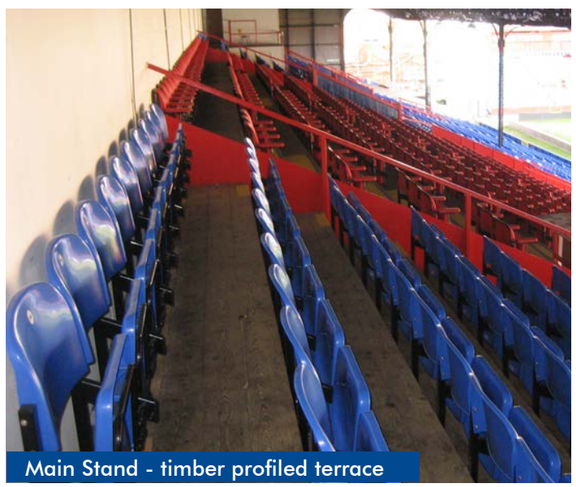
As the ground's original Main Stand, most of the primary Stadium facilities are currently located here, including club offices, club shop, hospitality lounges, and players, officials and team staff (POTS) facilities and dugouts, which are located in the centre of the stand. The changing rooms are located in the south of the stand which is also where the players access the pitch.

Over the years the stand has been modified to keep up with the modern game, most recently with improvements to address Accessible Stadia requirements. The centre of the stand was re-profiled in timber to create greater leg room for the executive seats.

Towards the rear of the stand on both ends there are large radio and commentator areas.


Existing Hospitality Provision


View of Main Stand from Arthur Wait Stand


Main Stand - timber profiled terrace


Aerial view

2.7 Restricted Views

MAIN STAND:
6no. columns

- Existing Capacity 5,627
- Severely Restricted View: 600
- Compromised View (within 10m): 900
- Unrestricted View Capacity: 4,127

WHITEHORSE LANE STAND:
1 x floodlight mast

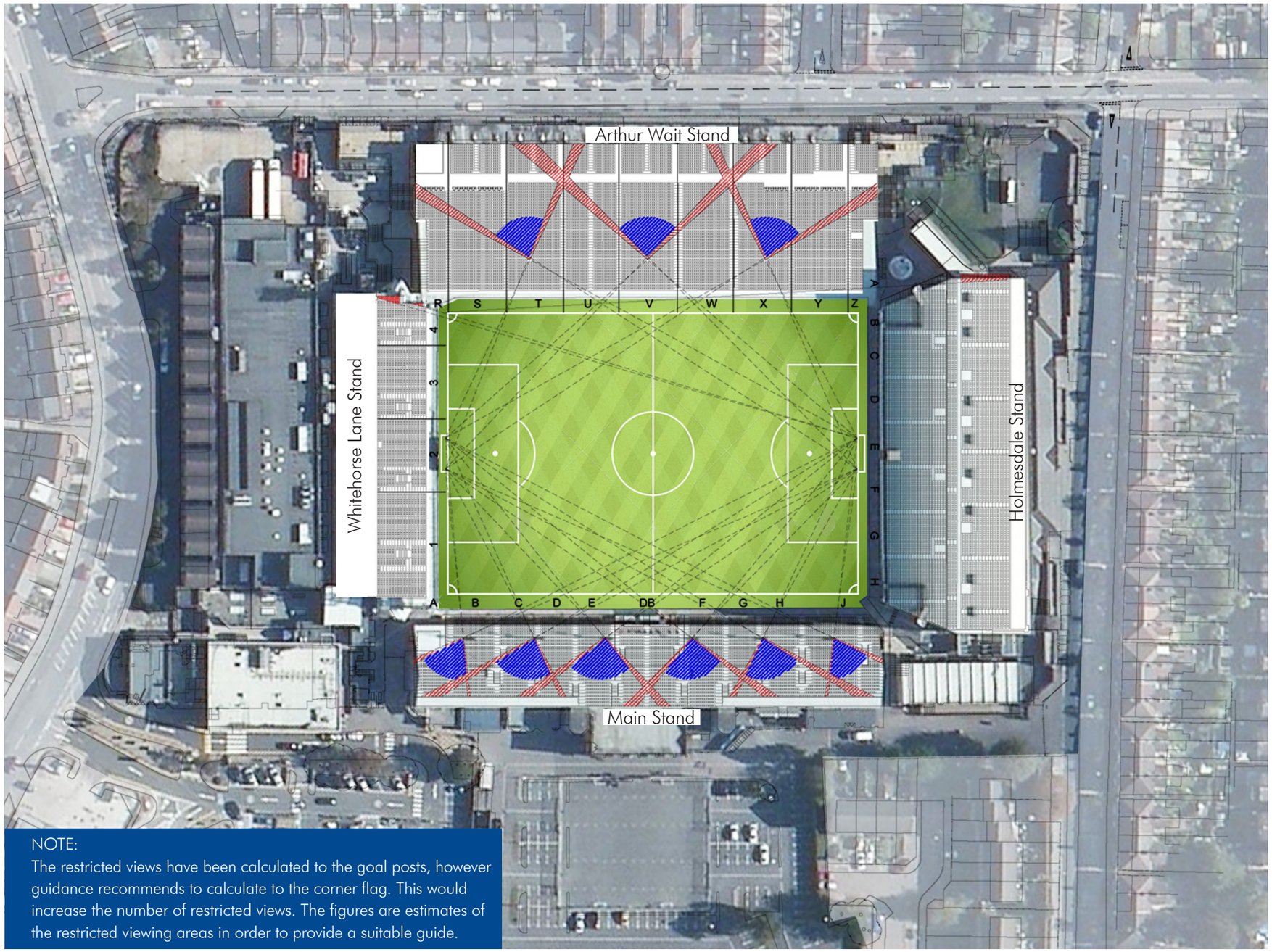
- Existing capacity: 2,725
- Restricted View: 27

ARTHUR WAIT STAND:
3no. columns

- Existing capacity: 9,769
- Severely Restricted View: 1,050
- Compromised View (within 10m): 550
- Unrestricted View Capacity: 8,169

HOLMESDALE STAND:
6no. Arthur Wait Stand Roof

- Existing capacity: 8,176
- Restricted View: 54
- Unrestricted View Capacity: 8,115



NOTE:
The restricted views have been calculated to the goal posts, however guidance recommends to calculate to the corner flag. This would increase the number of restricted views. The figures are estimates of the restricted viewing areas in order to provide a suitable guide.

2.8 Substandard Seats: General Arrangement & Gantry

The diagram on the left identifies obstruction to the quality of the spectator's view.

MAIN STAND:

- Currently only the front 21 rows are able to see a ball on the halfway line at 15m, & 19 rows at 18m.
- Rear rows have poor visibility of the pitch.
- The front four seats are not covered by the roof.

15m high ball	1300
18m high ball	1650
Uncovered seats	650

WHITEHORSE LANE STAND:

- The rear nine rows of the stand have C-values below the recommended amount of C60.

Below C60	1230

ARTHUR WAIT STAND:

- Due to a shallow stand C-values are below C60.
- TV gantry reduces visibility of the action

15m high ball	3,550
18m high ball	4,150
C-Value lower than C60:	5,100

HOLMESDALE STAND:

- Front row of lower tier is 440mm below pitch level
- Rear two rows of lower tier are restricted by upper tier

Front row below pitch level	140
18m high ball	300

2.9 Sections Through Existing Stadium

Main Stand

Sight lines from the Main Stand are obstructed by the following:

- 6 columns in the 8th row
- Eaves of the pitched roof structure
- Dugouts affect the visibility of the lower rows

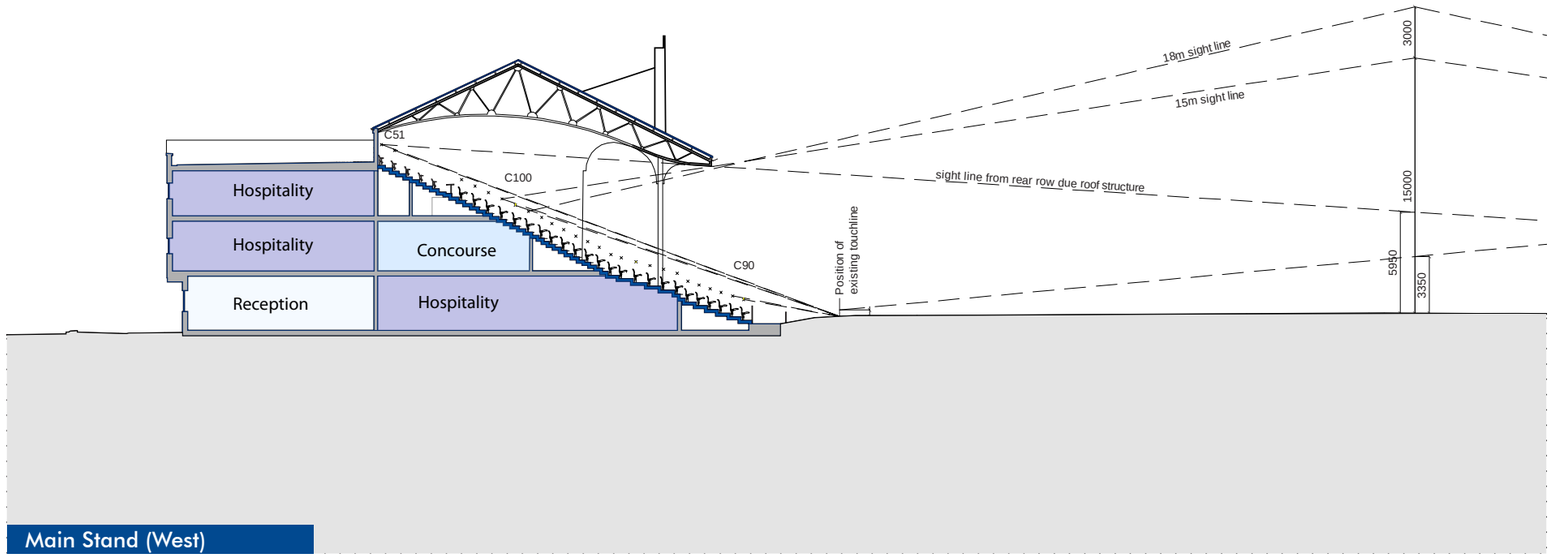
C-values vary drastically throughout the stand due to the timber alterations to the centre of the stand for the directors seats. (section shown through centre stand)

Currently the front 21 rows are able to see a ball on the halfway line at 15m, and 19 rows at 18m.

From the rear row, visibility height at the centre of the pitch is 6m

Allocation for disable seating has been made as part of the recent Accessible Stadia works.

The front four rows are uncovered.



Main Stand (West)

Holmesdale Stand

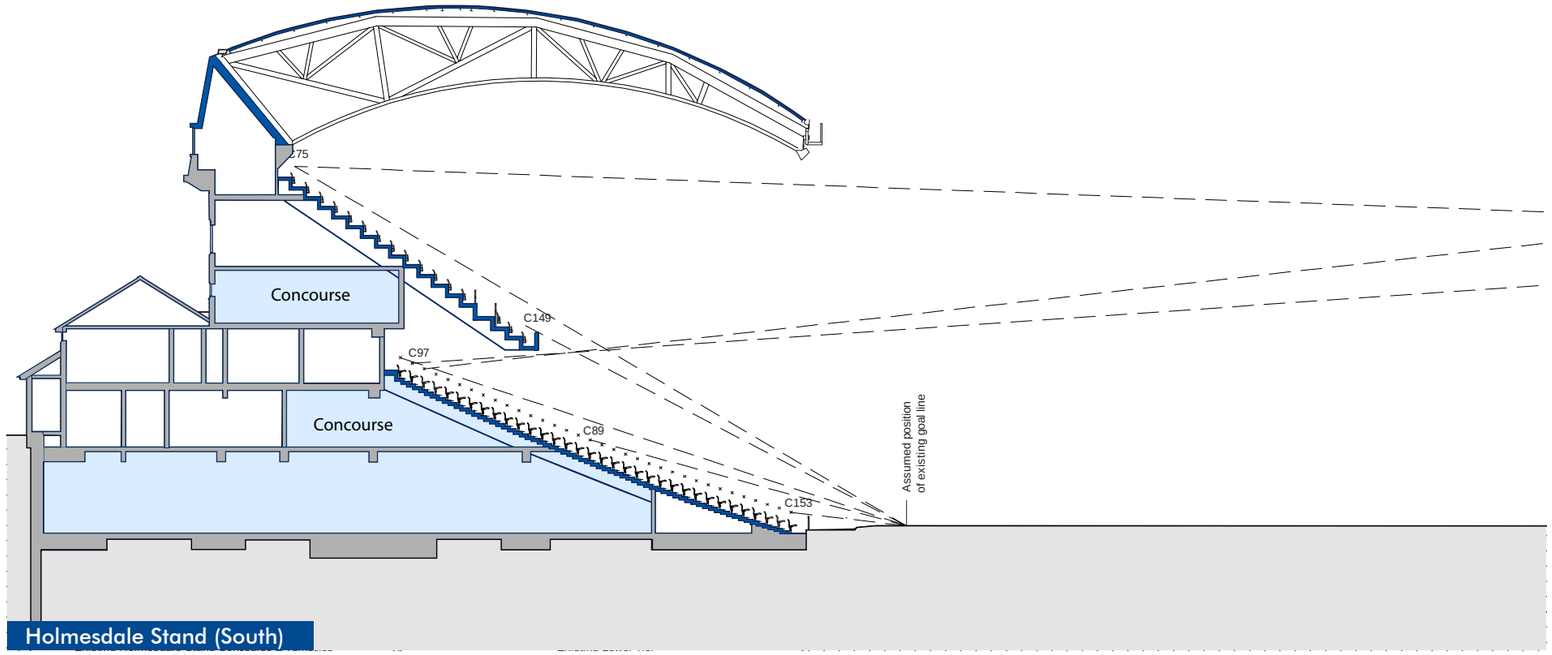
The existing two-tier stand is the primary home supporters stand.

C-values on the bottom tier start at C153 from the front, reducing, and in the upper tier are C149 reducing to C75 at the rear

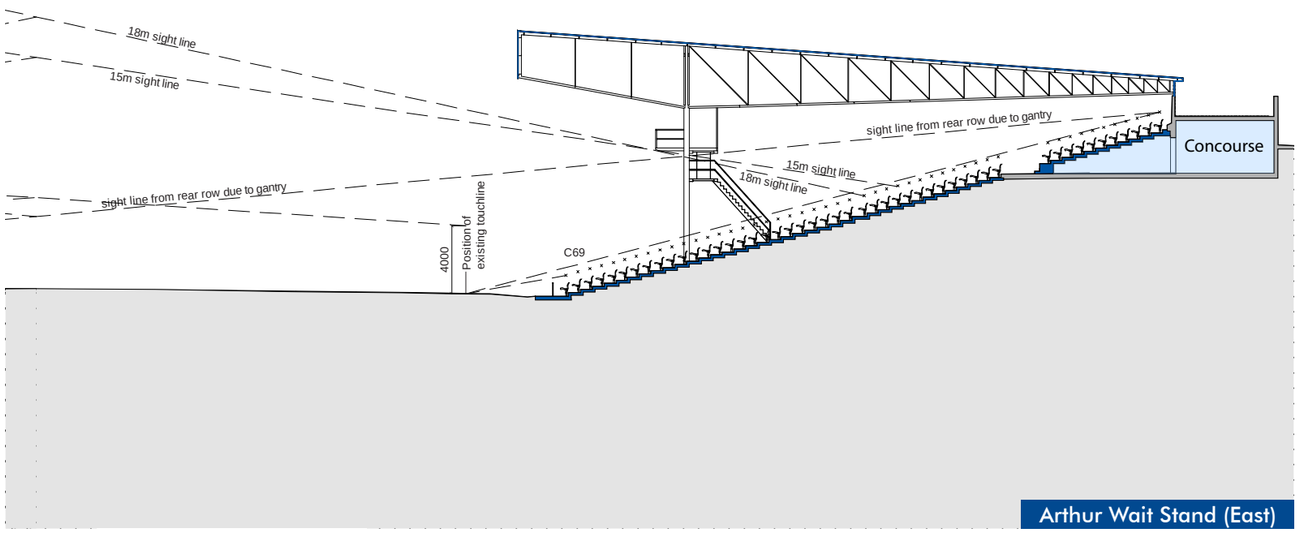
The front row of the lower tier is 440mm below pitch level which, when combined with the new advertising hoard partial restricts views to the touchline.

The rear row of the lower tier has a reduced visibility at the centre of the pitch (just over 14m) due to the upper tier leading edge.

The stand has approximately 25 allocated disabled seats, however many of these are obstructed by the TV Studio and are not suitable for use.



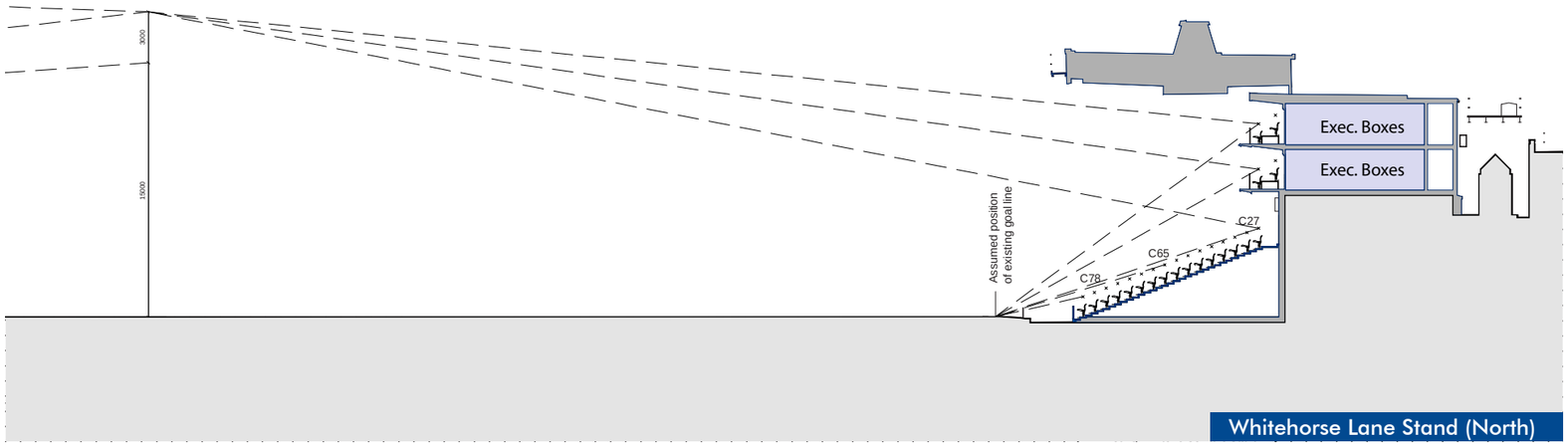
Holmesdale Stand (South)



Arthur Wait Stand (East)

Arthur Wait Stand

- Sight lines are poor with only the front two rows having a C-value greater than C60.
- Due to the location of the gantry, visibility for the majority of the stand has been reduced.
- A ball 15m above the middle of the pitch would not be visible by the rear 20 rows.
- A ball 18m above the middle of the pitch would not be visible by the rear 23 rows.
- From the rear row, visibility height at the centre of the pitch is 3.5m.
- There is allocation for 35+35 disable seats which have been enhanced as part of the Accessible Stadia works.
- Highly inadequate concourse area with space standards severely compromised.



Whitehorse Lane Stand (North)

Whitehorse Lane Stand

- Sight lines of C-Value C27 at the rear improving to C78 at the front.
- The rear row of seats at box level currently have obstructed views of the near touch line.
- A ball 18m above the half-way line is visible from all seats.
- The stand has no allocated disabled seating.
- The stand has limited concourse and toilet facilities.

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3.0 Existing Access

3.0 Existing Access

3.1 Public Transport

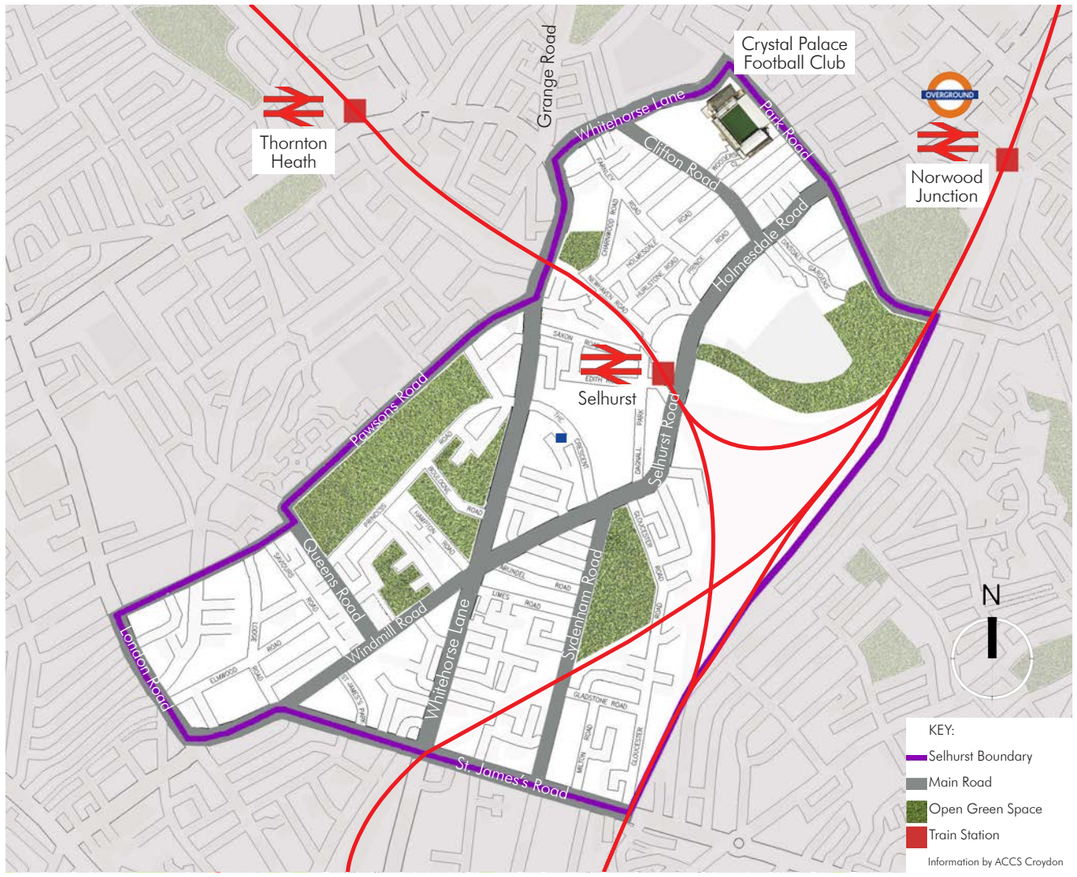
The centre of Croydon enjoys good transport links including London Overground Rail services, Buses and London Tramlink. When travelling by train to Croydon centre the nearest two stations are West Croydon Station and East Croydon Station (16mins from London Victoria & 15mins from Gatwick Airport). These areas can be accessed using a number of lines including the 'London, Brighton & South Coast Railway' from London Bridge, the Thameslink through King's Cross, and London Overground from Shoreditch to West Croydon. Croydon has an average Public Transport Accessibility Rating (PTAL) of 3

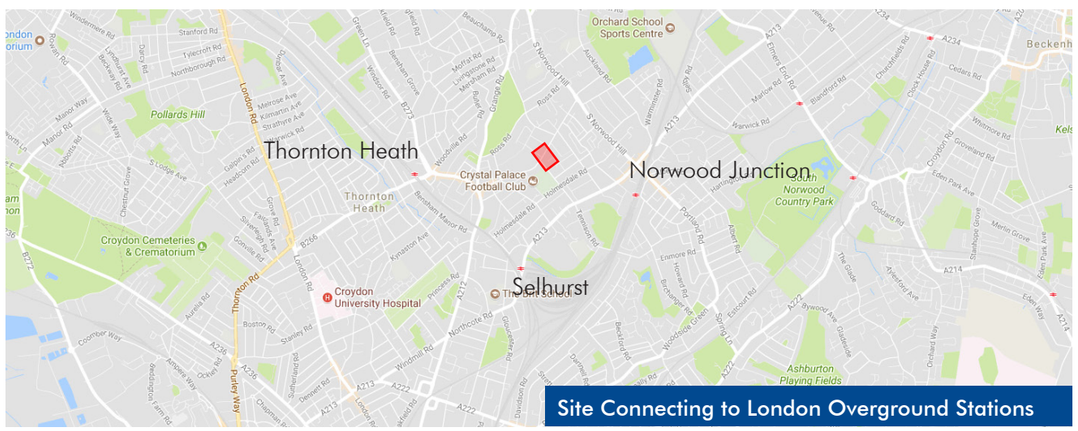
The nearest underground stations are Thorton Heath (20-25 minute walk), Norwood Junction (10 minute walk) and Selhurst (10 minute walk) as indicated on the adjacent plan. Selhurst Park has a PTAL Rating of up to 5.

The site also has good links to a number of bus services.

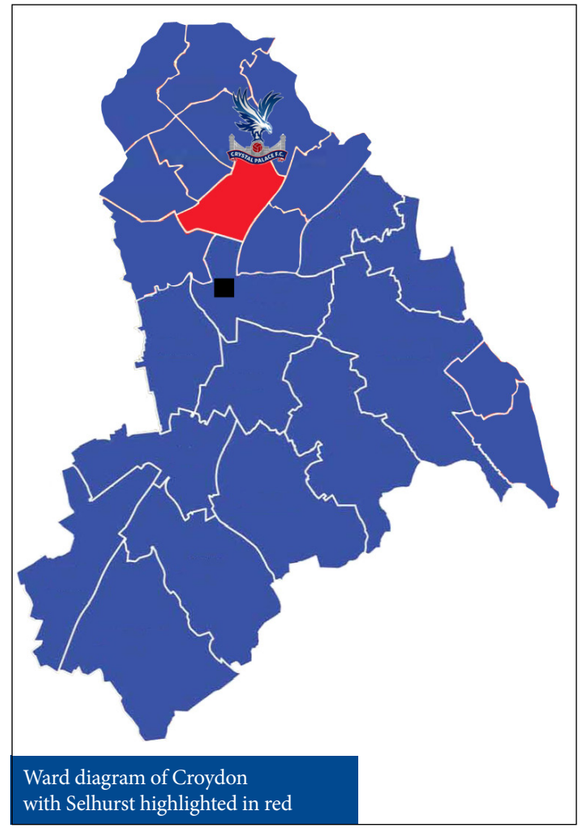
Transportation matters are addressed in detail in the Transport Assessment document, as prepared by Mott MacDonald and submitted with this application.

Park Road and Holmesdale Road are closed during match-days to allow for the 26,000 + spectators to enter and leave the ground safely. These roads are closed for up to 25 minutes after the match has finished. Whitehorse Lane and Clifton Road remain in operation during match-days.





Site Connecting to London Overground Stations



Ward diagram of Croydon with Selhurst highlighted in red

3.2 Approach and Access

Selhurst Park has three main line train stations within a mile of the ground providing transport for spectators.

On match-days, Holmesdale Road and Park Road are closed, however Whitehorse Lane remains in use which reduces the flow of spectators. Pedestrian access is also available directly from Clifton Road into the car park which also remains operational during match-days.

The club have an agreement with Sainsbury's to use the store's car park during the match period.

A desktop assessment of the road network capacity suggests that in excess of 42,000 spectators would be able to comfortably access and egress the ground and it's surrounding area.

Ground access is restricted by the ground's urban residential setting and the adjacency of the supermarket. The design response to these is discussed in later chapters of this report.

The Arthur Wait Stand is accessed via Park Road at several locations. Level access for wheelchair-bound home supporters is located centrally in the Stand. Away supporters accessi the ground in the north-east corner, which allows appropriate segregation along Park road.

Holmesdale Road Stand access has a similar access arrangement, where access is through several entry points and at several levels along Holmesdale Road.

Whitehorse Lane Stand access is severely limited by the Sainsbury's supermarket and residential properties on Whitehorse Lane. General admission access is via the supermarket car park. The corporate box levels are accessed via Sainsbury's roof level from Whitehorse Lane itself.

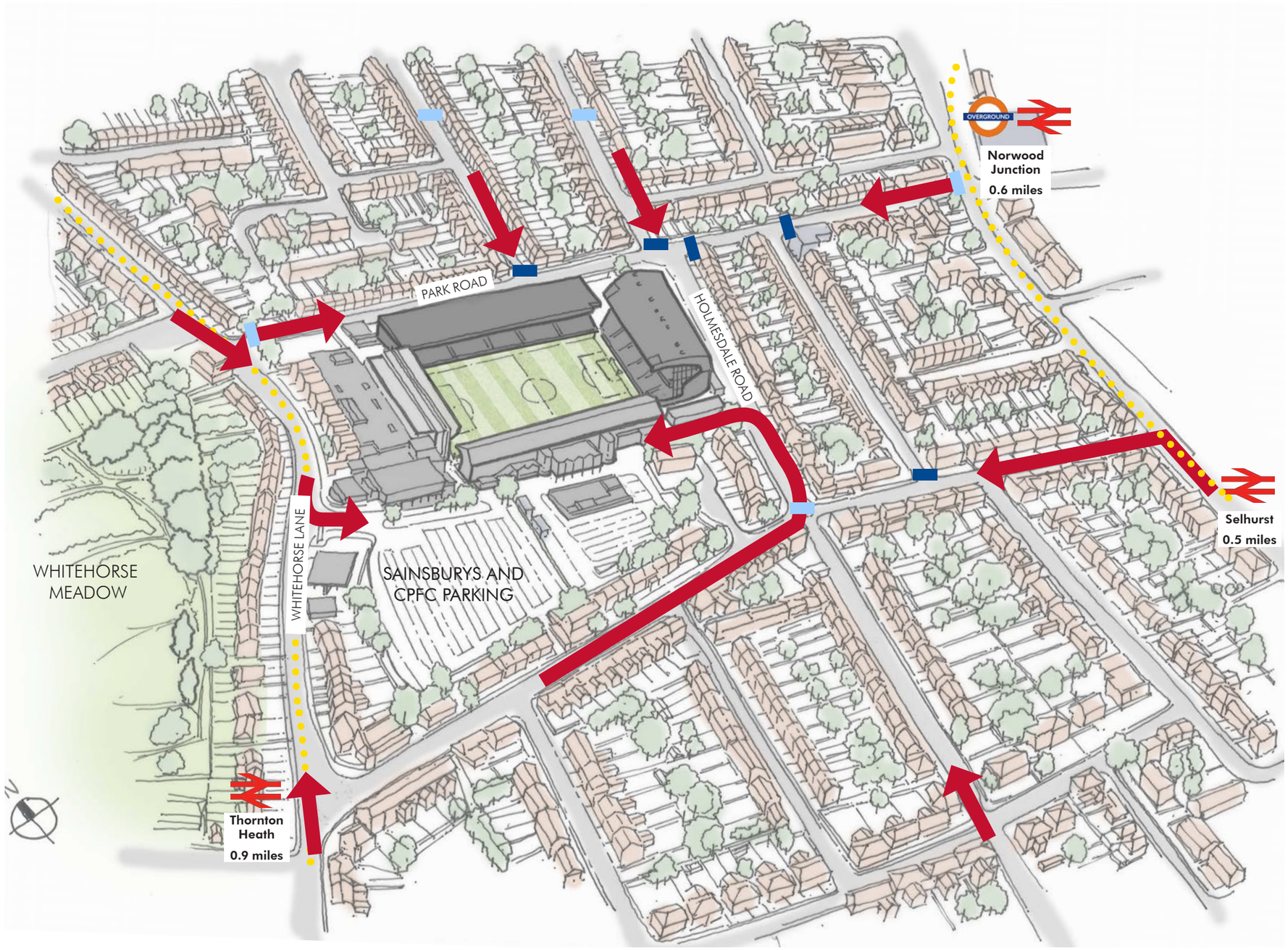
The Main Stand is accessed directly from the car park for both general admission and hospitality customers. Hospitality custmomers all arrive and are accredited at the ground main entrance.

BUS ROUTES

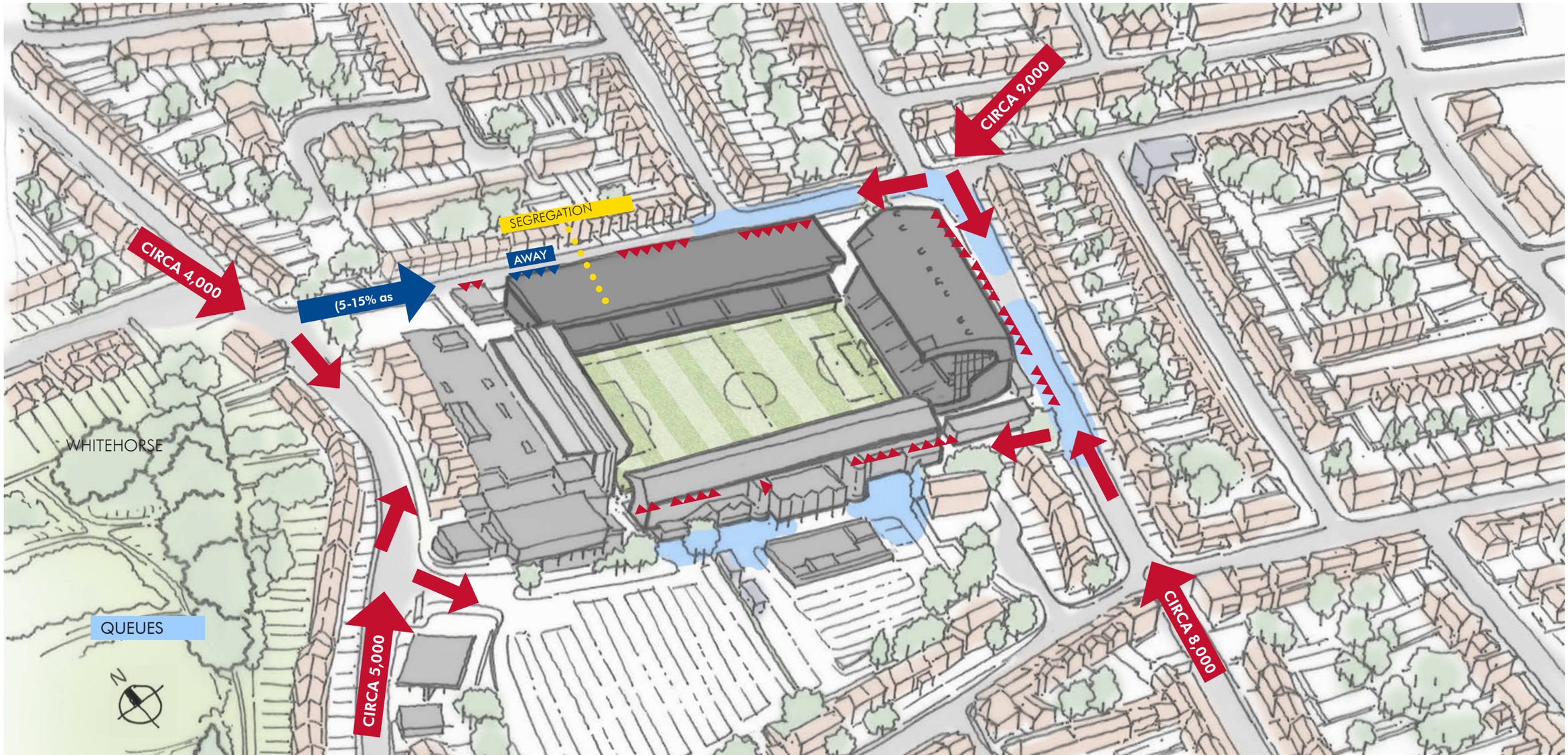
VEHICLE BARRIER

GENERAL ACCESS

BARRIER AND STEWARD



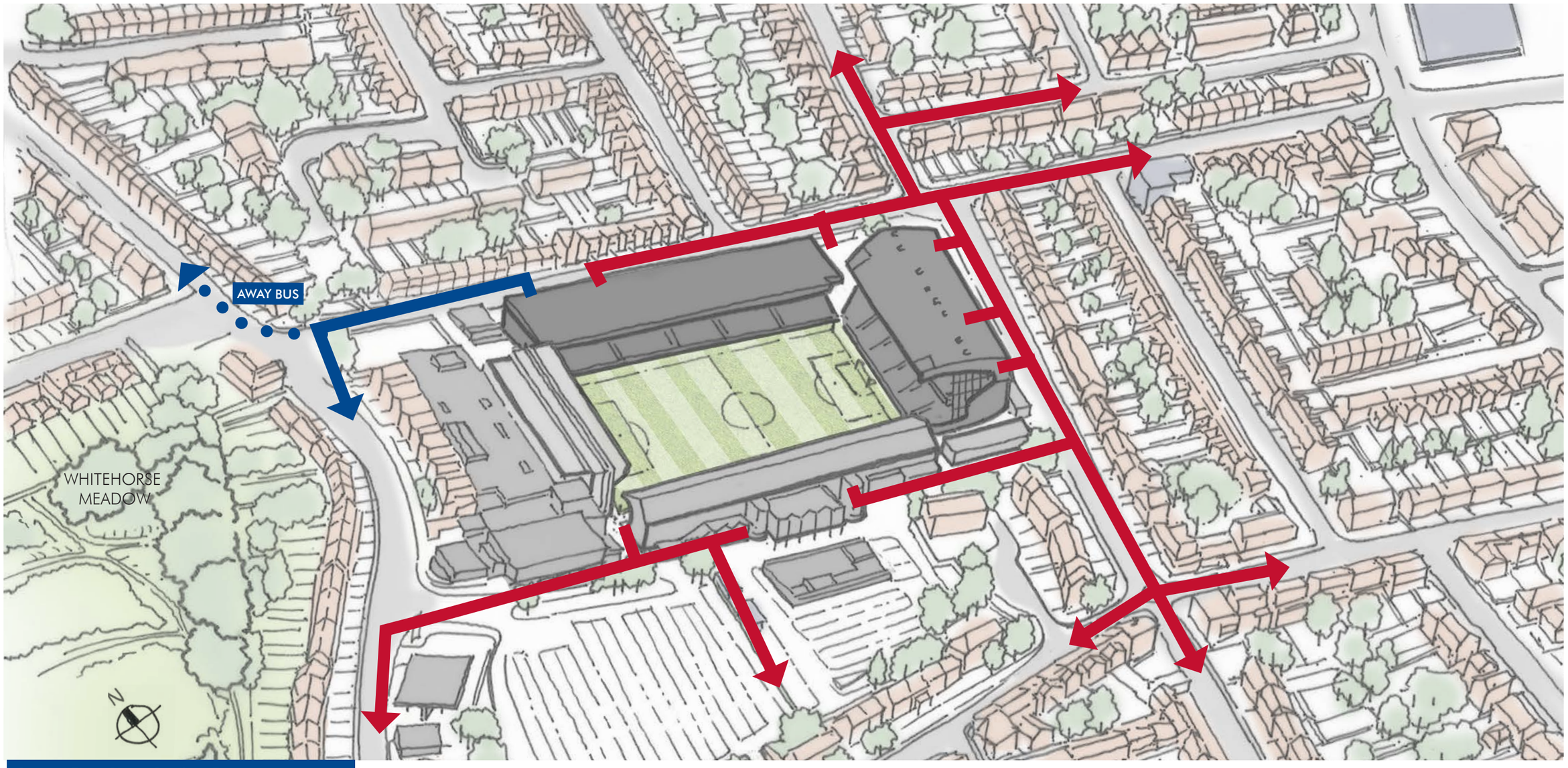
3.3 Stadium Access - Matchday



Ground Floor Plan - Stadium Access

Evacuation at the grounds perimeter is governed by the widths of the gates and turnstiles. The figures stated on the adjacent diagram are based on the maximum capacity using current guidance and 2010 ground capacity license figures.

3.4 Stadium Egress - Matchday



Ground Floor Plan - Stadium Egress

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4.0 Design & Access Considerations

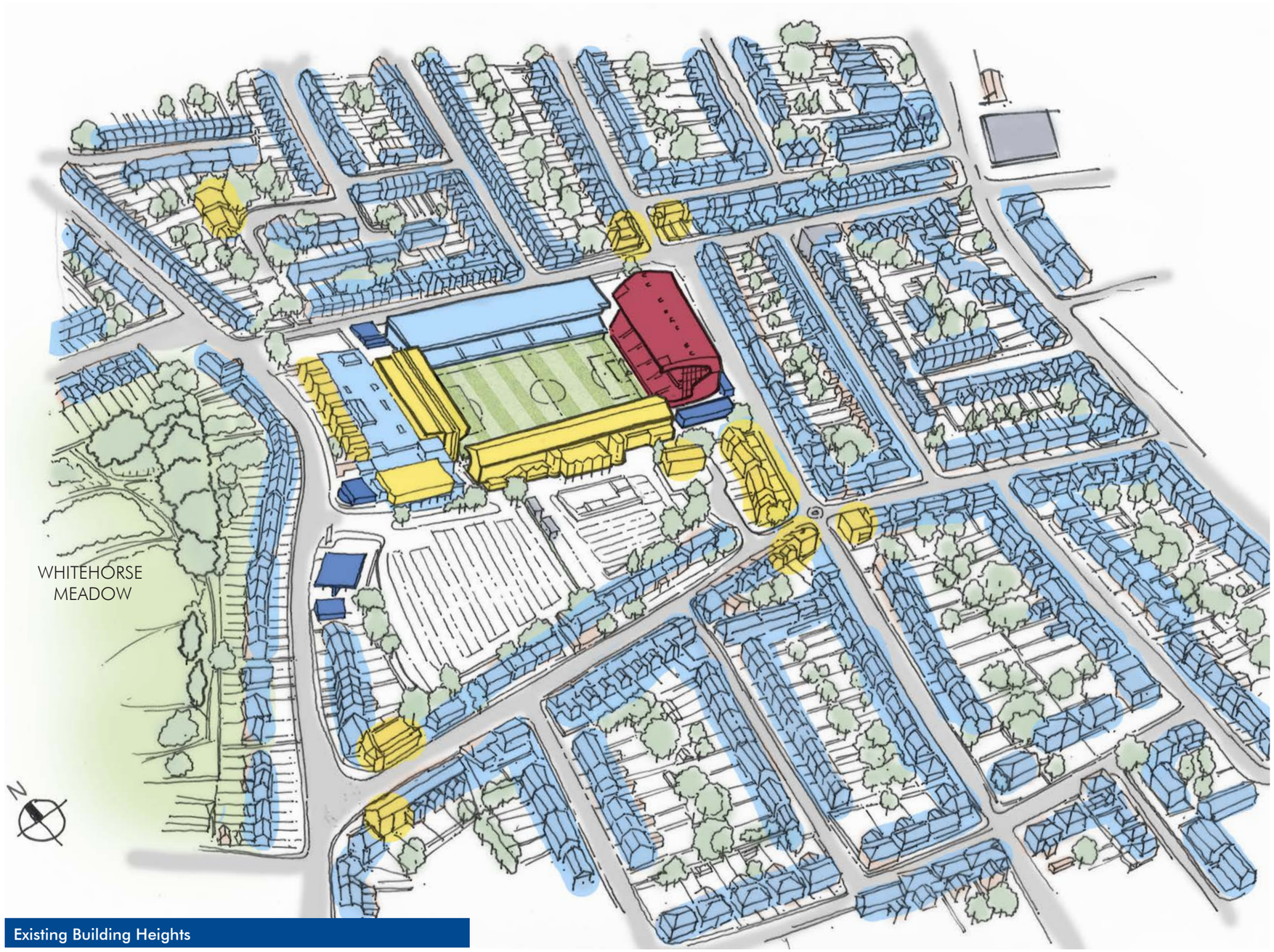
4.0 Design and Access Considerations

4.1 Building Heights

This image highlights the relative heights of Selhurst Park, Sainsbury's and surrounding buildings using typical storey heights. The majority of these buildings are two-storey residential properties, with the exception of several three-storey residential buildings (located on Wooderson Close & Whitehorse Lane). The Holmesdale Stand, is the tallest building on the South of the site near two three-storey buildings off Park Road

KEY:

- 1 storey
- 2 Storeys
- 3 Storeys
- 5+ Storeys



Existing Building Heights

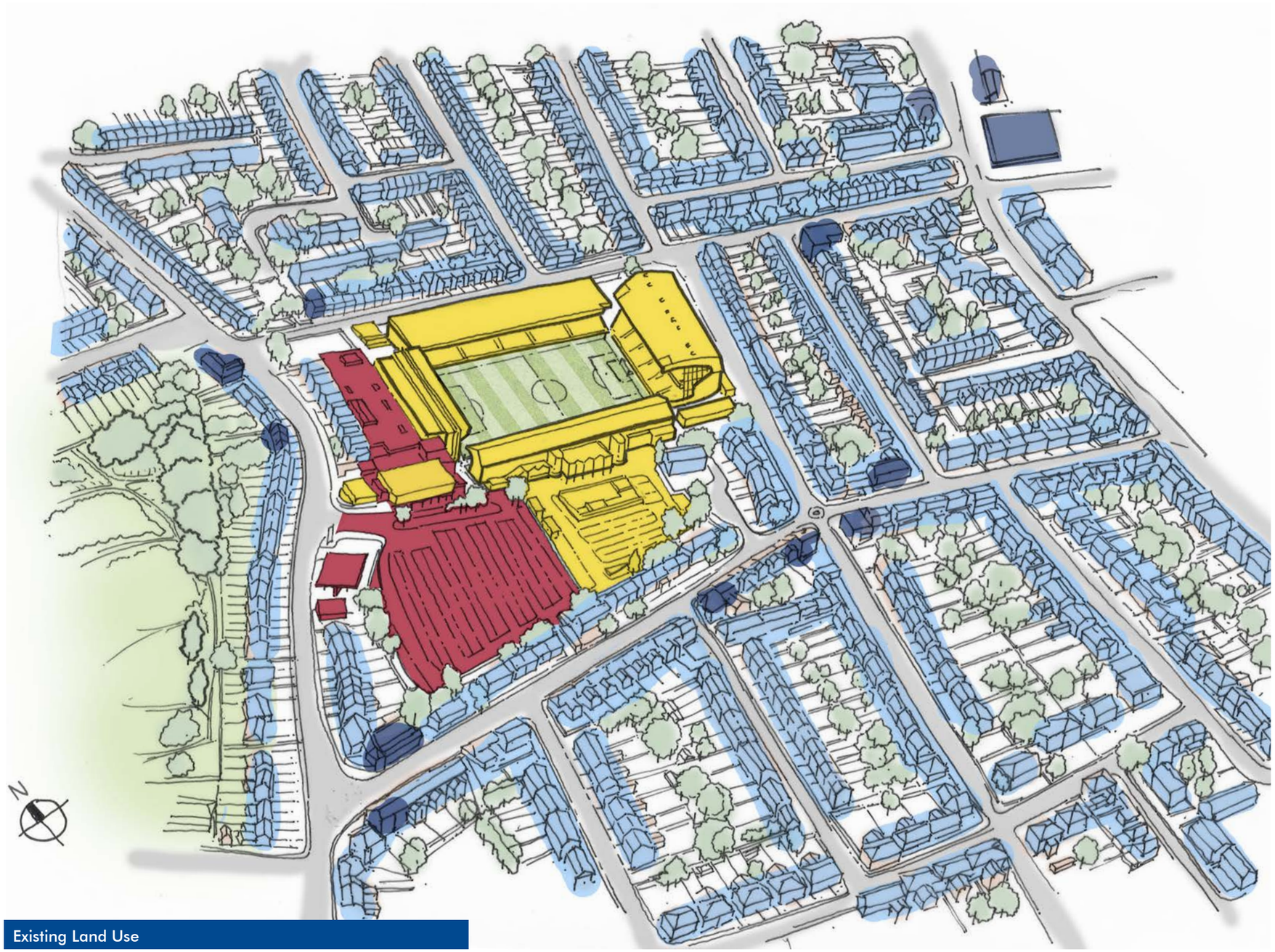
4.2 Land Use

This image identifies the different land use in sites directly adjacent to the Selhurst Park ground. The buildings which are owned by CPFC oversail Sainsbury's in parts. These include the Whitehorse Lane Stand which shares emergency exits with Sainsbury's and the Nightclub above the supermarket (which is also owned by CPFC). Access is from Whitehorse Lane.

The area is typical of a London suburb, with a number of small and cottage businesses that serve the immediate and local community.

KEY:

- Mix use shop/business
- Residential
- CPFC
- Retail



Existing Land Use

4.3 Site Topography

This image highlights the relative land levels around the site and its immediate context. This illustrates that the Stadium is located on a hillside location, with a significant east-west slope.

The land in the south-east corner of Selhurst Park (at the raod junctions of Holmesdale Raod and Park Road) is c.12.5m higher than the land at the western end of the Holmesdale Road Stand.

The land in the north-east corner of Selhurst Park (at the raod junctions of Whitehorse Lane and Park Road) is c.9.0m higher than the land at the eastern end of the Holmesdale Road Stand.

The effect of this is that certain elements of the Stadium (Arthur Wait Stand)appear low on the skyline at street level whereas the Holmesdale Road Stand at its western end is particulalry noticeable.

Site Topography

4.4 Development Opportunity

The opportunities for development of Selhurst Park are limited by a number of factors.

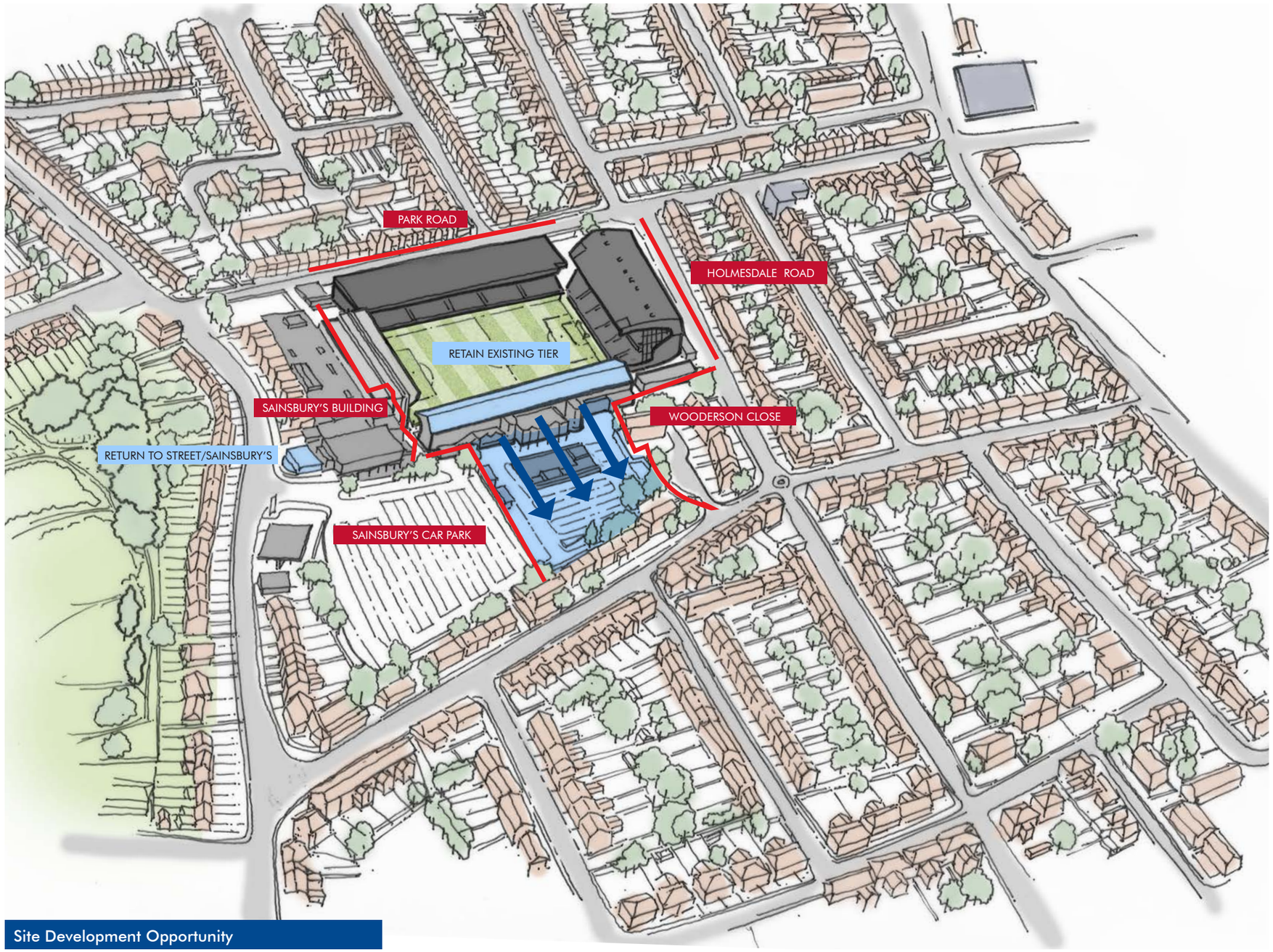
Expansion of the Arthur Wait Stand or Holmesdale Road Stand is restricted by their close proximity to Park Road and Holmesdale Road respectively.

The Whitehorse Lane Stand is bounded by Sainsbury's supermarket, in separate ownership.

The obvious development opportunity exists in the Main Stand, due to it's location adjacent to the car park site. Although car parking and Fan Zone would be lost as a result of any expansion of the Main Stand, this is the only viable solution that fulfils the Client brief of Stadium expansion while maintaining Stadium capacity and mini-mising disruption to spectators during the construction period.

The presence of the open car park area also provides excellent access, storage, drop off logistics and lay-up arrangements for the contractor during the construction period.

Although the car park space offers expansion opportu-nity, there are limitations on the extent of this due to tghe adjacent land ownerships to the north and south of the CPFC car park.



Site Development Opportunity

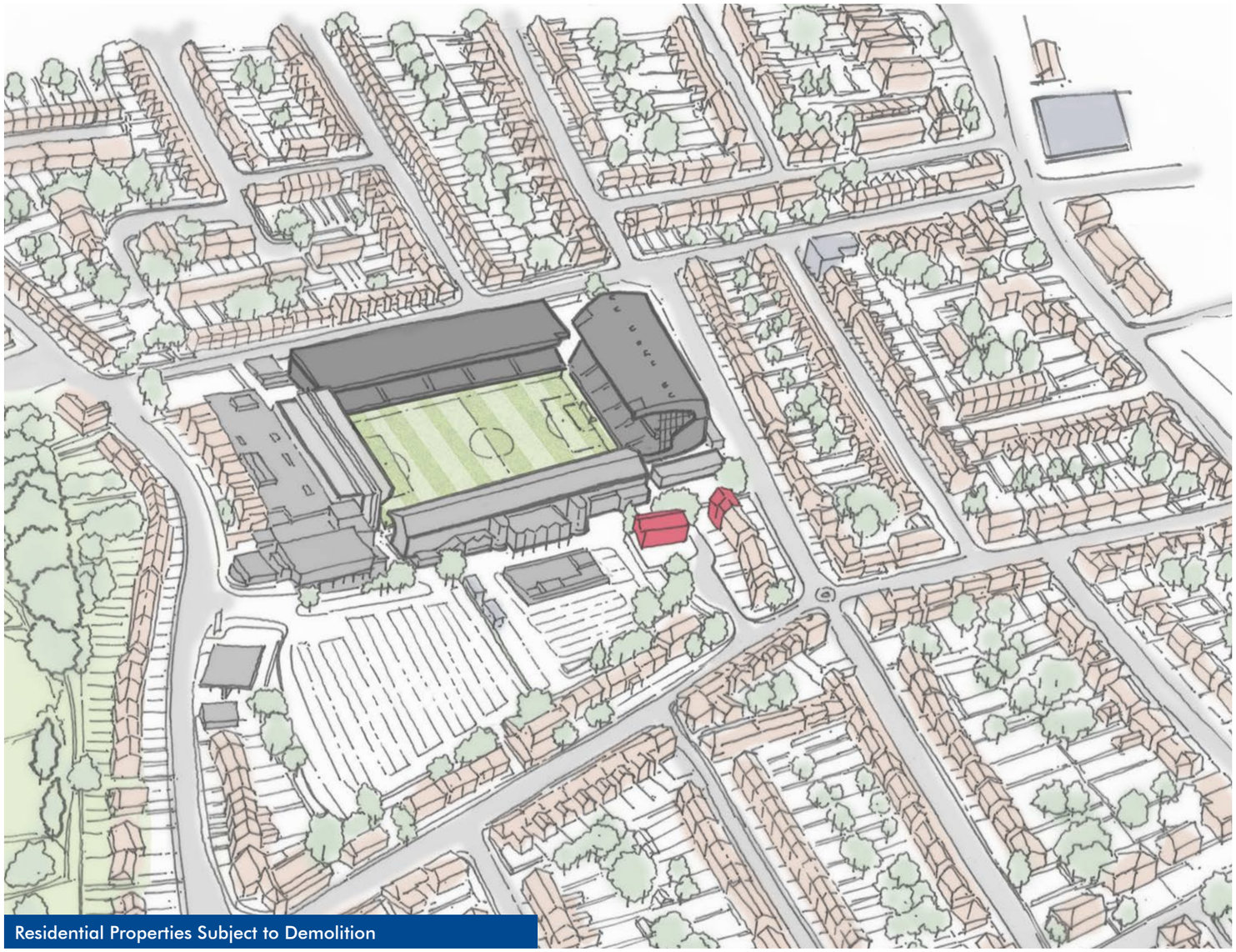
4.5 Site Constraints - Neighbouring Properties

By it's very nature, a football Stadium occupies a large site footprint area and has a direct impact on neighbouring properties, be it from the large mass of the building, floodlighting or the presence of large volumes of matchday fans in small urban streets.

Although the car park offers significant development opportunity, both the constricted site access from Holmesdale Road at the south end of the Main Stand and the proximity of existing residences on Wooderson Close (at the CPFC southern boundary) mean that a small number of residences will no longer be viable as a result of the Stadium expansion.

The proposals have been carefully considered to ensure that the number of houses lost is the absolute minimum required in order to maintain the safety and integrity of pedestrian circulation and evacuation around the Stadium perimeter and balancing the need to maintain an acceptable living environment for the remaining nearby houses.

Buildings to be Demolished
Wooderson Close: 6 Properties



Residential Properties Subject to Demolition

4.6 Site Constraints - Sunlight and Daylighting

Typical of many football Clubs, CPFC's Selhurst Park occupies a suburban site that is characterised by low-scale residential development.

Since the start of it's construction in 1924, Selhurst Park and it's neighbouring houses have gradually expanded up against their mutual boundaries. Due to the large difference in scale and function, particularly at the southern end of the site, there is a sensitive junction where the Main Stand is closest to existing houses on Wooderson Close, Holmesdale Road and Clifton Road. The impact of the new development on these neighbouring properties has been assessed by Delva Patman Redler.

Buildings Subjected Testing

80 - 106 Clifton Road

2 - 20 Wooderson Close

172 - 194 Holmesdale Road

Main Stand, Selhurst Park c. 1924

Rights of Lights and Daylighting Influences

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5.0 Proposed Design

5.0 Proposed Design

5.1 Design Approach

The general form of the stand responds to a number of influences:

Opportunity – The site area to the rear of the existing Main Stand is currently used as car parking and a temporary match day "Fan Zone" installation. In this respect, the club were able to look at an expansion of the ground without potentially significantly impacting the match day arrangements.

Site form – The given arrangement of the site and immediate surroundings suggests that the form of a new structure might need to be pinched at each end to accommodate the wider built constraints, suggesting a square extension to the rear of the stand would significantly impact the clubs neighbours.

In this respect, a curved or stepping form, which brings the mass of the building toward the centre of the site and away from immediate neighbours, is a favourable approach.

Type – One of the main drivers of the scale and mass of a new stand is the building type and the specific design parameters that are common with stadiums and stands. A key element of determining the overall size of the building is connected to the development of the seating and tier profiles, which is directly linked to achieving good views of the pitch. Using the site form constraints, the seating tier sections and sight line calculations helps to determine the general mass profile of the buildings, with the focus at the middle of the stand. The depth of a new stand design is usually determined by either the outer line of the seating tier, or more commonly the outer most line of the upper concourse.

Use – Large football stands, especially for clubs in the top tiers of English and European Football, fit a use profile that can be unique to the building type with safety, comfort, access and egress and circulation high priorities over the match day period. The use is a reflection of the type where many different functions and diverse accommodation is brought together. There are many defining characteristics, such as the requirement for large outer circulation areas and robust material choices in heavily trafficked areas. At upper levels, prime areas for dining and match day hospitality, as well as dual function spaces are paramount, tend to be expressed and these primarily lean towards the food and beverage industry rather than being directly sports orientated.

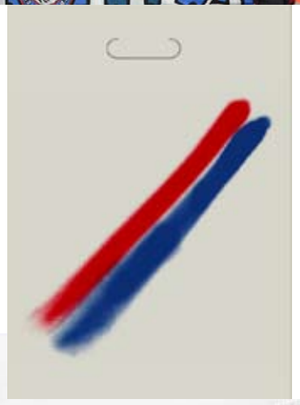
Architectural Response

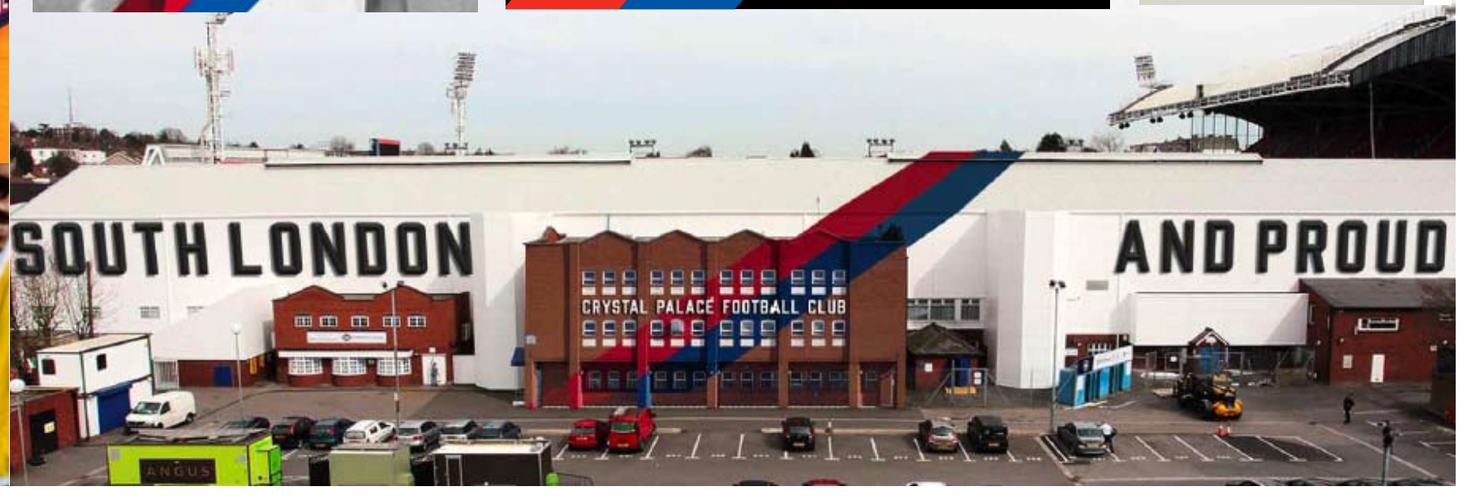
The opportunities and constraints at the site and the geometrical challenges posed by the building type lead to a number of logical design decisions with regard to function. However, football is a highly emotive sport; passion runs high and loyalty deep with each club and their supporters. Clubs therefore want to outwardly express their character, which is often a reflection on their style of football and in most cases this is a reflection of their roots and often of the way in which fans embrace their club. Crystal Palace is a bold urban club with honesty, an overt style of their own and camaraderie at their heart of who they are.

In looking to develop an architectural style, it was clear that the club wanted to reflect many of these aspects in a striking envelope. Further detail is in Section 5.7.

› OUR STYLE

BOLD SIMPLICITY



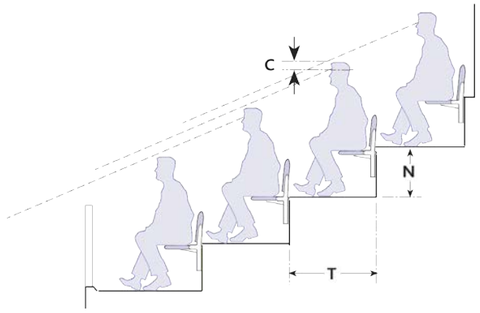


5.2 Initial Concept - Bowl Section

The first stage of the design process was to establish the 'cross section' profile of the Stand. This was key to the design development process as it established the seating capacity, the building height and the building depth.

Key brief and technical considerations that informed the section design were as follows:

- Stand capacity should deliver a target 13,500 seats, whilst simultaneously attempting to mimimise the overall building mass, planning risk and RoL impact
- Seating tiers and 'C-Values' must be designed in accordance with the current 'Guide to Safety at Sports Grounds 'Green Guide' publication
- Proposed ground floor level should ideally be as close as possible to the existing ground datum, in order to provide level-access circulation between the player changing rooms and the playing pitch, to avoid flood risk issues
- 'behind-bowl' GA concourses and hospitality areas should have direct adjacency to their associated seats, to avoid long travel journeys between game time, to simplify circulation and improve security
- Lower tier seats must remain fully operational during the construction period, in accordance and the proposals should be informed by the rake and structure of the existing Main Stand.



To calculate the appropriate 'C' value for the sport to be viewed, the following formula applies:

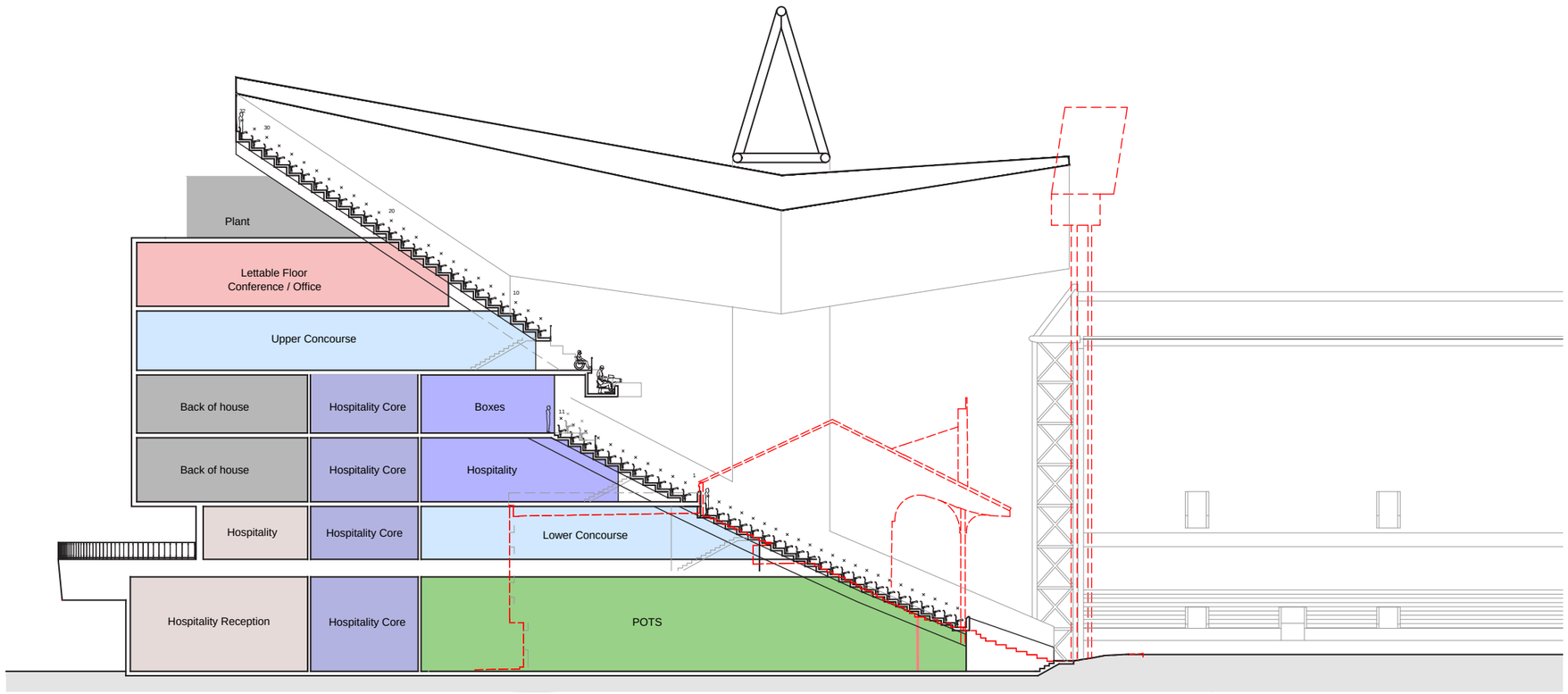
$$C = \frac{D\,(N + R)}{D + T} - R$$

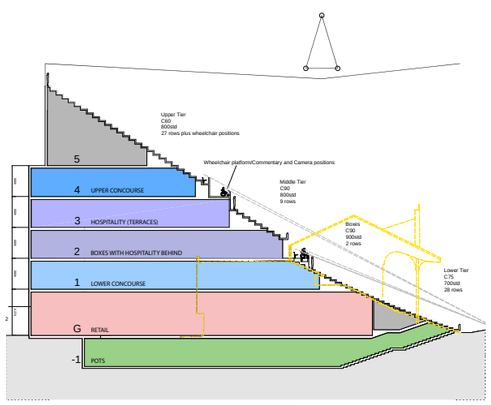
Numerous studies were considered in order to:
- establish the most efficient tier section
- optimise the position of internal functions
- simplify circulation and access to/egress from the bowl
- minimise building height and Rights of Light impact

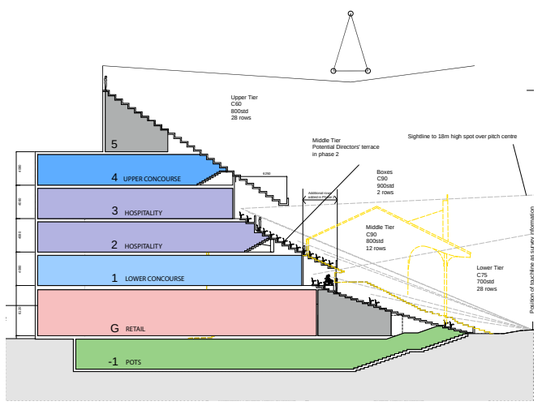
The preferred straetgy for the section adopts a profile that creates a middle tier positioned behind an extended lower tier. This allows for excellent access to the middle tier from two hospitality levels, with more premium offers located on the upper level alongside director lounge and boxes.

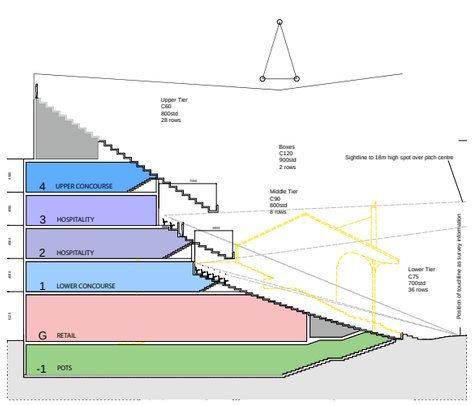
The existing lower tier was designed to now superseded design standards, and no longer complies with the Green Guide 5th edition. The proposal incorporates a reprofiled lower tier in order to improve sightlines and maximise lower tier capacity, thereby reducing the need to add further seats to the upper tier (which in turn would increase concourse area requirements and subsequent building foortprint).

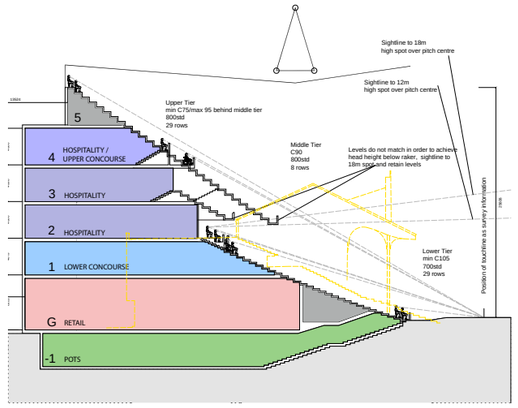
A truss located above the roof was considered the most appropriate to the site, as this achieves unobstructed views of the pitch from all seats. The height of the roof is the minimum required to incorporate floodlights beneath it and the roof truss is set back in order to minimise its visual impact on the building elevations and for structural efficiency.











SECTION PROFILE STUDIES

5.3 Initial Concept - Seating Bowl Plan

The second stage of the design development was to establish the overall massing of the stand bowl.

Two principle massing options to achieve 13,500 seats were explored:

- orthogonal bowl with a rectilinear back of tier
- orthogonal bowl with a curved back of tier

The studies identified that a curved bowl best fits the site, compared to a traditional rectilinear form. A curved stand:

- reduces the depth of the stand in the south end

- relieves proximity to existing residential development on Wooderson Close

- creates a more appropriate relationship with the existing Sainsbury's building to the north end

- maximises the number of 'centre-line' seats, thereby increasing the overall proportion of higher quality seats

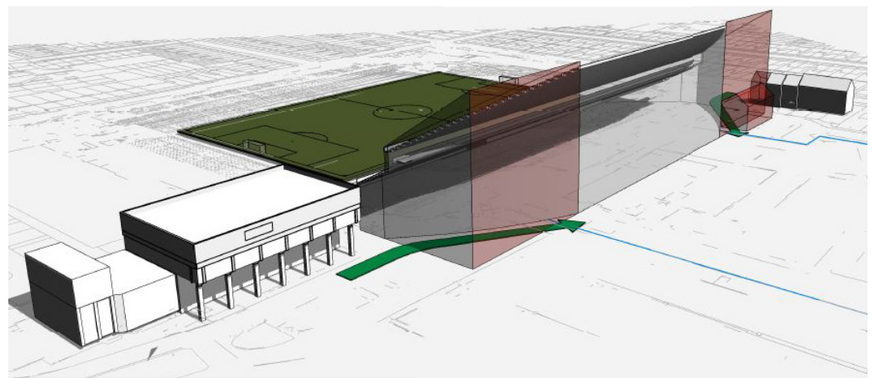
- reduces the number of 'goal line' seats, and reduces the maximum viewing distance of the seats furthest away from the pitch corner flags

- best address the junctions with the Holmesdale Road Stand and Whitehorse Lane Stand, as the corners can be more readily infilled with this arrangement.

- unifies the internal lower tier seating and visually connects the separate Stands.

1. LOWER TIER

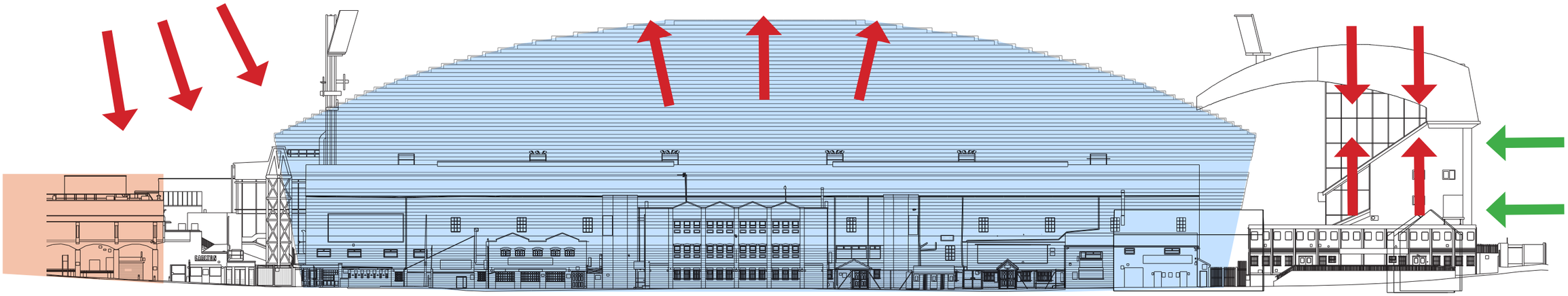
2. UPPER TIER



3. PROFILING THE END CORNERS

4. MAINTAINING CAPACITY

The seating bowl plan influences the elevation and section of the Stand. The curved bowl profile is visually apparant externally and is reflected in the shape of the 'back of tier' seating profile.



CORNER INFILL

BOWL PROFILE

CORNER INFILL

CORNER JUNCTION

5.4 Layout and Scale

In football stadia, the West Stand is traditionally considered to be the most important of the four stands around the pitch because, taking advantage of a north-south pitch orientation, it offers the best views of the playing area from the largest number of seats that are all unaffected by direct sunlight and glare. Premium seats, hospitality boxes, and VIP/directors boxes are therefore usually provided in the West Stand.

Currently, Selhurst Park contradicts these basic principles, and provides a relatively small proportion of both spactator seats and hospitality provision in the west stand.

The massing of the proposals therefore addresses CPFC's desire for the expanded stadium to remain as four visually separate, individual stands, but for the Main 'West' Stand to become the most visibly dominant and functionally important Stand at Selhurst Park.

Spectator Seating

The Main Stand will be expanded from a single tier configuration to three tiers, with the existing lower tier kept operational during construction.

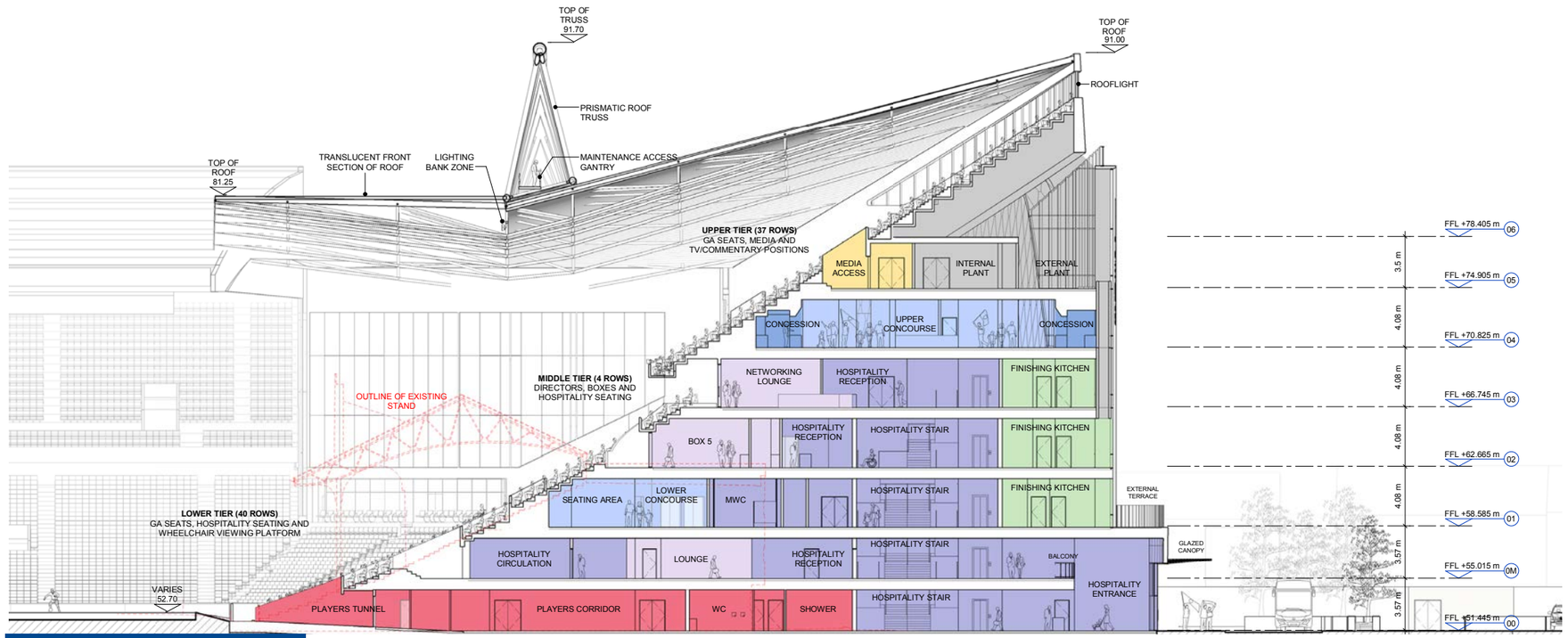
The existing tier will be re-profiled to 40 rows to give wider treads in line with current standards and will provide approx. 5,203 general admission seats and 2,155 premium/hospitality seats.

New players' tunnel and team benches and 'Tunnel Club' hospitality seats will be provided in the centre of the stand.

A new 4-row middle Directors / Hospitality tier will provide approx. 472 new premium seats including wheelchair user positions and amenity standard seats to the rear.

A new 37-row upper tier will provide approx. 5,768 general admission seats and a further 48 media positions (radio commentator / TV cameras / desks) in prime viewing positions at the centre front of the tier.

15no. retained and 42no. new wheelchair user positions, each with companion seats will be provided.



Proposed Main Stand Section

KEY

- PLAYERS, OFFICIALS & TEAM STAFF
- MEDIA
- CATERING FACILITIES
- RETAIL
- GENERAL ADMISSION CONCOURSE
- GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION
- HOSPITALITY LOUNGES & BOXES
- HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION
- PLANT
- VENUE STAFF FACILITIES, SERVICING & STORAGE

5.5 Layout and Internal Accommodation

The Main Stand accommodation will be expanded behind the existing 3 storey stand, and comprise 6 storeys plus an open roof plant area / media access gallery above. The existing hospitality accommodation will be replaced entirely.

Access to all areas within the Stand will be from a 9m wide perimeter access 'outer concourse' road running around the Main Stand at Level 0.

Access to 'general admission' lower and upper tier seats and to hospitality areas in the lower and middle tiers, will be via separate dedicated entrance lobbies, security control points and stair / lift cores.

Level 0 accommodates the greatest number of usages. This will include 'back-of-house' players, officials and team staff (POTS) facilities, a new media suite, matchday staff and stewards' changing and welfare facilities, central production kitchen, ground equipment store and waste recycling area.

A new 440sqm Club shop, 340sqm museum/cafe 'Palace Experience', match-ticket 'box office' windows and potential 550sqm A1/A3 retail space will create a 'shop front' aesthetic and provide an active frontage at pedestrian level around the perimeter of the stand.

New general admission concourses with supporting toilets and concession accommodation will be provided for the lower tier on Level 1 and the upper tier on Level 4. Inclusive independent access to the lower concourse via three stair cores and to the upper concourse via two stair cores, each incorporating internal scissor stairs and adjacent lifts, is described in Section 5.12.

New hospitality restaurants, lounges, and bars for VIPs and premium seat holders would be provided at evels 0 and Mezzanine (Tunnel Club and Bunker Bars), Level 1 (Speronis Club and Glaziers Lounges), Level 2 (Silver & Gold Lounges and 10no. Hospitality Boxes), and Level 3 (Directors & Platinuim Lounges and 16no. Hospitality Boxes).

A central production kitchen at Level 0 has direct vertical linkage via service lift to centrally positioned finishing kitchens on all upper hospitality levels, to assist with food/goods distribution and waste/used crockery handling.

Hospitality dining spaces on all upper levels enjoy proximity to 'glass facade' frontage along the western elevation, for occupants to enjoy views out, to provide natural daylighting to internal spaces and to help animate the building from outside.

A number of centrally-positioned hospitality boxes, dining spaces and bar areas on Levels 2 and 3 also enjoy exclusive direct views eastwards through glazed facades out onto the playing pitch.

Proposed GA Plan Axonometric

5.6 Use and Amount

The proposal would be to expand the Main Stand capacity by approximately 8,300 seats to a total of 13,500, including approximately 11,000 general admission seats and 2,500 premium / hospitality seats, and provide supporting front of house facilities, essential back of house operational facilities, reconfigured players, officials and team staff facilities, media centre, retail store, secure VIP parking, extensive public realm and associated landscape works.

Seating Capacity

• Main Stand (Approximately)	13,500
• Whitehorse Lane Stand (North)	2,131
• Arthur Wait Stand (East)	9,769
• Holmesdale Road Stand (South)	8,859
Total (Approximately)	34,259

Key Areas

• Application Site Area	4.9ha
• Main Stand Total GIA	25,072sqm
• Including A1/A3 Retail	550sqm
• Club Shop GIA	440sqm
• Parking (non-matchday)	140 spaces

A Summary of Floor Areas and Usages is included in Appendix A.

5.7 Appearance & Materials

Architectural Response - Historical Reference

The appearance of the Main Stand has been developed with the Club owners' brief in mind.

The Club has it's origins at the original Crystal Palace – a huge glasshouse on a metal frame that was constructed for the Great Exhibition of 1851. Originally showcased in Hyde Park, the Palace structure was dismantled at the end of the Exhibition and reassembled at Sydenham Hill in 1854.

When the Club was formed in 1905, it played it's matches inside the historic Crystal Palace grounds, and became known as the 'The Glaziers' in respect of it's links to the glass Palace.

In subsequent years, the Club moved to an existing football ground at Selhurst 'The Nest' before building Selhurst Park in 1924. In 1973, CPFC became 'The Eagles' and later, in 1992 CPFC became founder members of the Premier League.

Despite moving location and changing it's nickname, the Club is proud of its original South London roots and connections with the iconic Crystal Palace building. Today, the Palace building and the Eagle are the two dominant elements of the Club's crest.

The Club desire the design of the new Main Stand to draw inspiration from this rich heritage and historical connection with the Crystal Palace, and develop an architecture that is bold and confident, in line with CPFC's core brand ethos.

The proposed facade therefore subtly reflects certain elements of both the original Crystal Palace building and the Club's crest, as a key core brief requirement.

Crystal Palace Badge 2018

Crystal Palace FC - First Team Photo 1905

The Crystal Palace

Contextual Analysis

Selhurst Park is located within a primarily residential suburb of Greater London. The principle building typology is private residential dwellings, principally of the Victorian and Edwardian periods, with later contemporary post-war infill development. Residential development is supported by small scale retail.

Building forms generally consist of 2, 3 and 4-storey terraced buildings.

Despite many properties being subsequently over-clad, painted or rendered, the dominant building material that defines the streetscape and public realm is facing masonry brickwork, in mixed colour tones of buff London-stock brick and orange/red engineering facing brick.

On the small-scale residential buildings, London-stock facades are articulated with feature soldier course bands, quoins, sill projections and pier details in contrasting colour bands.

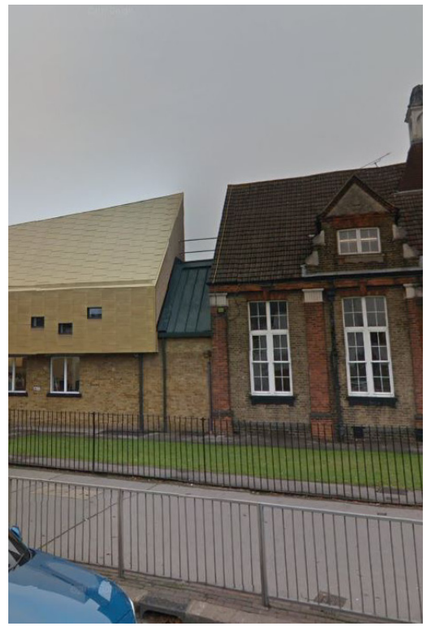
On larger-scale non-residential buildings, facades are complimented with metal panel cladding and roof details to breakup the monotony of masonry. These are further articulated by projecting facade planes and recesses, introducing shadow and creating depth in the facades.

Contemporary developments such as the Whitehorse Manor Junior School retain masonry as the base building material, to compliment existing and retained adjacent structures, but introduce metal cladding in a senstive manor that is both respectful to the existing building forms but introduces contemporary interpretation. Similar metal wrap enclosures are adopted at the existing Holmesdale Road Stand.

The lower 3-4 storeys of the proposed facade therefore responds to the immediate context of the surrounding residential and retail streetscape, and introduces metal cladding to the upper floors, commensurate with the large scale nature of a football stadium development.

Sainsbury's Supermarket adjacent to Selhurst Park


Whitehorse Manor Junior School




Typical Residential Townhouse close to Selhurst Park


Typical Residential 'Villa' houses


Holmesdale Road Stand Facade

Elevational Design Approach

The expanded Main Stand, at 169m long x 62m wide and over 39.55m high (back of main roof), will be the largest single stand at Selhurst Park and the largest building in the immediate area. The overall height and therefore enclosed volume is set primarily by the seating tier design and the new roof that covers all of the new and reprofiled seating tiers.

In developing the massing and form, the choice of a long span primary roof truss (rather than cantilevered trusses) and the curved roof cladding profile was selected to best suit the curved bowl profile, to mitigate impact on adjacent properties in the senstive northwest and southwest corners.

External claddings have been selected to suit the building scale, internal configuration and site context in a clearly legible manner. Key facade components are:

- Durable brick facing masonry façade at Levels 0-3, facing the public realm, to reflect the 'streetscale' and adjacent residential context and to identify entrances to GA concourse turnstiles / cores
- Glazed shopfront elements at at ground Level 0, to provide views into active retail frontages
- Reconstituted stone frieze panel above shopfront glazing as a horizontal unifying element around the curved facade
- Glazed curtain walling and metal framed elements to upper storeys, reflecting the form and nature of the Crystal Palace, to animate the facade with views into and out from hospitality dining and spectator concourse areas
- Feature arch in the centre of the stand, influenced by the south transept section profile of Crystal Palace and the Club logo, to signify the VIP / hospitality / player entrance lobby at Level 0
- Opaque glazed spandrel panels within the feature arch, to conceal functional kitchen production areas and service risers on upper levels
- Sculpted metal cladding wings with inclined ends, to conceal and enclose the general admission access cores, creating unifying elements to tie lower-mid floors with the upper levels and building parapet

The west facade and particularly the hospitality facilities will be exposed to low setting sun and glare. The façade will therefore address solar gain using:

- High performance glazing with solar reflective inter layers to doors and windows
- Ventilation strategy to modify internal temperatures

The primary structure will comprise a long span curved prismatic arch truss spanning onto the two main support cores at each end, with infill rafters connected back to the main structure at the rear which will support the main solid roof cladding, and cantilevered tips support the front section polycarbonate cladding.

The truss will cover all of the seating and its curved profile will articulate the back line of the upper tier, while providing a clear span structure without mid-span supporting columns in order to maintain unobstructed clear views for spectators from all seats to the pitch.

The design of the upper tier maximises seating capacity on the pitch mid way line, typically the best viewing positions in the stadium, while reducing numbers at each end of the stand closest to the goal touchline, which are less desirable viewing positions. The arch truss reflects the internal seating capacity, peaking in the middle, while dropping lower at the ends.

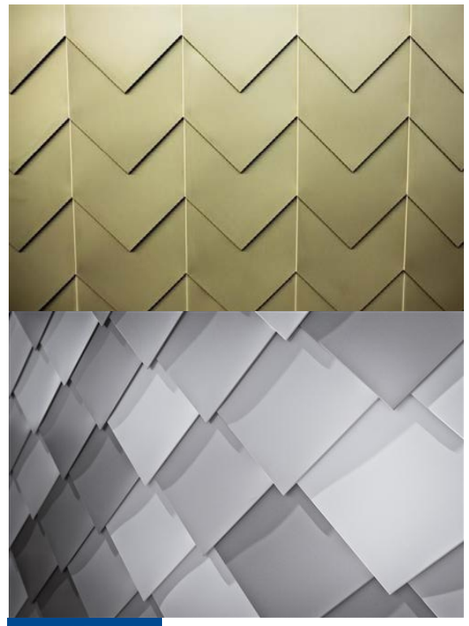
The roof leading edge will be set in line with the first row of seating in the lower tier, thereby providing rain protection to all seating in line with FSADC and FLA requirements, though the front section of the lower tier would unavoidably be affected by driving rain.

This roof edge will be translucent to maximise sunlight penetration into the ground in order to promote pitch grass growth.

Surface water run-off from the front and back sections will fall to a central gutter which will drain to major outlets in both ends and may be collected and reused for toilet flushing as part of CPFC's sustainability strategy for the development.

A continuous high level gantry will run internally along the length of the truss, to provide maintenance access to floodlighting and public address speakers set in roof plane upstand detail.

Curtain Walling



Metal Panels

Textured Brickwork

Roofing Materials

5.8 Design Evolution

Design Approach to Overall Form

The principal elements of the facade concept proposals are:

- curved bowl profile that maximises the number of centreline seats

- curved massing profile that responds to the immediate surroundings and restricted site area at each end of the site

- central landmark feature that reflects the Club's historic links to the 1851 Crystal Palace

- Glazing that provides visibility into the stadium and animates the facade

- cladding wings reminiscent of the CPFC 'Eagle' motif, to conceal internal staircases and service ducts

- brickwork masonry elements at low level, reflecting the building's suburban, residential context and providing a human scale at street level

- Club logo / signage for long-range site identification and to demark the main entrance into the Main Stand

In response to general design comments made by LA planning and place-making officers and observations made at the Place Review Panel (PRP) meeting on 18th January 2018, the design has been developed with a focus on the following areas:

- Architectural and design motifs
- Spectator and visitor approach and experience
- Entrance and key access locations
- Lower level/human scale
- Parking and "sense of place"

CONCEPT DESIGN CGI

Architectural and design motifs

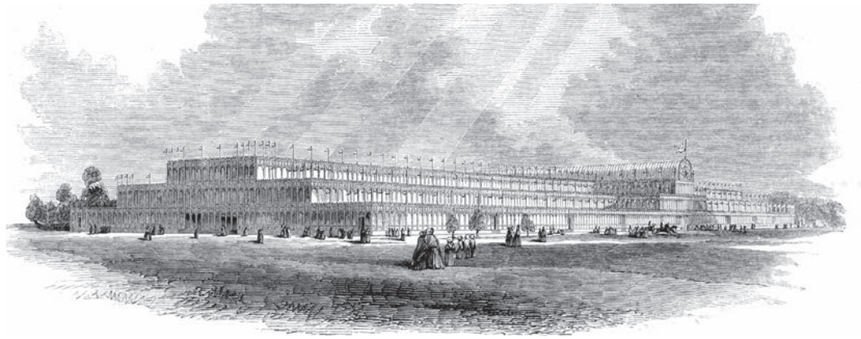
Generally comments from relevant authorities were based on the conceptual images released in December 2017. Initial concerns that the overall design concept utilising both The Crystal Palace and Eagle wings motifs appeared to be competing with each other have been addressed and the design development has further taken on board comments regarding the wings and vaulted arched form as being "tokenistic" and the external form as "corporate" which might weaken the aesthetic.

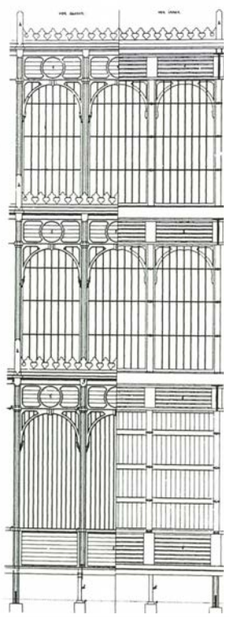
The design motifs have been developed since the initial concept visuals and early conversations with colleagues in planning and place making. The wings that wrap to the sides have been integrated into the architectural form and have been further stylised to avoid them being "tokenistic". Numerous cladding options have been considered to enhance the shimmer of these elements.

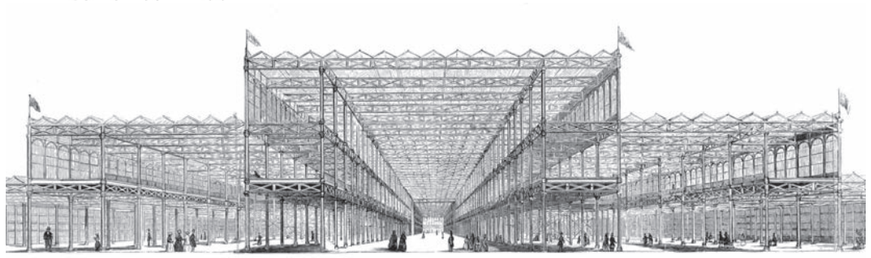
Some of the referential elements towards The Crystal Palace have been moderated in terms of their direct prominence on the façade and the design narrative has been developed further to enhance and balance the aesthetic. The elements of The Crystal Palace motifs have been retained, but the prominence of the main vaulted arch has been reduced so as to not break the main glazing line. The upper line of the glazing has, however, been retained to conceal plant levels and the rear of the concrete upper tier.

The glazing and structural module has been developed to nod towards Paxton's defining grid for The Crystal Palace at 8ft (approx.2.5m). This forms the vertical glazing lines in the upper façade. Further reference to Paxton's formative module size is seen in a fritted pattern applied to the main accommodation levels within the feature lines. The fritted pattern references the 10x49 inch glazing module size used throughout the structure – the maximum size that could be produced in float glass at the time by Birmingham based Chance Bros.

The design has not only been considered in context of comments from colleagues at the local authority, but also in careful consultation with the client who continues to express a desire to retain a number of the features developed at the concept stage and we have respected and responded to those wishes.



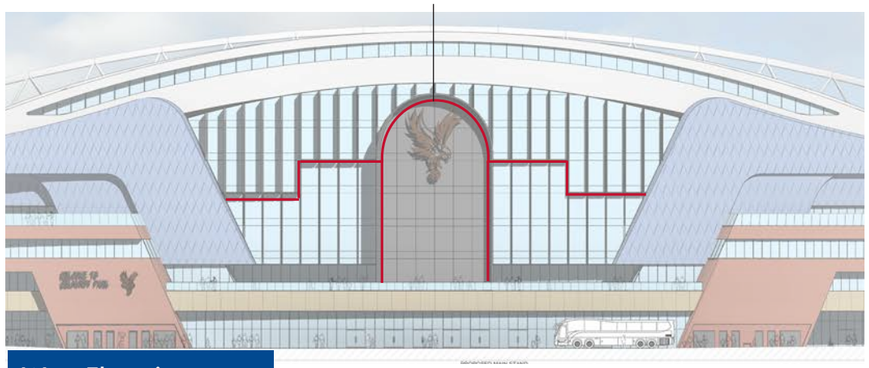




Conceptual Reference

2017 Elevation Concept

Suppress iconography of 'Crystal Palace' / consider fenestration of curtain walling / add glare control



West Elevation

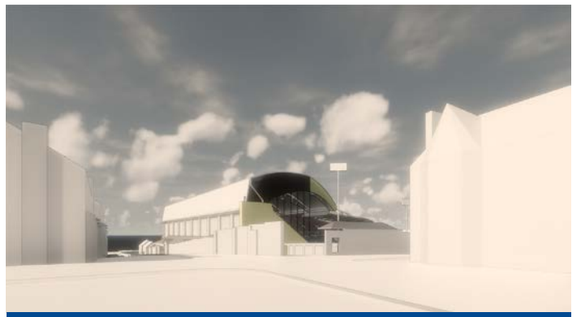
Entrance Facade - Proposed

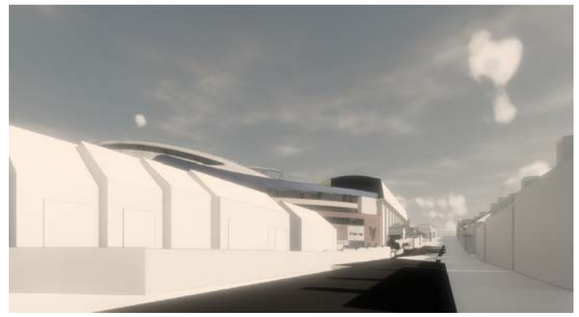
Spectator and visitor approach and experience

It was noted that comments from the PRP meeting suggested developing a clearer understanding of the approach and visual experience of visitors to the new Main Stand and the ground.

In response to these comments, the design team have developed key areas of the stand visible to the key approach views, including the lower level of the stand and main entrances. Views have been included from inside the newly included fan area.

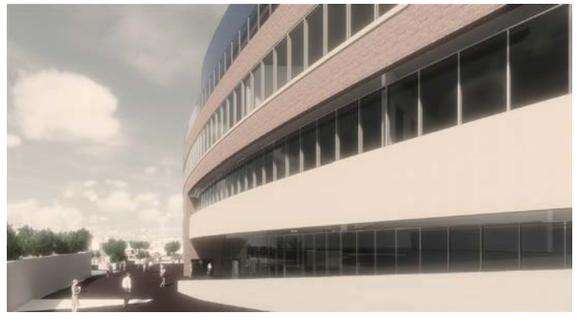
Below are a number of key sequential approach thumbnail views which describe the immediate local journey along Holmesdale Road and from Whitehorse Lane.



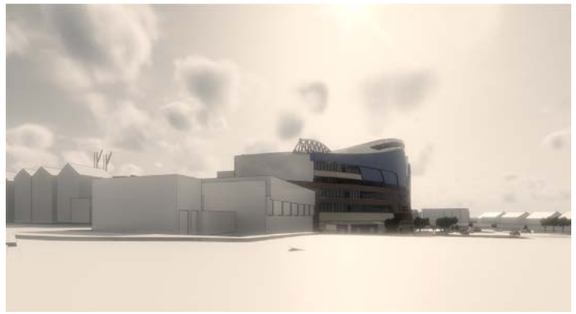


Views 1, 2 and 3 - Approach along Holmesdale Road

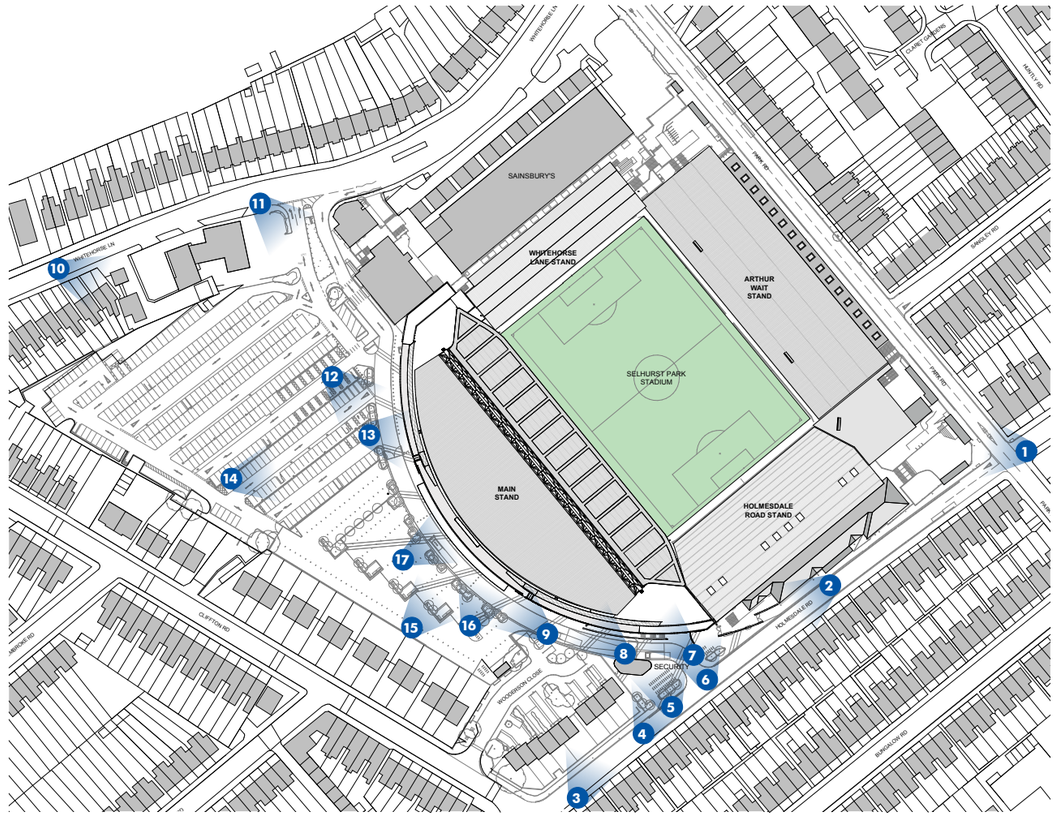
Views 4, 5 and 6 - Site Entrance from Holmesdale Road



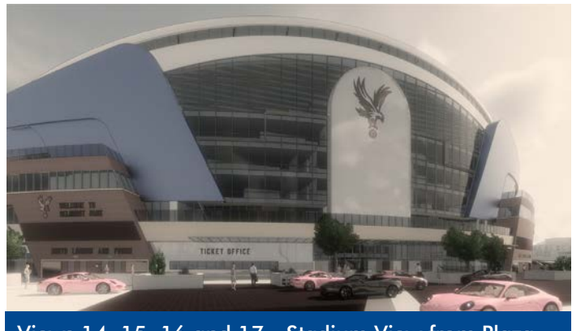
Views 7, 8 and 9 - SE Approach to Plaza



Views 10 and 11- Approach from Whitehorse Lane



Views 12 and 13 - NW Approach to Plaza



Views 14, 15, 16 and 17 - Stadium View from Plaza

Entrance and key access locations

Comments suggesting enhancing the main entrance and access areas have been reviewed and developed. The design has been further developed to uplift and enliven the frontages in these areas.

Initial sketches were presented to design and planning colleagues and have been further developed to harmonise the entrance areas in the elevation. Suggestions of façade activation and entrance graphics have been included and will be subject to a graphics and signage application.

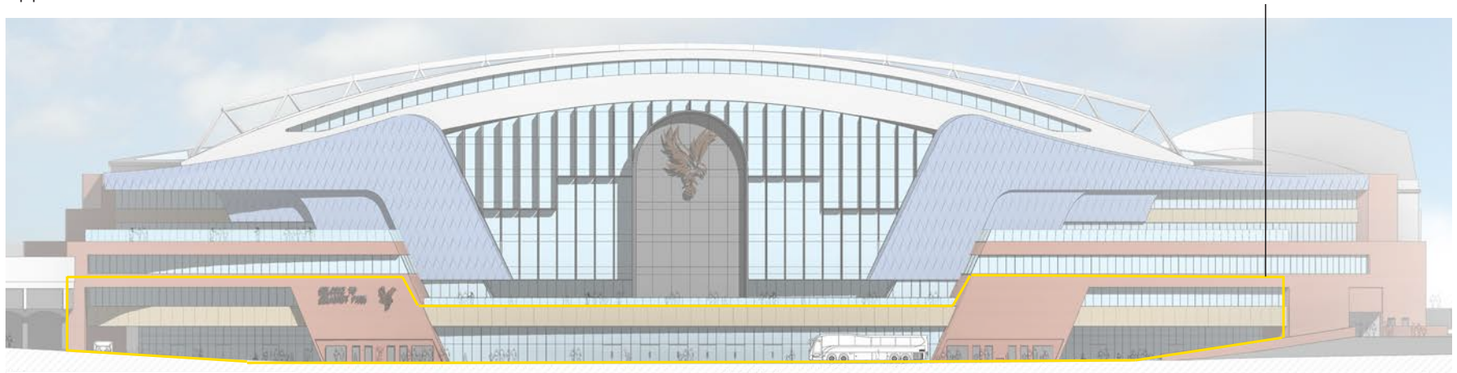
Lower level/human scale

It was noted that further development of the lower levels of the stand is required to address the human scale and further activate the lower levels.

The design has been developed to further uplift the lower level of the façade and incorporates many of the suggestions made by the PRP. Super graphics and active signage has been indicated along the main glazes facades, especially on the main entrance areas, club shop and ticket office.

The design now includes a layer of textured stone/concrete and brick set above the lowest level which creates relief and incorporates an important wall or fame/friends of the club feature.

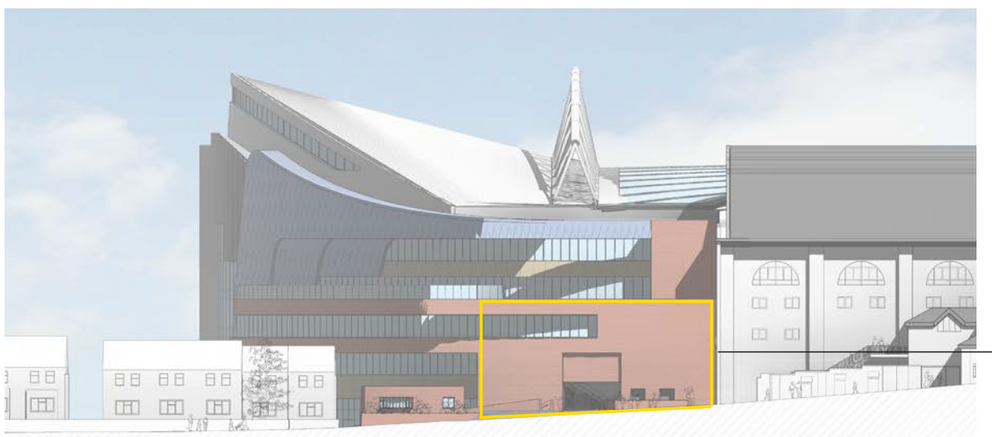
Review material quality / detail of lower two levels



West Facade - Concept

- Add feature / inlay brickwork to reveal
- Add soft landscape planting / seating within circulation zone
- Introduce CPFC brand entrance signage at turnstile positions
- Incorporate appropriate street-level shop front signage

Sketch Study



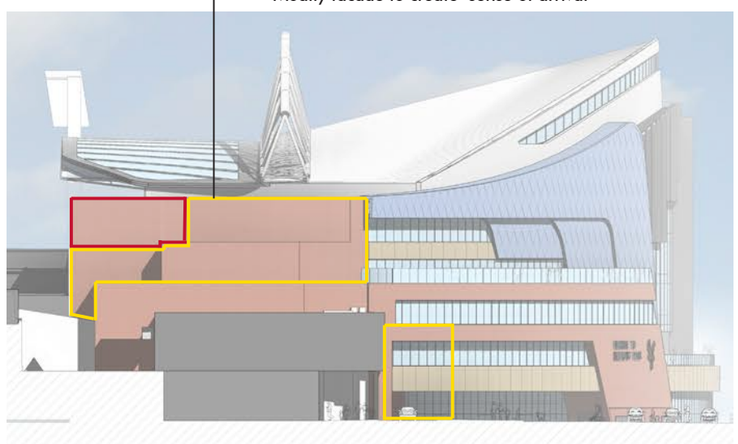
South Facade - Concept

Modify facade to create 'sense of arrival'

- Add feature curtain walling
- Introduce 'landmark' arrival signage
- Add feature / inlay brickwork to reveal

Sketch Study

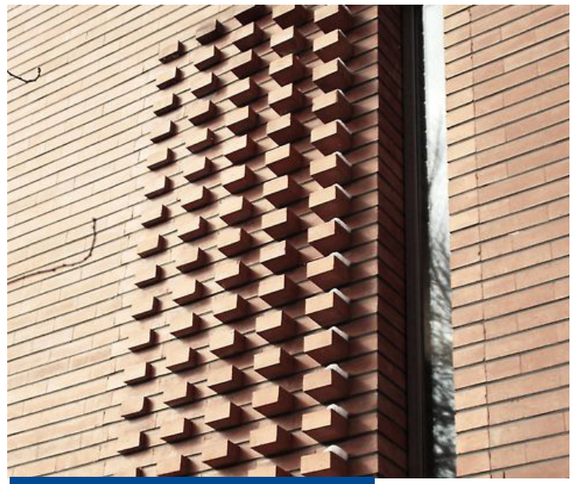
- Incorporate different materials
- Truncate level 4 accommodation to match adjacent Stand
- Modify facade to create 'sense of arrival'



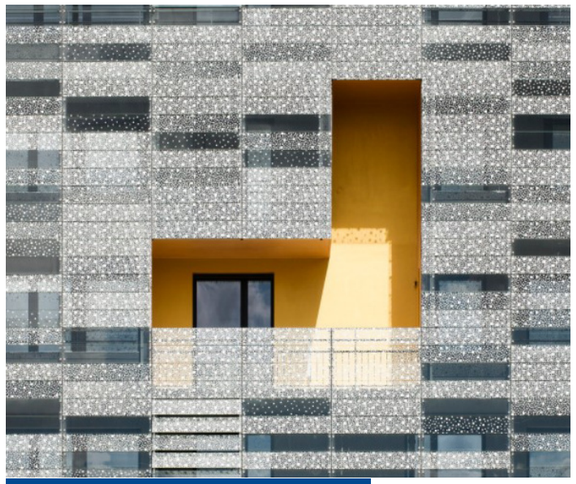
North Facade - Concept

Printed Concrete

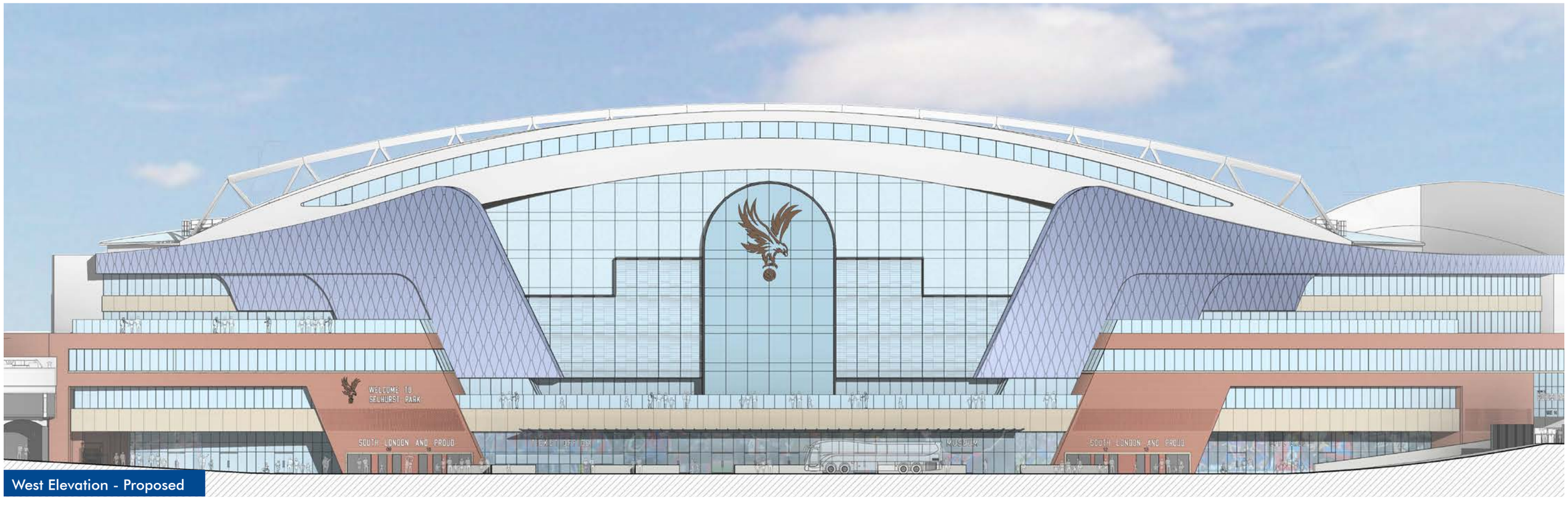
Etched Concrete



Textured / Patterened Briackwork

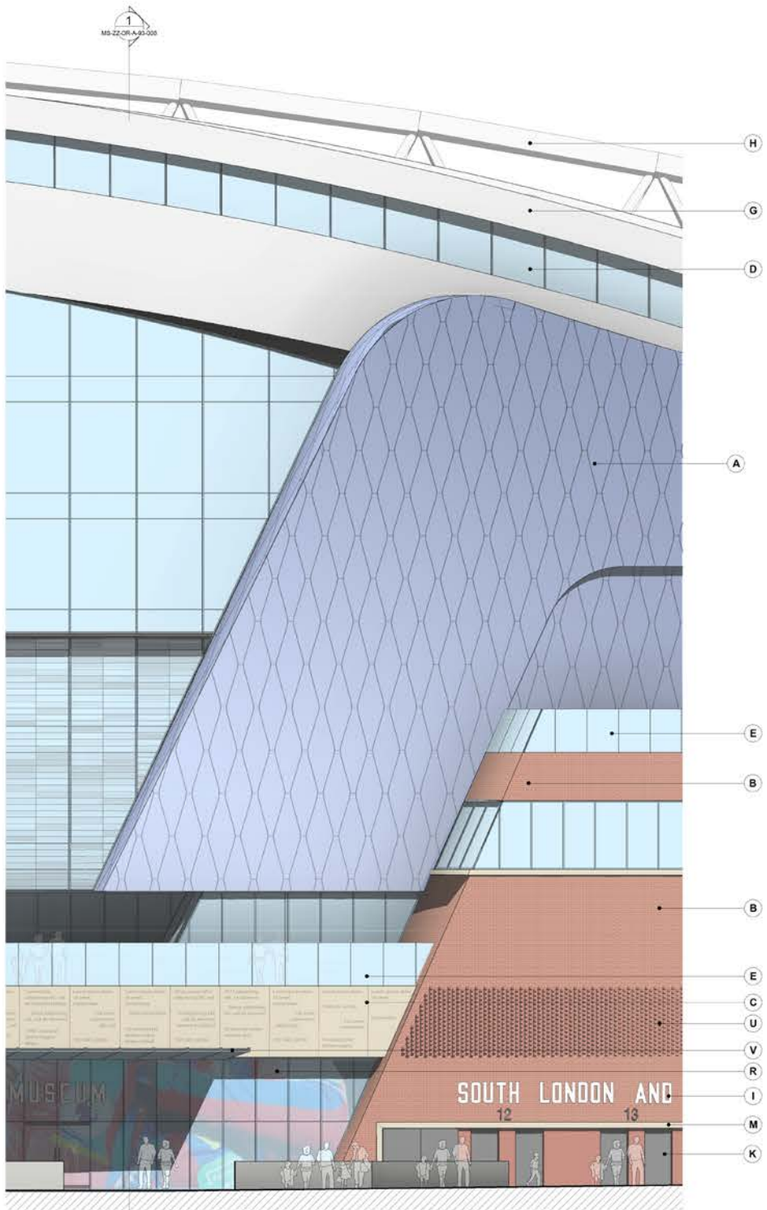


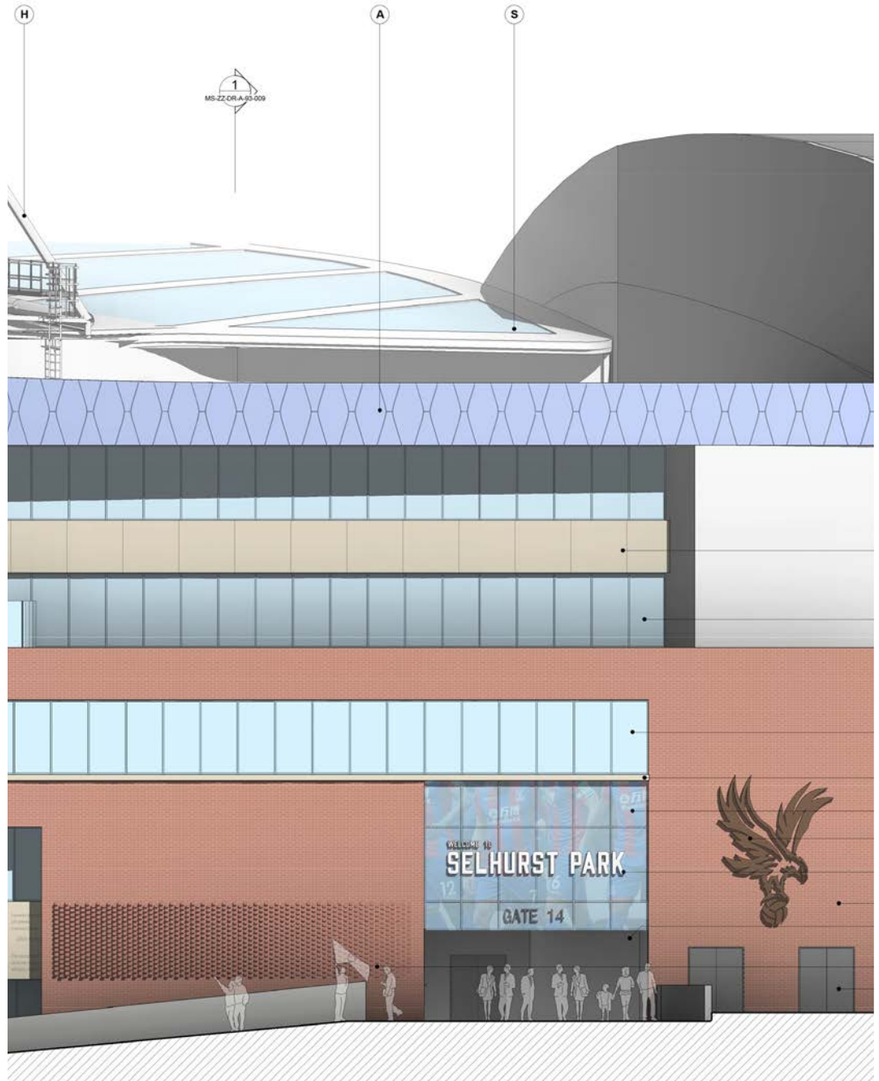
Fritted Glazing



West Elevation - Proposed

Elevational Detail





KEY

- (A) STAINLESS STEEL METAL CLADDING PANELS - RIMEX PYRAMID PATTERN COLOURTEX BLUE STAINLESS
- (B) VERNACULAR RED BROWN FLEMISH BOND BRICK CLADDING WITH SAND MORTAR
- (C) DIGITALLY PRINTED CONCRETE CLADDING PANELS
- (D) CURTAIN WALLING SYSTEM WITH WITH LOW E SOLAR CONTROLLED DOUBLE GLAZING AND POWDER COATED CAPPING TRIMS TO RAL9007
- (E) GLAZED BALUSTRADE WITH ANODISED BRONZE HANDRAIL AND POSTS
- (F) SINGLE GLAZED CURTAIN WALLING WITH SSG BACK-PAINTED GLASS.
- (G) ALUCOBOND PPC METAL CLADDING TO RAL9002
- (H) STEEL ROOF SUPPORT STRUCTURE WITH HIGH PERFORMANCE EPOXY PAINTED FINISH TO RAL9010
- (I) PPC PRESSED METAL SIGNAGE TO RAL 9002. (SUBJECT TO FUTURE SIGNAGE APPLICATION)
- (J) DOUBLE GLAZED HOSPITALITY ENTRANCE DOORS WITH POWDER COATED FINISH TO RAL 9007
- (K) METAL ENTRANCE DOORS WITH POWDER COATED FINISH
- (L) CPFC EAGLE EMBLEM IN ANODISED BRONZE FINISH
- (M) CAST CONCRETE WINDOW CILL AND FEATURE SURROUND
- (N) BRUSHED STAINLESS STEEL PRESSED METAL ARCHITECTURAL TRIM
- (O) CPFC VINYL SUPERGRAPHIC OVERLAY ON BACK PAINTED GLASS
- (P) ANODISED STEEL HANDRAILS TO CONCOURSE ACCESS STAIR
- (Q) STANDING SEAM ROOFING PANELS TO RAL7004
- (R) DOUBLE GLAZED CURTAIN WALLING SYSTEM WITH REMOVABLE CPFC VINYL SUPERGRAPHIC AND ANODISED BRONZE CAPPING TRIMS AND INTEGRAL DOUBLE GLAZED DOORS.
- (S) PROFILED CLEAR POLYCARBONATE SHEET CLADDING TO ROOF FRONT SECTION
- (T) CURTAIN WALLING SYSTEM WITH WITH LOW E SOLAR CONTROLLED FRITTED DOUBLE GLAZING AND ANOLOK 545 ANODISED CAPPING
- (U) VERNACULAR RED BROWN FLEMISH BOND BRICK CLADDING WITH EXTRUDED HEADERS AND SAND MORTAR.
- (V) LIGHTWEIGHT ENTRANCE CANOPY WITH CAST ALUMINIUM SUPPORT ARMS AND TOUGHENED GLASS CLADDING

5.9 CGI - Main Stand Elevation

5.10 External Landscape

The development will be partly constructed on the car park behind the existing Main Stand and will require Stadium and Sainsbury's car park layouts to be revised. External concourses, outside broadcast compund and junctions with existing highways will be remodelled.

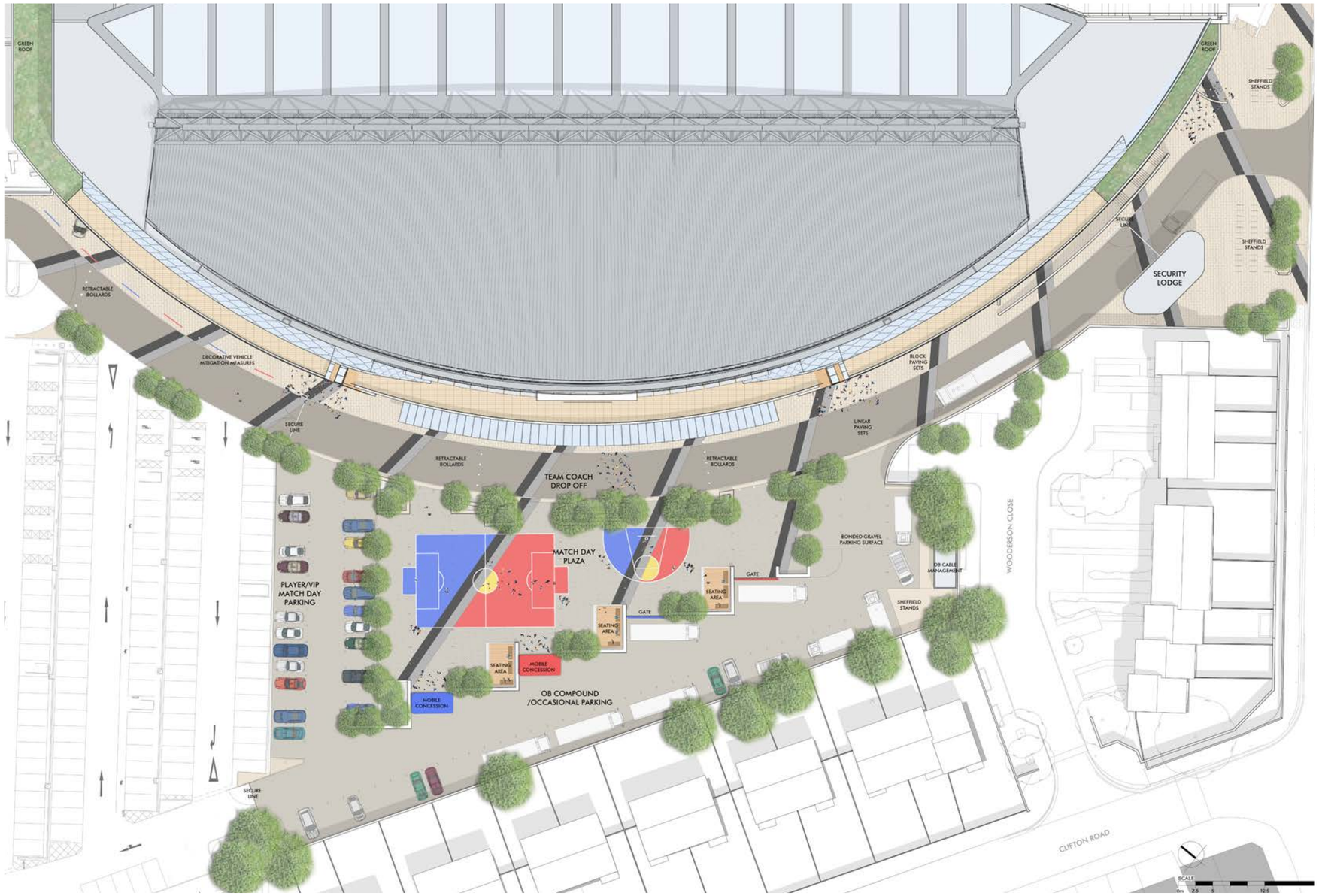
The existing car park is a private space owned by the Club, with controlled public vehicular access out of hours. Site security is achieved via lockable perimeter security gates along both the north boundary (with Sainsbury's car park) and the south boundary (to Holmedsale Road). These principles of site security and access are retained in the new proposals.

A key point made at the PRP was to review the initial frontage landscape design beyond the outer concourse. The initial brief from the client was to retain the car parking area and maintain parking numbers, however the PRP members were concerned that the enjoyment of the Main Stand would not be fully appreciated without the ability to view from longer range.

The landscaping design has been revised to enable a mix mode usage for match day events and parking on non-match days, as well as enabling longer range views from within the ground.

Key drrivers of the external landscape design approach are:

Space and Circulation- Improve circulation around the Stadium, with the landcape design defining clear routes into the Stadium and Car Parks
Public Plaza - provide an external pedestrianised 'plaza' in front of the Stadium for spectator matchday congregation
Car Parking - Rationalise and optimise non-matchday parking layouts and replace the existing Outside Broadcast Compound (OBC), to allow broadcasters full access for television production
Separation and Security - Create designated safe routes for pedestrians, cyclists and vehicles converging on and moving around the site
Softening the Environment - Improve the visual environment through the introduction of soft landscaping and planting.



Proposed Matchday Site Layout

Landscape Principles

A 9m wide obstacle-free 'outer concourse' is provided around the main stand perimeter, which is required to safely evacuate a maximum stadium capacity within 8 minutes from the stadium to surrounding highways.

The concourse incorporates a 6m wide vehicle access road, for non-matchday service access and access to car parking areas, and is separated from the building by protection bollards, in order to prevent accidential or malicious vehicular impact.

On a matchday, a pedestrianised 'Plaza', with soft landscaped planter beds and raised feature activity zones, creates a vehicle-free congregation zone in front of the Main Stand, for public spectator use. Mini football and basketball court floor markings facilitate informal pre-match games. The Club will arrange for the provision of temporary 'pop-up' entertainment, catering and sanitary facilities within the fan zone.

The western part of the car park incorporates a 1,500sqm Outside Broadcast Compound (OBC) for television production vehicles, as required by the FA Premier League and the principal TV broadcasters. This incorporates a small cable management cabin. The OBC is separated from the matchday Plaza by additional tree planting and raised feature areas.

New security gates at either end of the concourse and a manned Security lodge at the site entrance off Holmesdale Road will control vehicular access onto the site.

A secured team coach drop-off area, with retractable floor bollards is provided directly outside a dedicated player entrance.

The remodelled site boundary, between the Stadium concourse and the adjacent residences, incorporates a 3m high acoustic fence, to mitigate crowd-noise impact.

On non-matchdays, non-planted spaces in the Plaza revert to staff car park space. The outer concourse provides non-matchday service and car park access route and is visually and physically separated from the Plaza by raised tree-lined planter beds, curved in plan to follow the form of the stadium and to soften the external landscape character. These incorprate bench seats for informal meeting and congregation pre- and post-match.

The car park, accessed via Holmesdale Road, provides 126 spaces for non-matchday staff with 12 'managed' accessible spaces. On a matchday, the car park area is used as a publicly accessible 'Plaza' which will become a pre-match 'fan zone'. 31no. dedicated matchday spaces for Directors, VIP and Hospitality guests are provided. An additional 22no spaces may be available within the OBC area, subjest to match broadcasting requirements. 353no. additional spaces are located in the adjacent Sainsbury's car park, used by agreement.

Surfaces

A simple and robust solution is proposed to demark the different landscape areas and functions within the external public realm.

Different floor finishes identify the outer concourse, pedestrian walkways, car park acess roads and parking bays. Feature markings radiating out from the curved stadium form help to visually unite the separete spaces.

Furniture

The integration of street furniture, signage and lighting has been carefully considered and designed alongside the building, taking reference from the materials used and responding to the need for robust and distinctive solutions. Benches are constructed in concrete and a number of these would also have timber seats, with arm and backrests.

Cycle Parking

100 cycle stands are proposed as part of the new external works, located within the public realm adjacent to the site entrance Security lodge and around the building perimeter. These will provide space for 100 cycles.

Crowd and Car Park Management

The management of crowd movement around the exterior of the stadium pre match and post match focuses on vehicle and pedestrian segregation. CPFC operates under a safety certificate issued by Croydon

Proposed Non-Matchday Site Layout

Council and any revised version will include the management of crowds external to the footprint of the building on CPFC land and the public highway.

The current Traffic Management Order issued in 1997 by Croydon Council effectively bars all traffics from within the TMO for a period of 2 hours kick off. This is managed by barriers vehicles and marshals. The Corporate turnstiles for proposed 2500 in the main stand open 3 hours before kick off. The general admission turnstiles open 1.5 hours before kick off.

The main director car park entrance from Holmesdale Road opens 3 hours before kick off and closes approximately 1 hour before kick off. This is managed by a combination of barriers and steward

Evidence shows the majority of public entries occur after 1 hour before kick off. Accordingly traffic and pedestrians are separated on entry into the new main stand entrances. An effective ingress and queuing system will be designed to allow for the most efficient route however this will always need to be adjusted through the use of barriers and staff to allow for potential different match day circumstances. However the preference would be for channel lanes towards each turnstile entrance bank. An external outer cordon search on Holmesdale Road will speed up ingress.

5.11 Proposed Site Access - Matchday

It is anticpated that access to the stadium site from the wider suburban area will remain as per existing travel arrangements, with journeys to the stadium generally following the existing pattern:

44% via Car

41% via Train

15% by Other sustainable means

Arrivals via public train to the four nearest train stations are likely to split as follows:

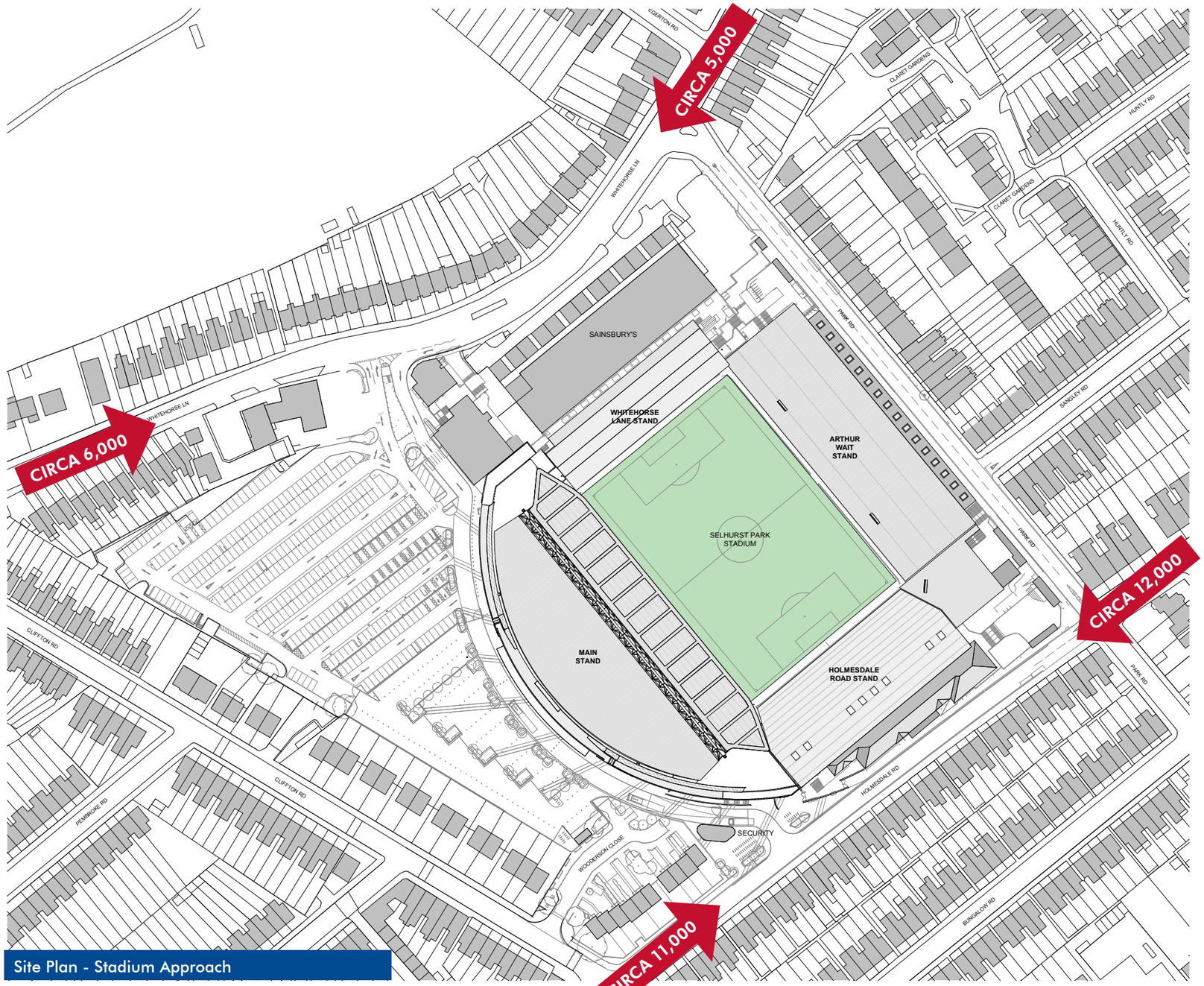
Selhurst: 40%

Norwood Junction: 49%

Thornton Heath: 9%

East Croydon: 2%

It is anticipated that considerably improved pre-match concessionary facilities for general admission ticket holders and an extended hospitality offer will encourage spectator early arrival. This will be further enhanced by the introduction of an external public plaza / 'fan zone'



Site Plan - Stadium Approach

5.12 Proposed Stadium Access Matchday

The public plaza will create a focal point where fans can gather pre-match before making their way into the ground.

Access into the Main Stand at plaza level for lower tier 'general admission' ticket holders is via three turnstile blocks.

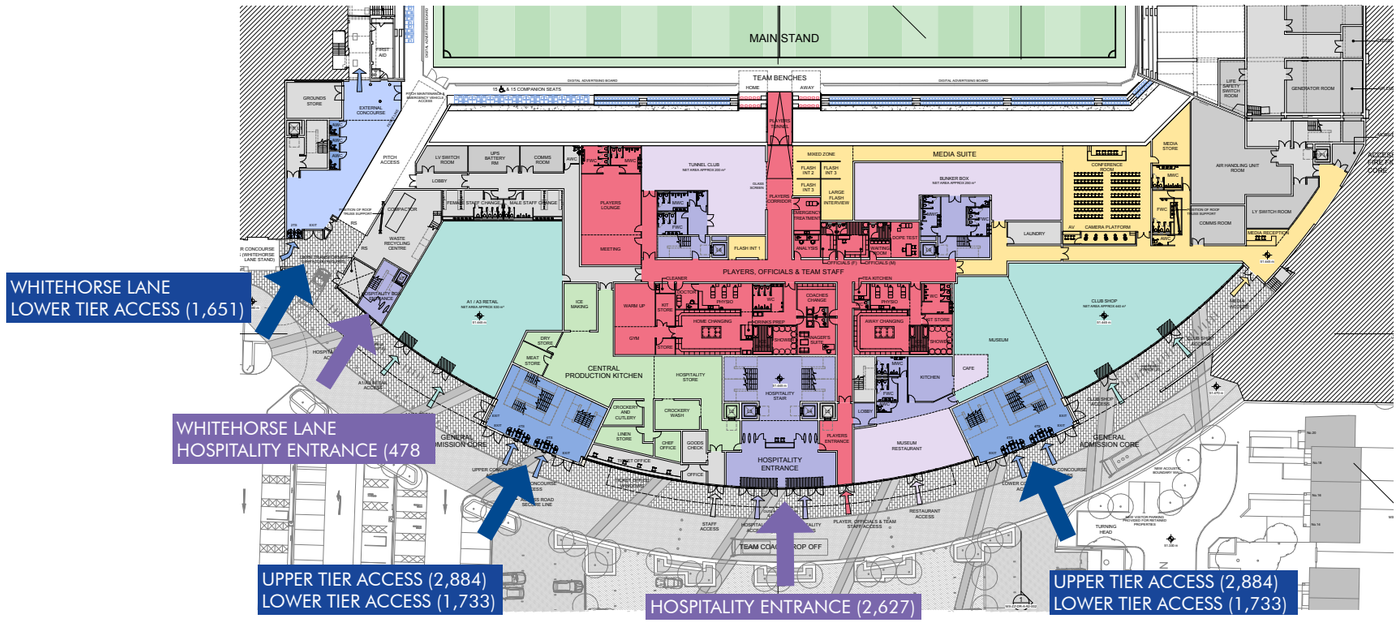
Two entrances are located at ground level, accessed directly off the outer concourse, and are identified by masonry facade elements that wrap down to the ground. A third GA entrance is located at the south end of the Stand which, due to differences in the sloping ground level, is effectively at mezzanine level. This is directly visible from the site aproach from Holmesdale Road.

Access for upper tier 'general admission' ticket holders is via the same two central entrance blocks.

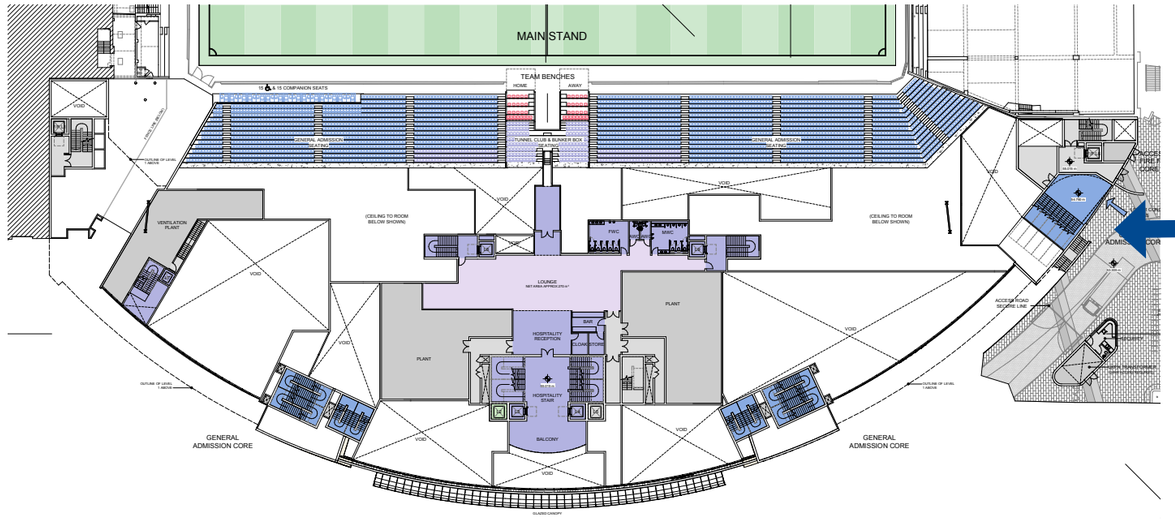
Entrance to the middle tier for VIP's, directors and corporate hospitality guests is via a dedicated entrance in the middle of the stand.

In reconfiguring the north-west corner of the stadium, existing access into the Whitehorse Lane Stand has been amalgamated into the Main Stand building. GA and hospitality entrance are located at the northern end of the Main Stand.

Wayfinding signage around the outer concourse and on the facade will direct spectators to the appropriate dedicatred entrance to each area.



Ground Floor - Main Stand Access



Mezzanine Level - Main Stand Access

5.13 Playing Pitch and Floodlights

The existing Selhurst Park pitch measures 101m x 68m. While this meets the necessary standards for Premier League compliance, it does not meet the necessary UEFA / FIFA standards that would allow the stadium to be used for International football matches.

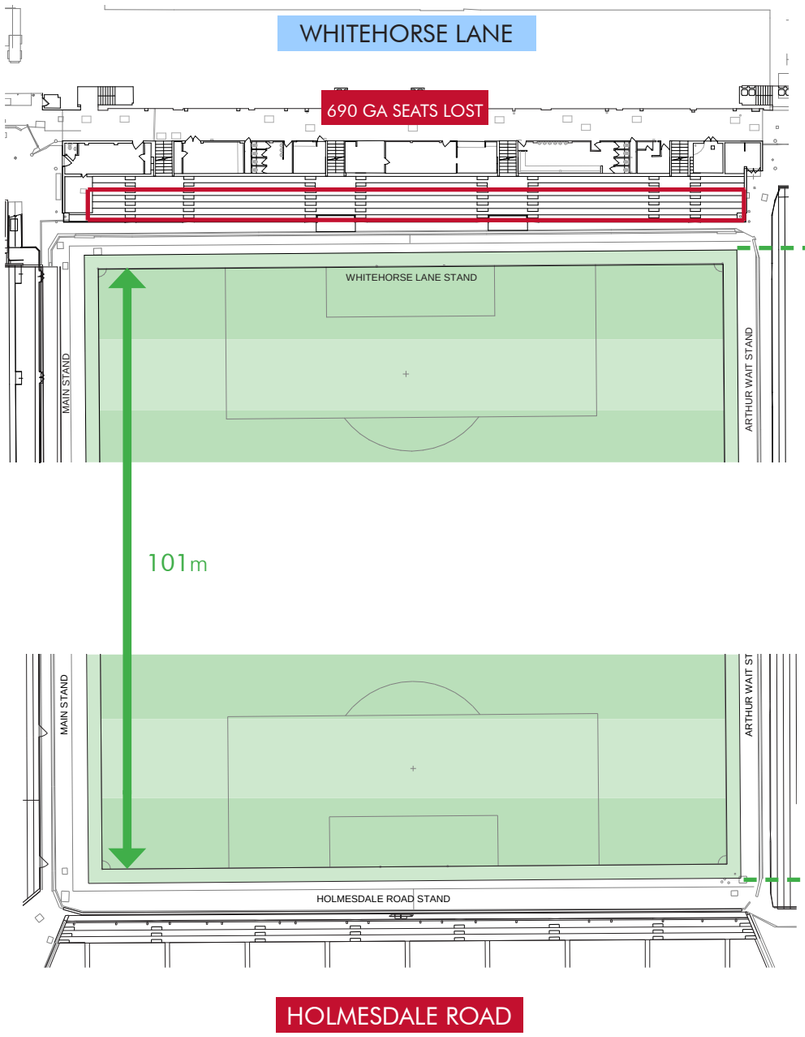
In order to do so, the pitch will be increased by 3.5m along its length, in order to achieve a 105m long playing surface. This will be achieved by extending the pitch aaprox. 2.43m in a northerly direction and 1.57m in a southerly direction.

This pitch expansion requires the front rows of the Whitehorse Lane Stand to be truncated accordingly. The net effect of this is the loss of 690 seats to the Whitehorse Lane Stand. 48no wheelchair and 48no. companion seats are re-provided along the front of the reprofiled tier.

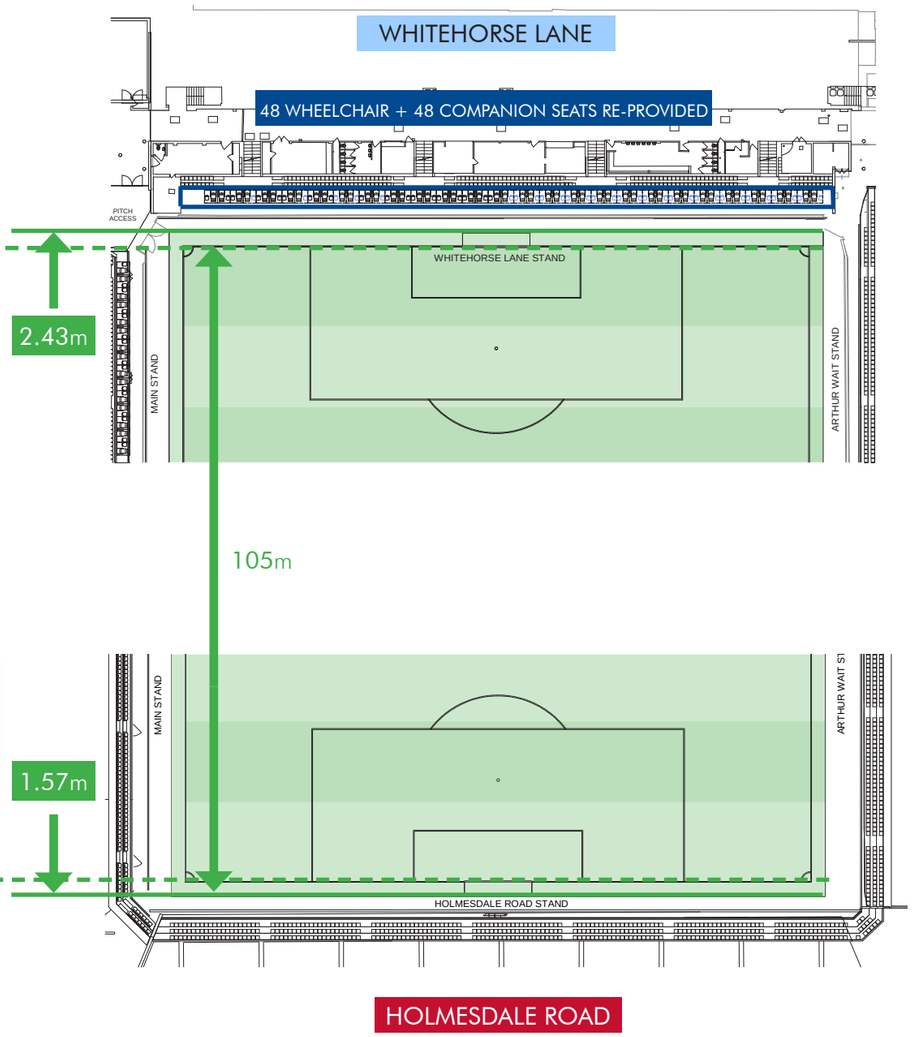
There are no seats lost at the front of the Holmesdale Road stand due to the existing configuration being able to accommodate the expansion.

In developing the Main Stand and extending the pitch, the existing pitch floodlighting strategy needs to be re-considered. A revised lighting strategy has been developed that best responds to the new stadium arrangements and seeks to reduce lightspill and impact on residential neighbours. Design of the lighting levels are based on minimum pitch-level illumination standards, as required by the FA Premier League for television broadcasts.

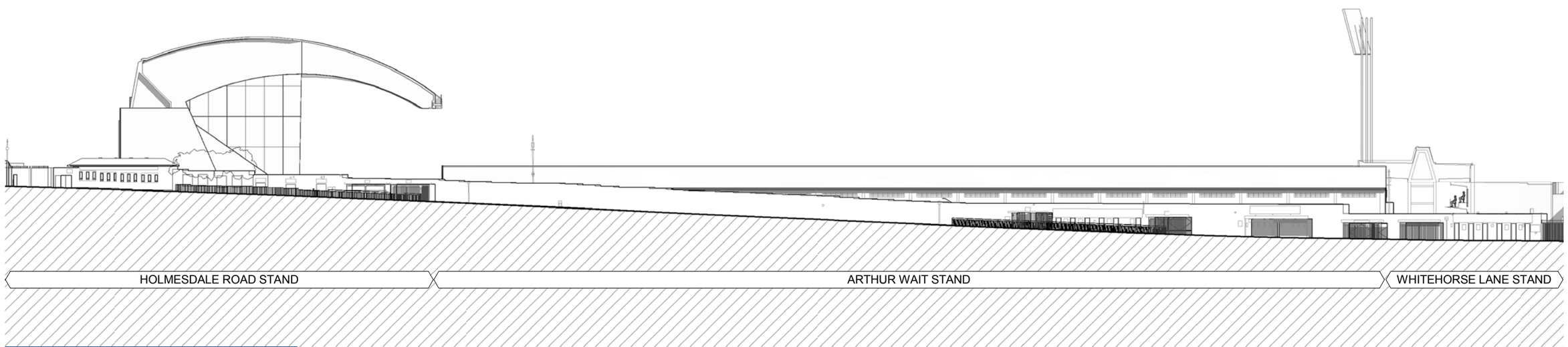
The pitch-size increase is relevant to the wider Main Stand design proposal, as the centre line of the symmetrical seating bowl, players tunnel and stadium roof has been aligned with the revised centreline of the pitch.



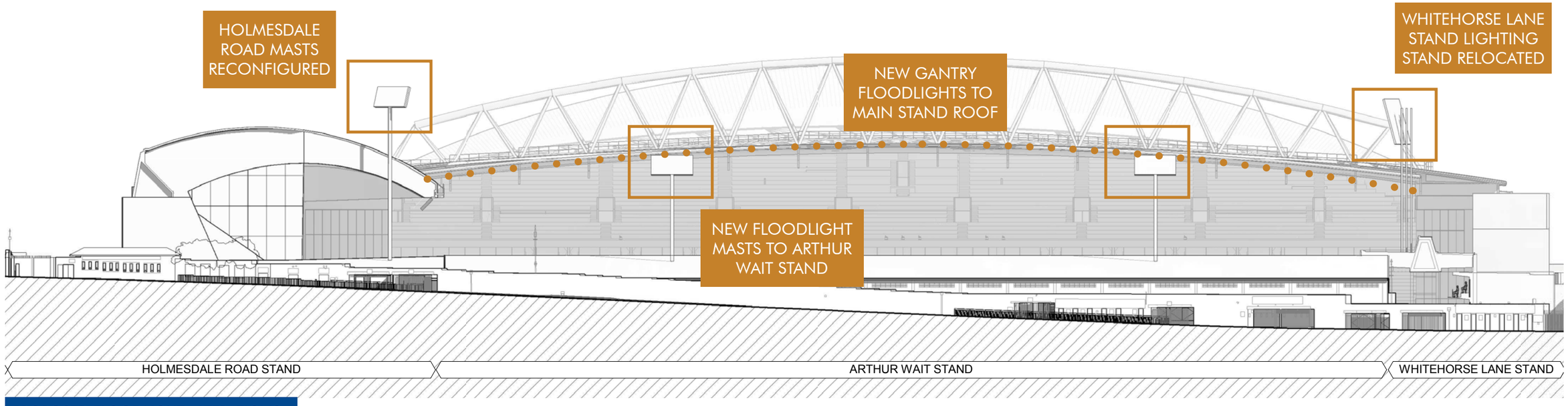
Existing Pitch Layout



Proposed Pitch Layout



EXISTING FLOODLIGHT ARRANGEMENT



PROPOSED FLOODLIGHT ALTERATIONS

5.14 Additional Seats

The proposed 3.5m increase in the length of the playing pitch and truncation of the Whitehorse Lane Stand will generate a net loss of 690 general admission seats.

The feasibility study considered how this seat loss could be retreived, with the least disruption to the rest of the Stadium.

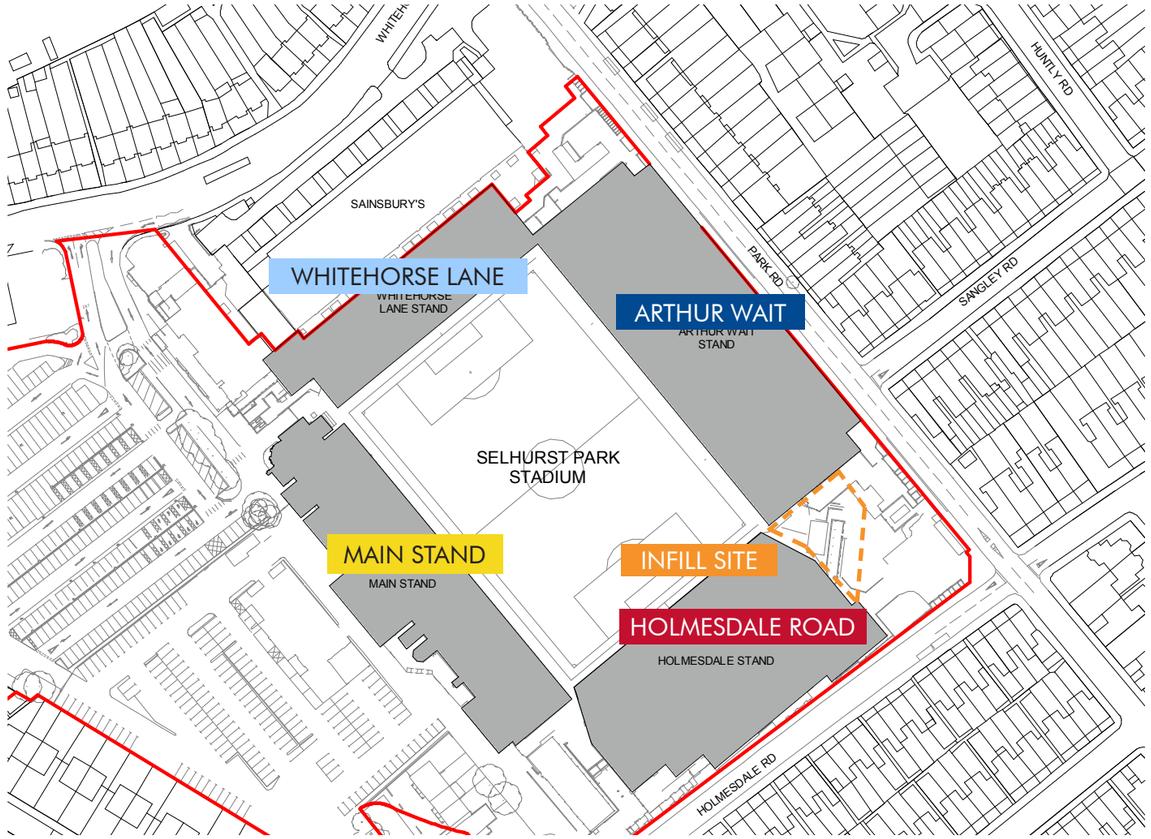
Adding seats to the rear of the Whitehorse Lane, Arthur Wait or Holmesdale Road Stands would be too expensive and inefficient, given the relatively small number of replacement seats required, as this would require complex structural modifications to the seating bowl and roofs. Adding seats to the proposed Main Stand would increase the bulk and scale of the building, potentially impacting on the sunlighting and daylighting of adjacent properties and planning risk, and provide seats not in the same ticket pricing bracket as those being lost.

The obvious solution is to infill the corners of the existing stands and utilise currently unused space.

The north-west and south-west corners are proposed to be redeveloped as part of the Main Stand works.

Infilling the north-east corner would be problemmatic, as this would add seats in a currently open area between home supporters in the Whitehorse Lane Stand and away supporters in the Arthur Wait Stand. A large proportion of any new seats between the two stands would need to be left unoccupied for the purposes of fan separation, which the open space currently ntaurally provides.

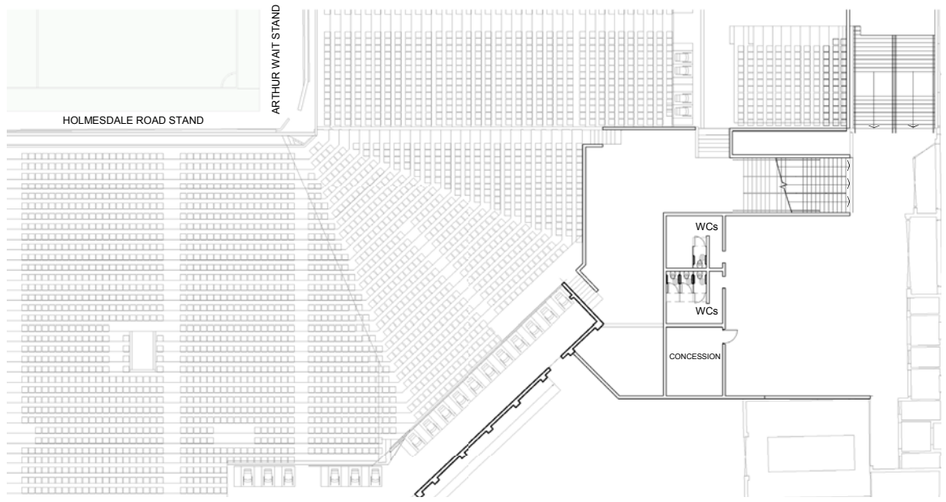
The only viable location for replacement seats is in the south-east corner between the Holmesdale Road and Arthur Wait Stands. This is an existing sloped area, with CPFC banner signage, that houses a TV Studio.



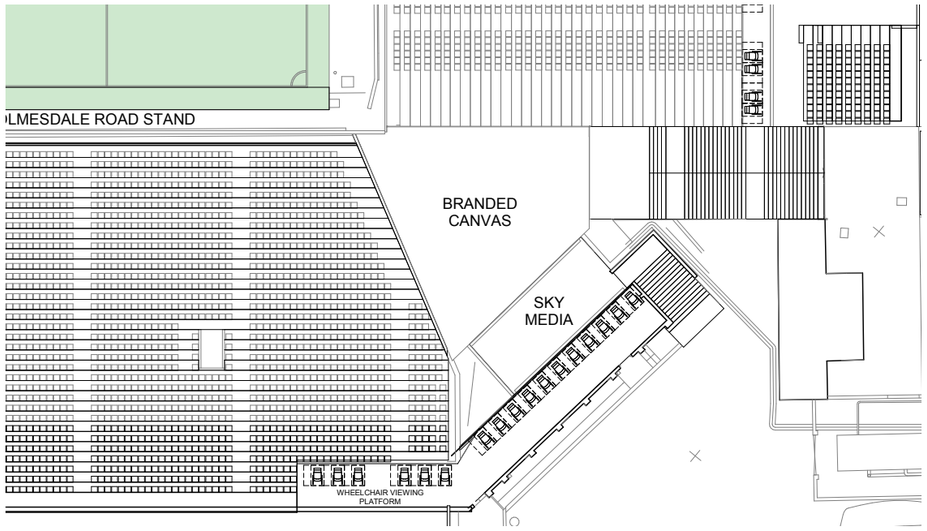
EXISTING SOUTH-EAST CORNER

The south-east corner will provide 683 replacement GA seats, with a new flat roof to provide cover to the spectator area.

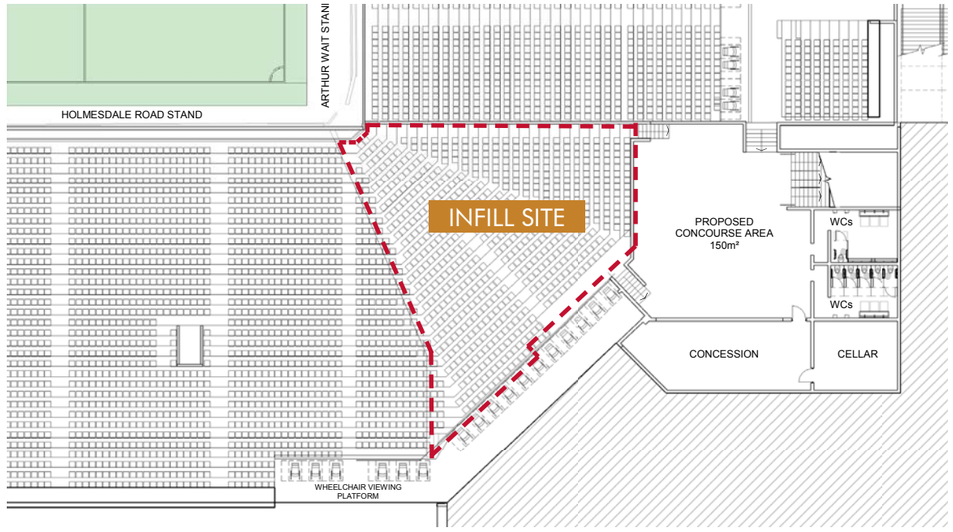
The existing TV studio will be demolished, with broadcast facilities re-provided within the new Main Stand development, at third floor level.



PROPOSED SOUTH-EAST CORNER - FIRST



EXISTING SOUTH-EAST CORNER



PROPOSED SOUTH-EAST CORNER - GROUND

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6.0 Inclusive Access

6.0 Inclusive Access

The proposals reflect CPFC's positive approach to inclusive design within the context of the constraints imposed by the existing stadium, and also the Club's commitment to consultation with its supporters groups. They incorporate significant improvements in accessible facilities particularly wheelchair user viewing positions and amenity seating, and respond to the following design legislation and guidance:

- Guide to Safety at Sports Grounds 5th Edition: 2008 (The Green Guide)
- SGSA Guide No.1 "Accessible Stadia"
- BS8300:2009 "Design of Buildings & Their Approaches to Meet the Needs of Disabled People"
- Building Regulations Approved Document M (with 2010 & 2013 amendments)
- Equality Act 2010.

6.1 Access Around the Stadium

All spectators approach the expanded stand via a remodelled external perimeter road with hard surfacing designed and laid to falls which ensures full accessibility for wheelchair users and the mobility impaired. A coordinated and consistent approach to external way finding signage (extended into the stands) will be adopted throughout for clarity of access and venue usage.

Surface materials havbe been selected to rminimise slip hazards, to achieve colour contrast for visually impaired where appropriate and with corduroy paving at approach to ramps and stairs.

Arrangement of street furniture, trees and lighting has been carefully considered to avoid presenting barriers and hazards to visually impaired pedestrians and are located away from the main match-day flow of spectators.

6.2 External and Internal Access

Access for general admission spectators in the Lower Tier is via three access stair core arrangements, from the external building perimeter at Level 0 directly up to 'Level 1' concourse. Stairs L1 and L2 comprise 'scissor stair' arrangements with two banks of full-height automatic turnstiles with proximity reader activation. Stair L3 is a straight flight arrangement, with turnstile control provided at Level 1 concourse, which provides access both to the new Main Stand lower concourse and into the existing Holmesdale Road Stand (existing access to which is removed as a result of redeveloping the Main Stand).

Access for general admission spectators in the Upper Tier is via two access stair core arrangements, from the external building perimeter at Level 0 directly up to 'Level 4' concourse. Stairs U1 and U2 comprise 'scissor stair' arrangements with two banks of full-height automatic turnstiles with proximity reader activation, located in the external building facade. Neither stairs interract with any of the intermediate floor levels, for security and ease of navigation.

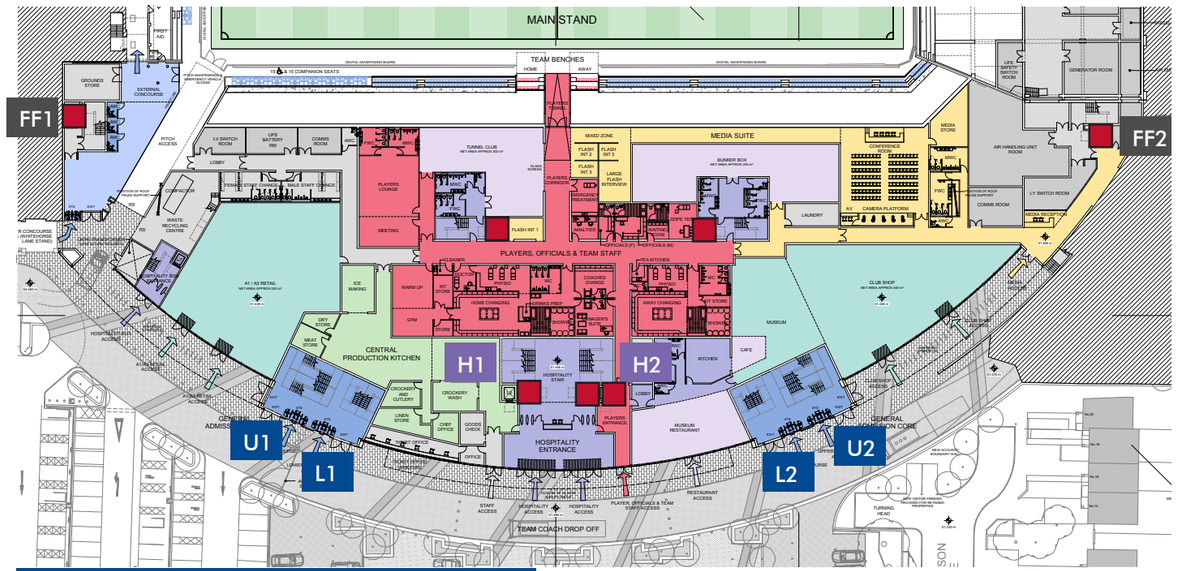
Access for hospitality members is via a dedicated central entrance lobby, with 2no. internal stairs H1 and H2 from Level 0 linking all upper hospitality levels.

All stairs in the Main Stand are designed to Green Guide and ADM standard.

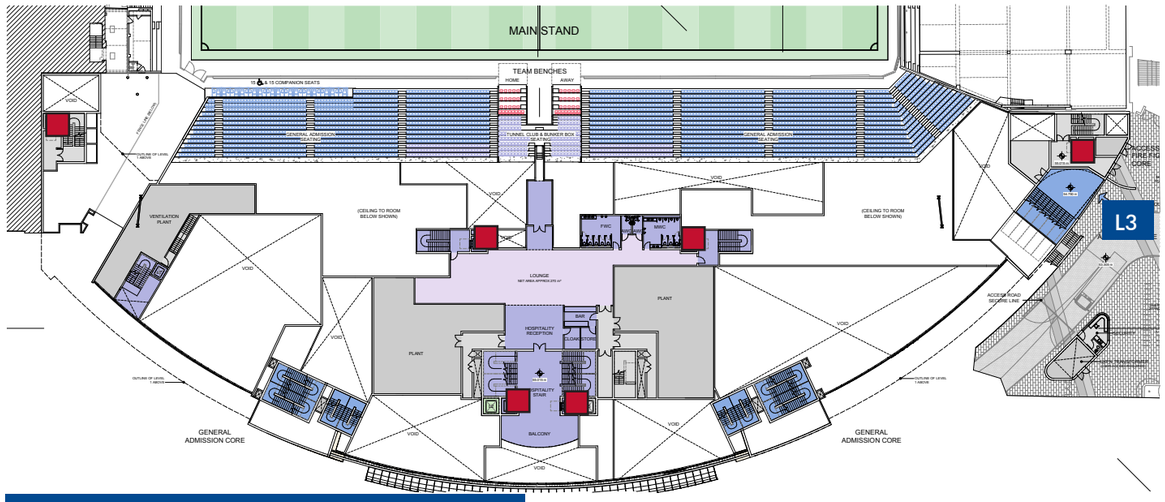
Independent inclusive access for general admission wheelchair users and amenity seat users is via dedicated entrances to Stair Cores FF1 and FF2, located at Level 0 at each end of the building. These provide access to wheelchair + companion viewing positions on Level 1.

Independent inclusive access for hospitality wheelchair users is via two central lifts in the Hospitality entrance Lobby, from Level 0 up to all hospitality levels.

Separate individual entrances for players, officials and team staff, media and match day staff, retail store and Club Shop at Level 0 are designed for inclusive access, All internal front and back of house areas are fully accessible, with horizontal and vertical circulation and toilet facilities designed accordingly.



Ground Floor - Access



Mezzanine Level - Access

6.3 Wheelchair Viewing Positions

The proposals provide accessible viewing areas for all disability groups, including ambulant disabled spectators, and offers a range of good quality viewing options from different positions.

The provision of accessible positions has been developed in consideration of the specific design requirements of the new Main Stand, analysis of the existing aggregated provision of the three adjacent retained Stands and the specific design guidance set out in the DCMS Guide to Safety at Sports Grounds 5th Edition (the "Green Guide").

For a stadium with a proposed maximum seated capacity of circa 34,000 seats, Green Guide Table 4 notes a requirement for 150 wheelchair spaces, plus 3 per every 1,000 above 20,000.

For the redeveloped Selhurst Park, the required wheelchair provision is therefore 192 positions.

Retained / Remodelled Provision

Existing wheelchair positions that will be retained are:

Arthur Wait Stand - SE end (Home Fans)	- 43
Arthur Wait Stand - NE end (Away Fans)	- 27
Arthur Wait/Holmesdale Road SE corner	- 23
Sub-total	- 93

Proposed Additional Provision

48no. new pitchside positions are provided at the front of the remodelled Whitehorse Lane Stand (described above in Section 5.14).

The balance of wheelchair positions will be within the new Main Stand.

15no new pitchside wheelchair positions are provided at level 0, all accessed directly via a ground level entrance to the north-west corner of the new Main Stand.

42no. new elevated wheelchair positions are provided at Level 1, all with direct level access from the lower concourse

The total number of wheelchair positions that proposed as part of the Main Stand works or arise through works to extend the length of the playing pitch are:

Main Stand	- 57
Whitehorse Lane Stand	- 48
Sub total	- 105.
Revised Selhurst Park total	- 197

Amenity Seats

The Green Guide Table 4 is also used to establish the requirement for 192 ambulant disabled seats. 165no. are already provided in the three adjacent stands. 30no. will be provided in the Main Stand.

Accessible Facilities

2no. Sensory Rooms are provided at Level 1 lower concourse level, in the south-wewst end of the Main Stand.. One of the spaces overlooks the playing pitch and the other provides a 'block-box' environment.

Accessible WC's and concesssion facilities are provided throughout the building and at every hospitality level and to both the lower and upper tier concourses.

Accessible Hospitality Offer

The recommended provision of wheelchair positions is 1% of the total number of hospitality covers. The new Main Stand proposes 2,500 hospitality spaces and therefore 25 dedicated accessible spaces are provided accordingly. These are located at Levels 2, 3 and 4 on mid-tier lateral gangways and are accessed directly from adjacent hospitality spaces. Removable seats and platforms will be provideed to suit matchday demand.

6.4 Egress & Emergency Evacuation

Normal match day egress and emergency evacuation routes for general admission and hospitality areas is generally via the same gangways, vomitories, stairs and lifts and podium stairs providing access. Spectators in the lower tier will continue to be able to escape onto the pitch via stewarded gates at the bottom of the lower tier gangways.

The egress and emergency evacuation strategy complies with Green Guide 5th Edition recommendations on spectator flow rates, exit widths and timings, and heads of stairs barriers are provided at the approach to the top of the podium outer stairs to slow down exiting crowd flows and control the direction of approach.

Wheelchair users and amenity seating user egress and emergency evacuation will be managed by stewards, and is via the same routes and lifts used for access. Appropriately located and sized refuge areas are provided adjacent to lifts used for evacuation.

General admission concourses on Levels 2 and 6 are designed as lower risk fire sterile spaces, and therefore places of relative safety. High risk accommodation including food cook concessions, kiosks and stores are enclosed in fire rated construction and fitted with fire rated roller shutters and doors.

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7.0 Views Assessment

7.0 Views Assessment

7.1 Accurate Visual Representations

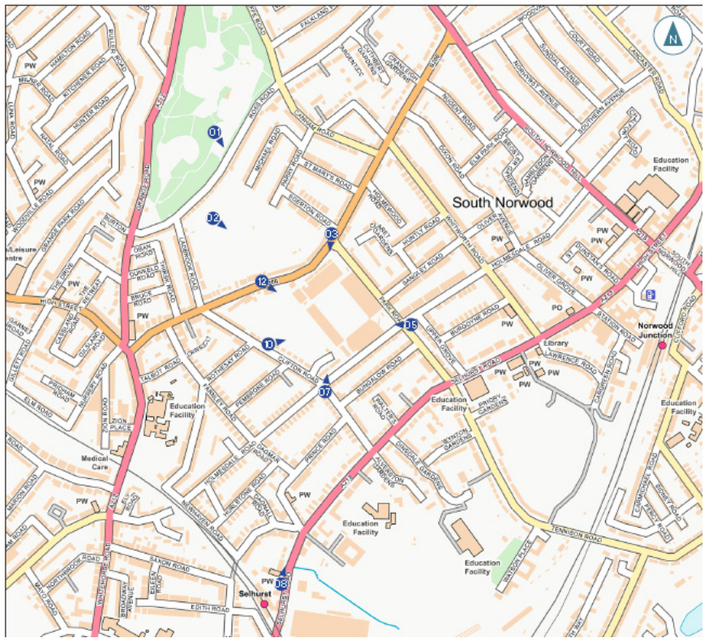
Accurate Visual Representation (AVR) studies have been prepared by Preconstruct Limited, in order to assess any likely significant impacts of the development.

The 'Verified View' analysis uses current best practise and identifies the potential changes to the physical landscape and landscape character and any potential changes to existing views of the Application site from eight key viewpoints.

The studies demonstrate that despite the large scaole of the development, the visual impact of the Stadium from long ranges is not significant. This is due to the existing urban street pattern, hillside location and site topgraphy.

As expected, the scale of the development is only really apparant when in close proximity to the development site.

Refer to Appendix B for Preconstruct's detailed AVR analysis report.



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Appendix A Area Schedule

LEVEL 00

wt	Department	Area
00		
CATERING LIFT	CATERING FACILITIES	6 m²
CENTRAL PRODUCTION KITCHEN	CATERING FACILITIES	161 m²
CHEF OFFICE	CATERING FACILITIES	18 m²
CROCKERY AND CUTLERY	CATERING FACILITIES	21 m²
CROCKERY WASH	CATERING FACILITIES	32 m²
DRY STORE	CATERING FACILITIES	13 m²
HOSPITALITY STORE	CATERING FACILITIES	107 m²
ICE MAKING	CATERING FACILITIES	37 m²
LINEN STORE	CATERING FACILITIES	27 m²
MEAT STORE	CATERING FACILITIES	18 m²
CIRCULATION	GENERAL ADMISSION CONCOURSE	137 m²
EXTERNAL CONCOURSE	GENERAL ADMISSION CONCOURSE	54 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	3 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	3 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	4 m²
GENERAL ADMISSION CORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	165 m²
GENERAL ADMISSION CORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	165 m²
BUNKER BOX	HOSPITALITY LOUNGES & BOXES	245 m²
CAFE	HOSPITALITY LOUNGES & BOXES	25 m²
MUSEUM RESTAURANT	HOSPITALITY LOUNGES & BOXES	150 m²
TUNNEL CLUB	HOSPITALITY LOUNGES & BOXES	199 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	12 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	15 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	17 m²
HOSPITALITY BOX ENTRANCE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	37 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	13 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	27 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	27 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	28 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	32 m²
HOSPITALITY ENTRANCE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	155 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	141 m²
KITCHEN	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	47 m²

wt	Department	Area
LOBBY	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	12 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	15 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	17 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	17 m²
AWC	MEDIA	4 m²
CIRCULATION	MEDIA	53 m²
CIRCULATION	MEDIA	166 m²
CONFERENCE ROOM	MEDIA	207 m²
FLASH INT 1	MEDIA	20 m²
FWC	MEDIA	23 m²
MEDIA CIRCULATION	MEDIA	79 m²
MEDIA RECEPTION	MEDIA	15 m²
MEDIA STORE	MEDIA	41 m²
MIXED ZONE	MEDIA	91 m²
MWC	MEDIA	22 m²
AIR DISCHARGE PLENUM	PLANT	41 m²
AIR HANDLING UNIT ROOM	PLANT	172 m²
CABLE MANAGEMENT	PLANT	20 m²
COMMS ROOM	PLANT	28 m²
COMMS ROOM	PLANT	50 m²
DIESEL FUEL TANK	PLANT	16 m²
GENERATOR ROOM	PLANT	69 m²
LIFE SAFETY SWITCH ROOM	PLANT	31 m²
LV SWITCH ROOM	PLANT	30 m²
LY SWITCH ROOM	PLANT	51 m²
MOBILE OPERATORS ROOM	PLANT	15 m²
POTABLE WATER STORAGE	PLANT	152 m²
SPLINKLER WATER STORAGE	PLANT	156 m²
UPS BATTERY RM	PLANT	33 m²
ANALYSIS	PLAYERS, OFFICIALS & TEAM STAFF	15 m²
AWAY CHANGING	PLAYERS, OFFICIALS & TEAM STAFF	12 m²
AWAY CHANGING	PLAYERS, OFFICIALS & TEAM STAFF	60 m²
CLEANER	PLAYERS, OFFICIALS & TEAM STAFF	5 m²
COACHES CHANGE	PLAYERS, OFFICIALS & TEAM STAFF	27 m²
DOCTOR	PLAYERS, OFFICIALS & TEAM STAFF	14 m²
DOPE TEST	PLAYERS, OFFICIALS & TEAM STAFF	33 m²
DRINKS PREP	PLAYERS, OFFICIALS & TEAM STAFF	4 m²
EMERGENCY TREATMENT	PLAYERS, OFFICIALS & TEAM STAFF	24 m²
FWC	PLAYERS, OFFICIALS & TEAM STAFF	18 m²
GYM	PLAYERS, OFFICIALS & TEAM STAFF	33 m²
HOME CHANGING	PLAYERS, OFFICIALS & TEAM STAFF	79 m²
ICE BATHS	PLAYERS, OFFICIALS & TEAM STAFF	13 m²
ICE BATHS	PLAYERS, OFFICIALS & TEAM STAFF	13 m²
KIT STORE	PLAYERS, OFFICIALS & TEAM STAFF	15 m²
KIT STORE	PLAYERS, OFFICIALS & TEAM STAFF	8 m²
MANAGER'S SUITE	PLAYERS, OFFICIALS & TEAM STAFF	30 m²
MEETING	PLAYERS, OFFICIALS & TEAM STAFF	44 m²
MWC	PLAYERS, OFFICIALS & TEAM STAFF	18 m²
OFFICIALS (F)	PLAYERS, OFFICIALS & TEAM STAFF	13 m²
OFFICIALS (M)	PLAYERS, OFFICIALS & TEAM STAFF	27 m²
PHYSIO	PLAYERS, OFFICIALS & TEAM STAFF	24 m²
PHYSIO	PLAYERS, OFFICIALS & TEAM STAFF	34 m²
PLAYERS CORRIDOR	PLAYERS, OFFICIALS & TEAM STAFF	312 m²
PLAYERS ENTRANCE	PLAYERS, OFFICIALS & TEAM STAFF	43 m²
PLAYERS LOUNGE	PLAYERS, OFFICIALS & TEAM STAFF	92 m²
SHOWER	PLAYERS, OFFICIALS & TEAM STAFF	17 m²

wt	Department	Area
SHOWER	PLAYERS, OFFICIALS & TEAM STAFF	17 m²
STORE	PLAYERS, OFFICIALS & TEAM STAFF	8 m²
TEA KITCHEN	PLAYERS, OFFICIALS & TEAM STAFF	6 m²
VEND. BINS	PLAYERS, OFFICIALS & TEAM STAFF	23 m²
WAITING ROOM	PLAYERS, OFFICIALS & TEAM STAFF	10 m²
WARM UP	PLAYERS, OFFICIALS & TEAM STAFF	42 m²
WC	PLAYERS, OFFICIALS & TEAM STAFF	3 m²
WC	PLAYERS, OFFICIALS & TEAM STAFF	3 m²
WC	PLAYERS, OFFICIALS & TEAM STAFF	5 m²
WC	PLAYERS, OFFICIALS & TEAM STAFF	20 m²
WC	PLAYERS, OFFICIALS & TEAM STAFF	22 m²
A1 / A3 RETAIL	RETAIL	527 m²
CLUB SHOP	RETAIL	442 m²
MUSEUM	RETAIL	177 m²
AWC	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	108 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	23 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	26 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
FEMALE STAFF CHANGE	VENUE STAFF FACILITIES, SERVICING & STORAGE	42 m²
GOODS CHECK	VENUE STAFF FACILITIES, SERVICING & STORAGE	19 m²
GROUNDS STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	48 m²
LAUNDRY	VENUE STAFF FACILITIES, SERVICING & STORAGE	29 m²
LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	19 m²
MALE STAFF CHANGE	VENUE STAFF FACILITIES, SERVICING & STORAGE	41 m²
OFFICE	VENUE STAFF FACILITIES, SERVICING & STORAGE	11 m²
PLANT	VENUE STAFF FACILITIES, SERVICING & STORAGE	296 m²
TICKET OFFICE	VENUE STAFF FACILITIES, SERVICING & STORAGE	41 m²
UKPN TRANSFORMER	VENUE STAFF FACILITIES, SERVICING & STORAGE	23 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
VENUE/STAFF STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	23 m²
WASTE RECYCLING CENTRE	VENUE STAFF FACILITIES, SERVICING & STORAGE	114 m²
		7103 m²

LEVEL M

wt	Department	Area
0M		
CATERING LIFT	CATERING FACILITIES	6 m²
LOWER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	88 m²
LOUNGE	HOSPITALITY LOUNGES & BOXES	271 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	15 m²
CLOAK	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	30 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	27 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	33 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	41 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
HOSPITALITY RECEPTION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	62 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	194 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	28 m²
STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	8 m²
PLANT	PLANT	242 m²
PLANT	PLANT	244 m²
RISER	PLANT	1 m²
RISER	PLANT	1 m²
RISER	PLANT	1 m²
RISER	PLANT	1 m²
RISER	PLANT	2 m²
RISER	PLANT	2 m²
RISER	PLANT	9 m²
RISER	PLANT	9 m²
UKPN TRANSFORMER	PLANT	12 m²
UKPN TRANSFORMER	PLANT	26 m²
VENTILATION PLANT	PLANT	161 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	28 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	28 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	26 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	33 m²

wt	Department	Area
PLANT ACCESS PLATFORM	VENUE STAFF FACILITIES, SERVICING & STORAGE	31 m²
SECURITY	VENUE STAFF FACILITIES, SERVICING & STORAGE	17 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
VENUE/STAFF STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	11 m²
VENUE/STAFF STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	24 m²
		1846 m²

REVISIONS

REV	DATE	DESCRIPTION	DRWN	CHKD
P1	31.01.18	PLANNING ISSUE	TF	LR

GENERAL NOTES AND LEGEND

Total NET area

Level	Area
00	7103 m²
0M	1846 m²
01	4715 m²
02	4101 m²
03	2746 m²
04	2809 m²
05	1527 m²
Grand total	24847 m²

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CLIENT
CRYSTAL PALACE FC

PROJECT
SELHURST PARK STADIUM REDEVELOPMENT

DRAWING TITLE
ROOM SCHEDULE - LEVEL 00 - 0M

DRAWING DATA & REFERENCE

Scale	Sheet Format	Drawn By	Date Drawn
	@ A1	TF	08.12.17
File Ref		Checked By	Date Checked
17812-KSS-MS-ZZ-M3-A-0001		LR	31.01.18
Status		Suitability	Revision
PLANNING		S2	P1

Project Ref.	Originator	Zone	Level	Type	Role	Series	Sequence
17812-	KSS-	XX-	ZZ-	SH-	A-	50-	001

LEVEL 01

wt	Department	Area
01		
CATERING LIFT	CATERING FACILITIES	6 m²
FINISHING KITCHEN	CATERING FACILITIES	107 m²
ACCESIBLE CONCOURSE	GENERAL ADMISSION CONCOURSE	73 m²
HOLMESDALE ROAD CONCOURSE ACCESS	GENERAL ADMISSION CONCOURSE	44 m²
HOSPITALITY BOX BAR & PREMIUM GA	GENERAL ADMISSION CONCOURSE	137 m²
LOWER CONCOURSE	GENERAL ADMISSION CONCOURSE	1576 m²
LOWER CONCOURSE CIRCULATION	GENERAL ADMISSION CONCOURSE	163 m²
SEATING AREA	GENERAL ADMISSION CONCOURSE	91 m²
ADULT CHANGE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	12 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	3 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	3 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	4 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	4 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	5 m²
BABY CHANGE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	8 m²
CELLAR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	31 m²
CELLAR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	32 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	18 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	32 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	32 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	48 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	74 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	74 m²
CONCESSION STORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	25 m²
CONCESSION STORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	25 m²
FIRST AID	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	35 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	72 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	72 m²
KIOSK	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	9 m²
KIOSK	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	9 m²
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	5 m²
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	7 m²
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	7 m²
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	10 m²
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	10 m²

wt	Department	Area
LOBBY	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	10 m²
LOWER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	29 m²
LOWER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	29 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	60 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	60 m²
REFUGE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	12 m²
SENSORY A	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	15 m²
SENSORY B	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	12 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
GLAZIERS LOUNGE	HOSPITALITY LOUNGES & BOXES	305 m²
HOSPITALITY BOX BAR & PREMIUM GA	HOSPITALITY LOUNGES & BOXES	126 m²
SPERONIS CLUB LOUNGE	HOSPITALITY LOUNGES & BOXES	356 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	3 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	3 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	19 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	19 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	30 m²
CLOAK	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	7 m²
CLOAK	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	7 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	32 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	28 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	139 m²
LOBBY	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	40 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	30 m²
RECEPTION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	14 m²
RECEPTION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	14 m²
STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	13 m²
WHL CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	53 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	23 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	25 m²
CLEANER	VENUE STAFF FACILITIES, SERVICING & STORAGE	8 m²

wt	Department	Area
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	26 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	8 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
HOSPITALITY CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	24 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	11 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	11 m²
LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	18 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
		4715 m²

LEVEL 02

wt	Department	Area
02		
CATERING LIFT	CATERING FACILITIES	6 m²
FINISHING KITCHEN	CATERING FACILITIES	124 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
BOX 1	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 2	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 3	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 4	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 5	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 6	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 7	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 8	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 9	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 10	HOSPITALITY LOUNGES & BOXES	24 m²
GOLD HOSPITALITY	HOSPITALITY LOUNGES & BOXES	832 m²
GOLD LOUNGE	HOSPITALITY LOUNGES & BOXES	468 m²
LOBBY	HOSPITALITY LOUNGES & BOXES	43 m²
LOBBY	HOSPITALITY LOUNGES & BOXES	43 m²
SILVER HOSPITALITY	HOSPITALITY LOUNGES & BOXES	838 m²
SILVER LOUNGE	HOSPITALITY LOUNGES & BOXES	332 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	3 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	26 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	34 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	37 m²
BAR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	37 m²
BAR STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	52 m²
BAR STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	52 m²
BOX FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	9 m²
BOX MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	14 m²
CLEANER	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
CLEANER	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
FURNITURE STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	48 m²
FURNITURE STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	48 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	21 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	21 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	38 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	38 m²

wt	Department	Area
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY RECEPTION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	62 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	139 m²
LOBBY	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	9 m²
LOBBY	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	10 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	20 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	20 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	32 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	32 m²
STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	23 m²
WHL CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	53 m²
RISER	PLANT	1 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	24 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	26 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	17 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	17 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	20 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
		4101 m²

REVISIONS

REV	DATE	DESCRIPTION	DRWN	CHKD
P1	31.01.18	PLANNING ISSUE	TF	LR

GENERAL NOTES AND LEGEND

Total NET area

Level	Area
00	7103 m²
0M	1846 m²
01	4715 m²
02	4101 m²
03	2746 m²
04	2809 m²
05	1527 m²
Grand total	24847 m²

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CLIENT
CRYSTAL PALACE FC

PROJECT
SELHURST PARK STADIUM REDEVELOPMENT

DRAWING TITLE
ROOM SCHEDULE - LEVEL 01 - 02

DRAWING DATA & REFERENCE

Scale	Sheet Format	Drawn By	Date Drawn
	@ A1	TF	
File Ref		Checked By	Date Checked
17812-KSS-MS-ZZ-M3-A-0001		LR	31.01.18
Status		Suitability	Revision
PLANNING		S2	P1

Project Ref.	Originator	Zone	Level	Type	Role	Series	Sequence
17812-	KSS-	XX-	ZZ-	SH-	A-	50-	002

LEVEL 03

wt	Department	Area
03		
CATERING LIFT	CATERING FACILITIES	6 m²
FINISHING KITCHEN	CATERING FACILITIES	122 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
BOX 1	HOSPITALITY LOUNGES & BOXES	26 m²
BOX 2	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 3	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 4	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 5	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 6	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 7	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 8	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 9	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 10	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 11	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 12	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 13	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 14	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 15	HOSPITALITY LOUNGES & BOXES	24 m²
BOX 16	HOSPITALITY LOUNGES & BOXES	26 m²
DIRECTORS DINING	HOSPITALITY LOUNGES & BOXES	208 m²
NETWORKING LOUNGE	HOSPITALITY LOUNGES & BOXES	244 m²
PLATINUM LOUNGE	HOSPITALITY LOUNGES & BOXES	242 m²
PLATINUM LOUNGE	HOSPITALITY LOUNGES & BOXES	421 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
AWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	4 m²
CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	13 m²
CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	37 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	11 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	29 m²
FWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	29 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	20 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	29 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	74 m²
HOSPITALITY CIRCULATION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	83 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY LIFT	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	6 m²
HOSPITALITY RECEPTION	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	32 m²
HOSPITALITY STAIR	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	79 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	18 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	23 m²
MWC	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	23 m²
STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	7 m²
STORE	HOSPITALITY LOUNGES & BOXES WCs & CIRCULATION	7 m²
MEDIA PREP	MEDIA	24 m²
TV STUDIO 1	MEDIA	35 m²
TV STUDIO 2	MEDIA	36 m²
TV STUDIO STORE	MEDIA	23 m²
WC	MEDIA	5 m²
RISER	PLANT	3 m²
RISER	PLANT	3 m²
RISER	PLANT	3 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	58 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	86 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	32 m²
HOSPITALITY CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	56 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	9 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	9 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	8 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	12 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
		2746 m²

LEVEL 04

wt	Department	Area
04		
PREMIUM GA	GENERAL ADMISSION CONCOURSE	182 m²
UPPER CONCOURSE	GENERAL ADMISSION CONCOURSE	1307 m²
AWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	4 m²
BABY CHANGE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	7 m²
BAR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	16 m²
CELLAR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	32 m²
CELLAR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	32 m²
CIRCULATION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	29 m²
CIRCULATION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	40 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	19 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	20 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	23 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	38 m²
CONCESSION	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	47 m²
FIRST AID	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	17 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	29 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	29 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	66 m²
FWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	66 m²
KIOSK	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	13 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	25 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	25 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	65 m²
MWC	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	65 m²
REFUSE STORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	17 m²
STORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	5 m²
STORE	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	7 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
UPPER CONCOURSE STAIR	GENERAL ADMISSION WCs, CONCESSIONS & CIRCULATION	49 m²
MEDIA GALLERY	MEDIA	34 m²
STADIUM PA	MEDIA	20 m²
STORE	MEDIA	6 m²
RISER	PLANT	5 m²
RISER	PLANT	5 m²
RISER	PLANT	12 m²
RISER	PLANT	12 m²
RISER	PLANT	12 m²
AWC	VENUE STAFF FACILITIES, SERVICING & STORAGE	4 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	8 m²
CIRCULATION	VENUE STAFF FACILITIES, SERVICING & STORAGE	23 m²
CLEANER	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	7 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	14 m²
F/F LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	21 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	27 m²
F/F STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	32 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	9 m²
IT/COMMS	VENUE STAFF FACILITIES, SERVICING & STORAGE	13 m²
LOBBY	VENUE STAFF FACILITIES, SERVICING & STORAGE	12 m²
MEETING ROOM	VENUE STAFF FACILITIES, SERVICING & STORAGE	28 m²
STADIUM CONTROL ROOM	VENUE STAFF FACILITIES, SERVICING & STORAGE	144 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	3 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
VENUE/STAFF STAIR	VENUE STAFF FACILITIES, SERVICING & STORAGE	24 m²

LEVEL 05

wt	Department	Area
		2809 m²
05		
LOBBY	MEDIA	33 m²
MEDIA ACCESS	MEDIA	23 m²
EXTERNAL PLANT	PLANT	1177 m²
INTERNAL PLANT	PLANT	176 m²
RISER	PLANT	12 m²
RISER	PLANT	12 m²
STAIRS	VENUE STAFF FACILITIES, SERVICING & STORAGE	24 m²
STORE	VENUE STAFF FACILITIES, SERVICING & STORAGE	64 m²
VENUE/STAFF LIFT	VENUE STAFF FACILITIES, SERVICING & STORAGE	6 m²
		1527 m²

REVISIONS

REV	DATE	DESCRIPTION	DRWN	CHKD
P1	31.01.18	PLANNING ISSUE	TF	LR

GENERAL NOTES AND LEGEND

Total NET area

Level	Area
00	7103 m²
0M	1846 m²
01	4715 m²
02	4101 m²
03	2746 m²
04	2809 m²
05	1527 m²
Grand total	24847 m²

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PROJECT
SELHURST PARK STADIUM REDEVELOPMENT

DRAWING TITLE
ROOM SCHEDULE - LEVEL 03 - 05

DRAWING DATA & REFERENCE

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File Ref		Checked By	Date Checked
17812-KSS-MS-ZZ-M3-A-0001		LR	31.01.18
Status		Suitability	Revision
PLANNING		S2	P1

Project Ref.	Originator	Zone	Level	Type	Role	Series	Sequence
17812	KSS	XX	ZZ	SH	A	50	003

Appendix B AVR Report

CRYSTAL PALACE FC MAIN STAND
ACCURATE VISUAL REPRESENTATIONS (AVR2 + AVR3)

Preconstruct Limited
www.preconstruct.com

February 2018

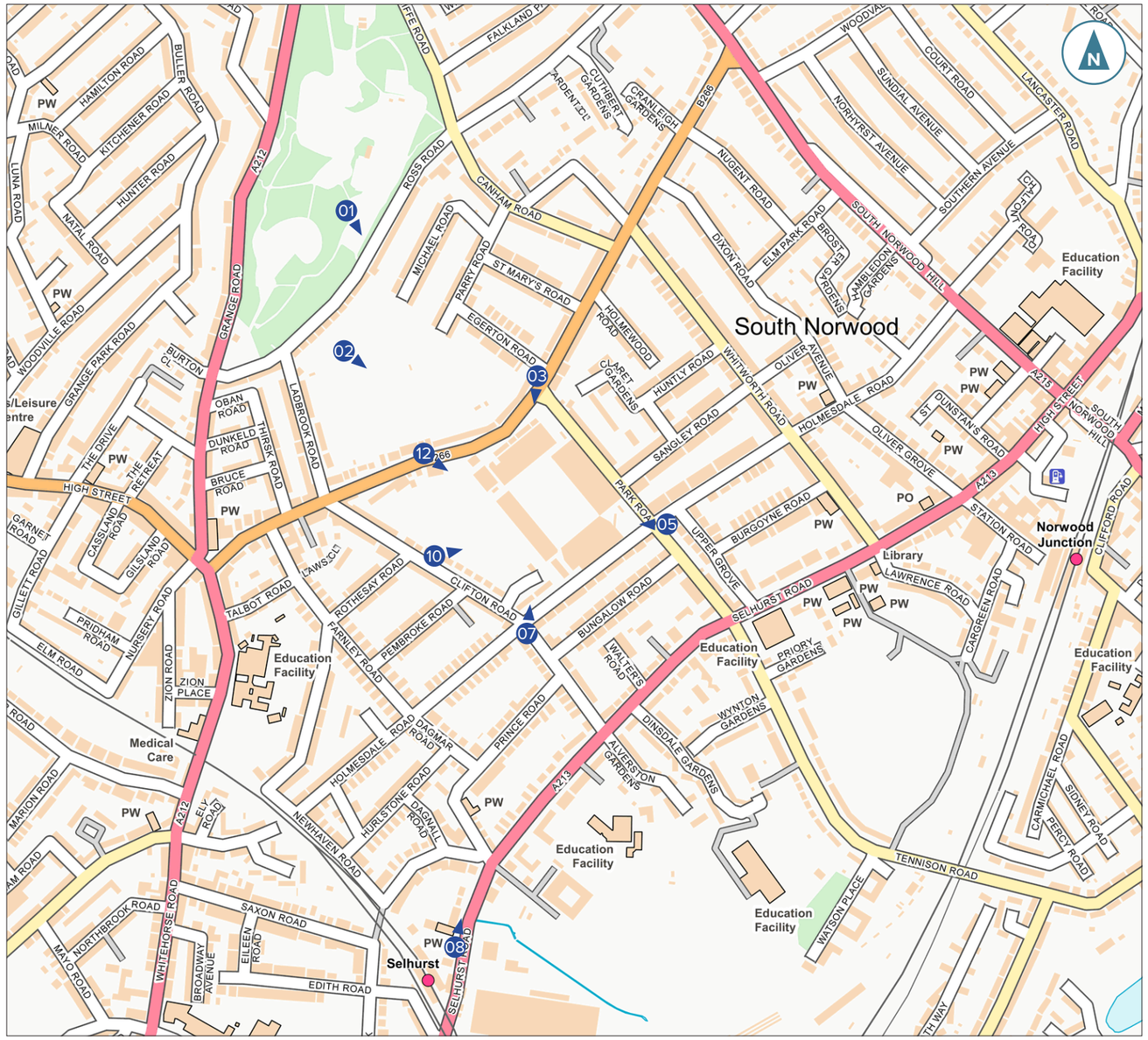
INTRODUCTION

This document has been prepared by Preconstruct Ltd on behalf of Crystal Palace FC, in support of a planning application for the proposed development at Selhurst Park.

CONTENTS

1 VIEWPOINT LOCATIONS

View No.	Description	AVR Type
1	View from Grangewood Park, Looking SE	2
2	View from Whitehorse Meadow, Looking SE	2&3
3	View from Whitehorse Lane, Looking S	2
5	View from Holmesdale Rd, Looking E	2
7	View from The Clifton Arms, Looking N	2&3
8	View from Selhurst Rd, Nr Station, Looking N	2
10	View from Cut-through between Clifton Rd and Sainsbury's CP, Looking E	2&3
12	View from Whitehorse Lane (Nr Petrol Station), Looking SE	2



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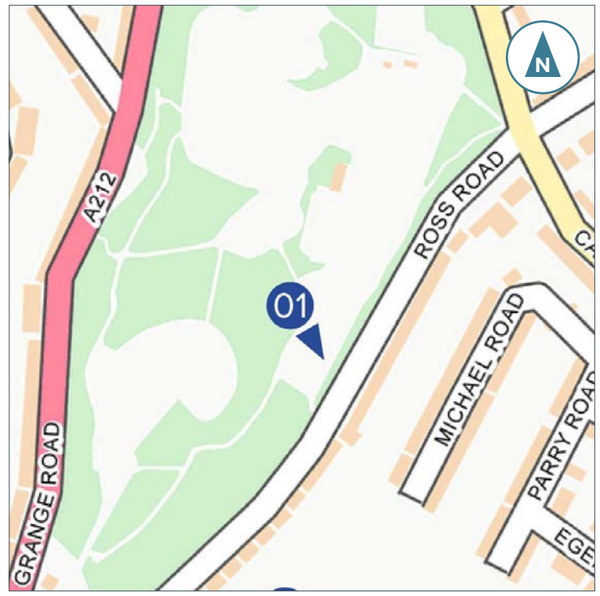
VIEW 1 - EXISTING

View from Grangewood Park, Looking SE



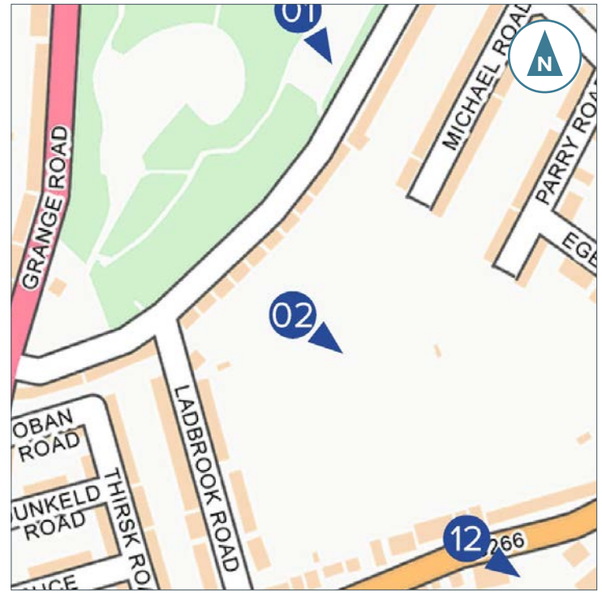
Viewpoint Location

VIEW 1 - PROPOSED AVR2

View from Grangewood Park, Looking SE

VIEW 2 - EXISTING

View from Whitehorse Meadow, Looking SE



Viewpoint Location

VIEW 2 - PROPOSED AVR2

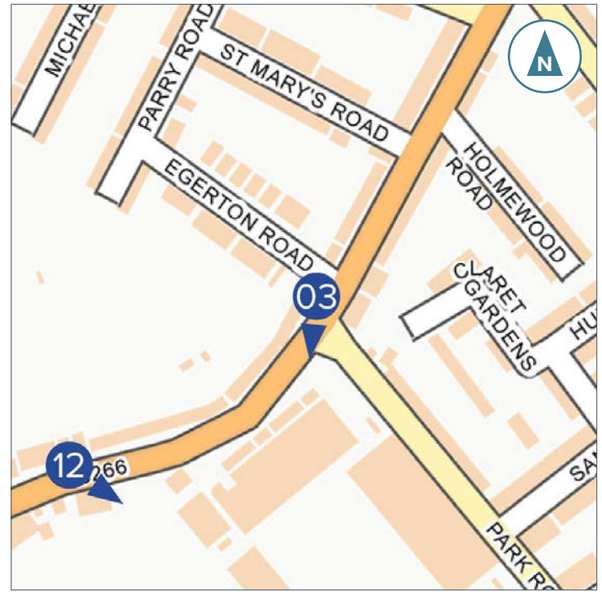
View from Whitehorse Meadow, Looking SE

VIEW 2 - PROPOSED AVR3

View from Whitehorse Meadow, Looking SE

VIEW 3 - EXISTING

View from Whitehorse Lane, Looking S



Viewpoint Location

VIEW 3 - PROPOSED AVR2

View from Whitehorse Lane, Looking S

VIEW 5 - EXISTING

View from Holmesdale Rd, Looking E

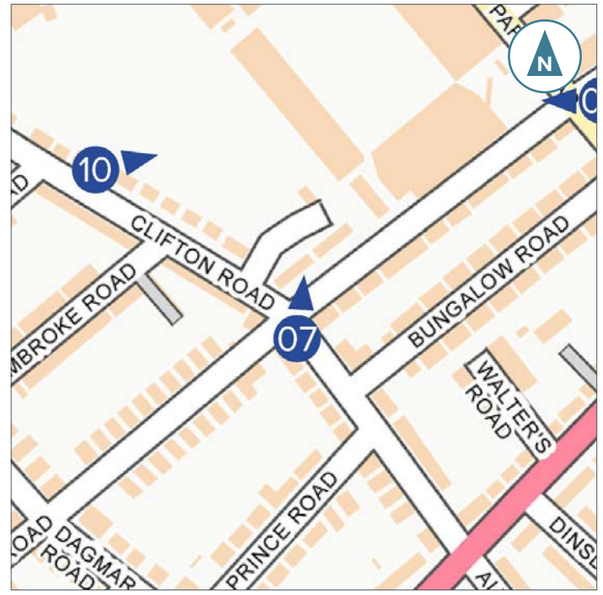
Viewpoint Location

VIEW 5 - PROPOSED AVR2

View from Holmesdale Rd, Looking E

VIEW 7 - EXISTING

View from The Clifton Arms, Looking N



Viewpoint Location

VIEW 7 - PROPOSED AVR2

View from The Clifton Arms, Looking N

VIEW 7 - PROPOSED AVR3

View from The Clifton Arms, Looking N

VIEW 8 - EXISTING

View from Selhurst Rd, Nr Station, Looking N

Viewpoint Location

VIEW 8 - PROPOSED AVR2

View from Selhurst Rd, Nr Station, Looking N

VIEW 10 - EXISTING

View from Cut-through between Clifton Rd and Sainsbury's Car Park, Looking E

Viewpoint Location

VIEW 10 - PROPOSED AVR2

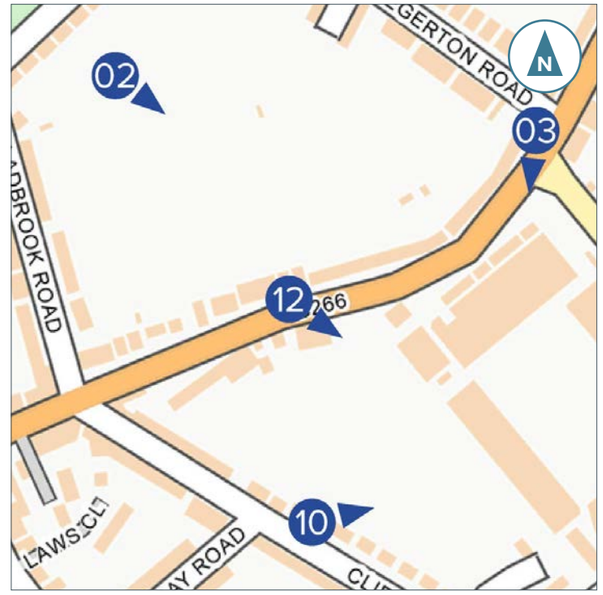
View from Cut-through between Clifton Rd and Sainsbury's Car Park, Looking E

VIEW 10 - PROPOSED AVR3

View from Cut-through between Clifton Rd and Sainsbury's Car Park, Looking E

VIEW 12 - EXISTING

View from Whitehorse Lane (Near Petrol Station), Looking SE



Viewpoint Location

VIEW 12 - PROPOSED AVR2

View from Whitehorse Lane (Near Petrol Station), Looking SE

APPENDIX 1: AVR METHODOLOGY

Overview
The process of generating verified views (also referred to as accurate visual representations (AVR)) for the Proposed Development at Crystal Palace FC, Selhurst Park, was carried out by Preconstruct.

Preconstruct use a methodology that is compliant with relevant sections of: The Landscape Institute/IEMA Guidelines for Landscape and Visual Impact Assessment (3rd edition 2013); The Landscape Institute Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment and The Revised SPG London View Management Framework (March 2012).

High quality/resolution photographs were taken from the agreed locations by Preconstruct. An adequate number of visible features were subsequently surveyed, including the precise location and bearing of the camera. A development model was generated to correct geographical co-ordinates. With a known camera position and orientation, photographic and surveyed existing visible features, the development model was accurately aligned to the photograph.

Site visit
Preconstruct visited the site on the 4th December 2017, to obtain viewpoint photography. The view positions were documented using photography of the exact positions (marked with paint) which was passed on to the surveyor who later visited the site to record the precise co-ordinates.

Photography
For each agreed photoviewpoint location, a high resolution photograph was taken with a 35mm (full frame) digital SLR camera. The location at which the photograph was taken was marked (where possible) with a peg and / or spray paint to allow the surveyor to record the precise location on a subsequent visit. The camera was levelled horizontally and laterally by means of a tripod mounted levelling base and two camera mounted spirit levels. A tilt/shift or perspective control lens was used to allow vertical rise while avoiding convergence of vertical elements.

Lens Selection Criteria
In order to capture the full extent of the proposed development and an appropriate amount of contextual built form and landscape, a range of lenses was used.

17mm lens in landscape orientation. 93.3° horizontal field of view.

24mm lens in landscape orientation. 73.7° horizontal field of view.

45mm lens in landscape orientation. 43.6° horizontal field.

Equipment Used for Photography
- Canon EOS 5D Mark II (35mm)
- Canon TS-E 17mm f/4L
- Canon TS-E 24mm f/3.5L
- Canon TS/E 45mm f/2.8
- Tripod and geared head
- Camera Mounted Spirit Level
- Plumb bob
- Street marking paint
- Wooden pegs

Post Production
Each base photograph has had a level of basic colour correction applied to it so that it best represents the impression of the scene as the photographer experienced it in person.

This processing is predominately done to the 16bit RAW file using Adobe Camera Raw and Photoshop. It includes, but is not limited to, adjustments in; colour temperature and tint; levels such as exposure and contrast; shadow and highlight recovery; sky recovery through the use of gradient corrections; and other post processing effects such as sharpening and noise reduction.

Survey
For each agreed photoviewpoint location an instructional document was released to the survey subcontractor.
The surveyor was instructed (by means of a marked up photograph, map and tripod (in situ) photograph) to record a range of contextual reference points.

Survey Equipment Required
- Leica 1200 series GPS Smartnet enabled dual receiver (GPS and GLONASS)
- Leica Total Station (1201 or TS16) 1' accuracy with 1000m reflectorless laser

Field Survey Methodology
- Camera locations: where possible, the camera position will be used as a setup point for the total station, enabling the re-creation of the view as seen in the imagery and reducing the risk of wrong interpretation of detail. Connection is usually via GPS Smartnet derived control points in OSGB datum and grid. 3-4 control stations are used, to ensure long distance accuracies and to identify possible outliers.
- Reference points visible in the photography are measured with reflectorless means from the total station. If long distance views have suitable detail too far from the camera station, further setups are used closer to the detail. Common visible detail points are observed from different setup points to check and increase accuracy achieved.
- Accuracies of camera positions are to the low centimetre, while accuracies of surveyed detail will vary due to setup geometry and distance, but will be usually in the low centimetre but always below 30 centimetre (if views are over 5km).

Data Processing & Delivery
Data is processed using industry standard software (Leica GeoOffice and TerraModel) to create points listings. A3 verification plots or digital photos are marked up with the surveyed points to aid identification. All points are to OSGB36 grid and datum, to allow the use of common Ordnance Survey products and industry standard site surveys.

The Proposed Development
Preconstruct created a 3D model of the proposed development from drawings supplied by the project architect The model was aligned to the OSGB36 co-ordinate system.

The Verification Process
The collected survey reference point data and camera location data was imported into the 3D model environment from the delimited text file (relative to the OSGB36 co-ordinate system) by means of a proprietary script.

At each photoviewpoint location a virtual camera was set up in the 3D software using the coordinates provided by the surveyor. The 3D coordinates of the survey reference points were used to create an accurate 'point cloud' model of the contextual surveyed parts of the scene. The scene was verified by matching the contextual surveyed points to the photograph. To do this, for each photoviewpoint, two renders* were made from the 3D model from the same virtual camera: one render showed only the development (in the chosen method of presentation); the other showed only the survey reference point data.

Using a photo editing package [Adobe Photoshop CC] the photography, survey reference point render and proposed development render were aligned.

** Rendering is the process of generating an image from a model (or models in what collectively could be called the 3D environment), by means of computer programs - specifically, in this case Chaos Group V-Ray 3.4 for Autodesk 3Ds Max 2017.*

APPENDIX 2: SOURCES OF AVR DATA

SUPPLIED DATA

Asset	Description	Supplier	Reference	Date	Comment
Verification (survey) Data	CSV file, DWG and surveyors notes (PDF)	Brandon Surveys	VV-0110	08/12/17	Imported using proprietary script. Origin Shift -533240 E -168280 N
Development Models	Autodesk Revit	KSS Architects	17812-KSS-EX-ZZ-M3-A-01.rvt 392351-MMD-00-ZZ-M3-S-0004.rvt	08/01/18	Existing Stands (reference only) Additional Roof Structure (not OS referenced) Level 0 is 0m (i.e not at correct AOD)
Site plan and Topo Survey	DWG	KSS Architects	17812-SITE SET UP - SHARED COORDINATE CONTROL VIEW.dwg	08/01/18	Used to Align Model to OS Coordinates.
Section	DWG	KSS Architects	17812-KSS-MS-ZZ-DR-A-92-002 - PROPOSED GENERAL ARRANGEMENT SECTION.dwg	09/01/18	Used to position model to correct AOD. Level 0 is +51.445m (as per KSS instruction via email)
Site Plan	DWG	KSS Architects	17812-KSS-MS-Z0-DR-A-90-0004 - PROPOSED SITE PLAN	16/01/18	Used to model immediate landscape around the main building and place proposed trees
Development Model	Autodesk Revit	KSS Architects	17812-KSS-MS-ZZ-M3-A-01_180118.rvt	18/01/18	Master Scene and Main Stand (not OS referenced)
Development Model	Autodesk Revit	KSS Architects	17812-KSS-MS-ZZ-M3-A-01.rvt	01/02/18	Model adjustments to the Northern End of new stand (not OS referenced)

GENERATED DATA (BY PRECONSTRUCT)

Asset	Description	Reference	Date	Comment
3D Model/Scene	Scene file generated in 3Ds Max Design 2017 to combine supplied survey and model data.	4492 MaxRender		

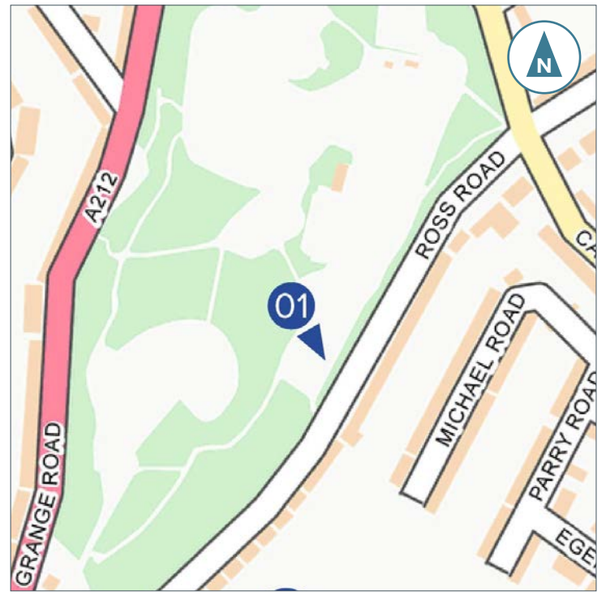
PHOTOGRAPHY DATA

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
1	View from Grangewood Park, Looking SE	2	Verified	532982.304	168737.588	94.935m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	0mm	Landscape	43.6°	04/12/2017	11:48	Basic Colour Correction
2	View from Whitehorse Meadow, Looking SE	2&3	Verified	532970.467	168545.392	70.263m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	0mm	Landscape	43.6°	04/12/2017	11:24	Basic Colour Correction
3	View from Whitehorse Lane, Looking S	2	Verified	533262.404	168507.625	60.14m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	3mm	Landscape	73.7°	04/12/2017	10:59	Basic Colour Correction
5	View from Holmesdale Rd, Looking E	2	Verified	533436.732	168292.715	65.298m	1.65m	Canon EOS 5D Mark II	TS-E17mm f/4L	17mm	3mm	Landscape	93.3°	04/12/2017	14:34	Basic Colour Correction
7	View from The Clifton Arms, Looking N	2&3	Verified	533237.896	168133.079	50.896m	1.65m	Canon EOS 5D Mark II	TS-E17mm f/4L	17mm	4mm	Landscape	93.3°	04/12/2017	13:01	Basic Colour Correction
8	View from Selhurst Rd, Nr Station, Looking N	2	Verified	533142.503	167655.704	47.656m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	3mm	Landscape	43.6°	04/12/2017	13:40	Basic Colour Correction
10	View from Cut-through between Clifton Rd and Sainsbury's CP, Looking E	2&3	Verified	533102.768	168244.749	51.615m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	5mm	Landscape	73.7°	04/12/2017	12:16	Basic Colour Correction
12	View from Whitehorse Lane (Nr Petrol Station), Looking SE	2	Verified	533099.987	168394.508	55.447m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	3mm	Landscape	73.7°	04/12/2017	14:55	Basic Colour Correction

APPENDIX 3: AVR VERIFICATION DATA

VIEW 1
View from Grangewood Park, Looking SE

Survey Reference Points



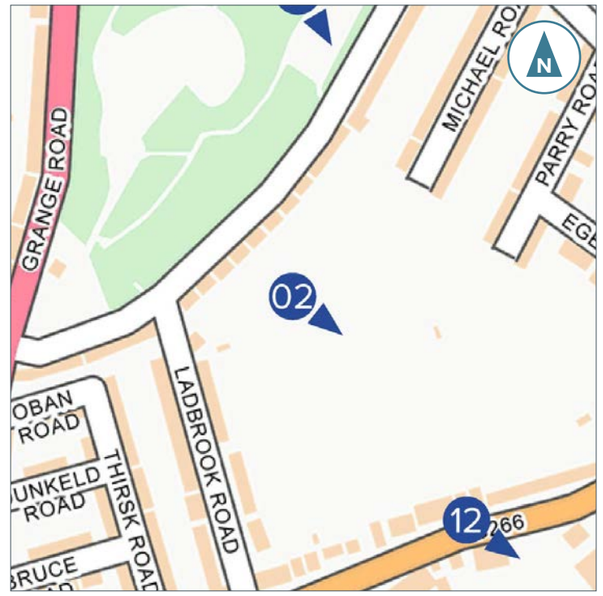
Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
1	View from Grangewood Park, Looking SE	2	Verified	532982.304	168737.588	94.935m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	0mm	Landscape	43.6°	04/12/2017	11:48	Basic Colour Correction

VIEW 2

View from Whitehorse Meadow, Looking SE

Survey Reference Points



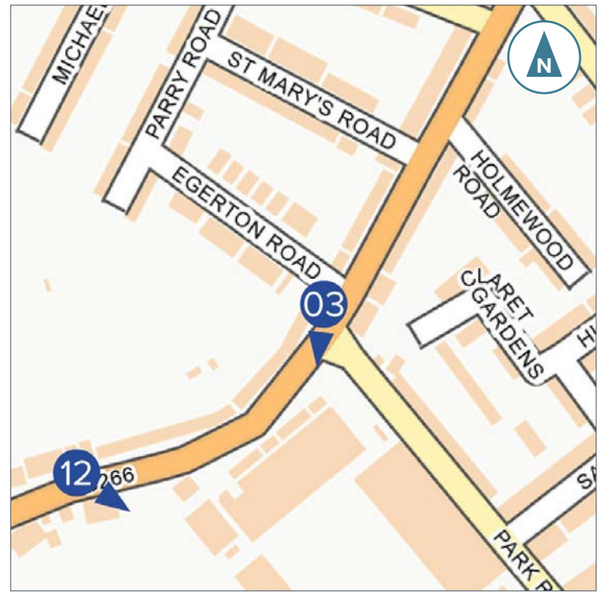
Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
2	View from Whitehorse Meadow, Looking SE	2&3	Verified	532970.467	168545.392	70.263m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	0mm	Landscape	43.6°	04/12/2017	11:24	Basic Colour Correction

VIEW 3 - EXISTING

View from Whitehorse Lane, Looking S

Survey Reference Points



Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
3	View from Whitehorse Lane, Looking S	2	Verified	533262.404	168507.625	60.14m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	3mm	Landscape	73.7°	04/12/2017	10:59	Basic Colour Correction

VIEW 5 - EXISTING

View from Holmesdale Rd, Looking E

Survey Reference Points

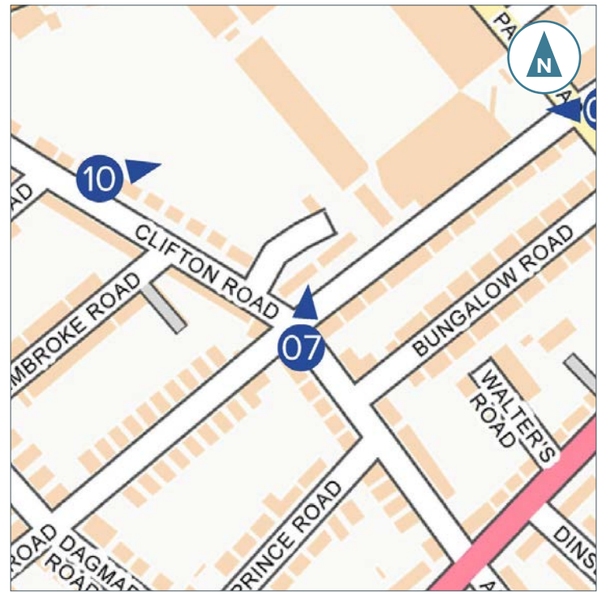
Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
5	View from Holmesdale Rd, Looking E	2	Verified	533436.732	168292.715	65.298m	1.65m	Canon EOS 5D Mark II	TS-E17mm f/4L	17mm	3mm	Landscape	93.3°	04/12/2017	14:34	Basic Colour Correction

VIEW 7 - EXISTING

View from The Clifton Arms, Looking N

Survey Reference Points



Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
7	View from The Clifton Arms, Looking N	2&3	Verified	533237.896	168133.079	50.896m	1.65m	Canon EOS 5D Mark II	TS-E17mm f/4L	17mm	4mm	Landscape	93.3°	04/12/2017	13:01	Basic Colour Correction

VIEW 8 - EXISTING

View from Selhurst Rd, Nr Station, Looking N

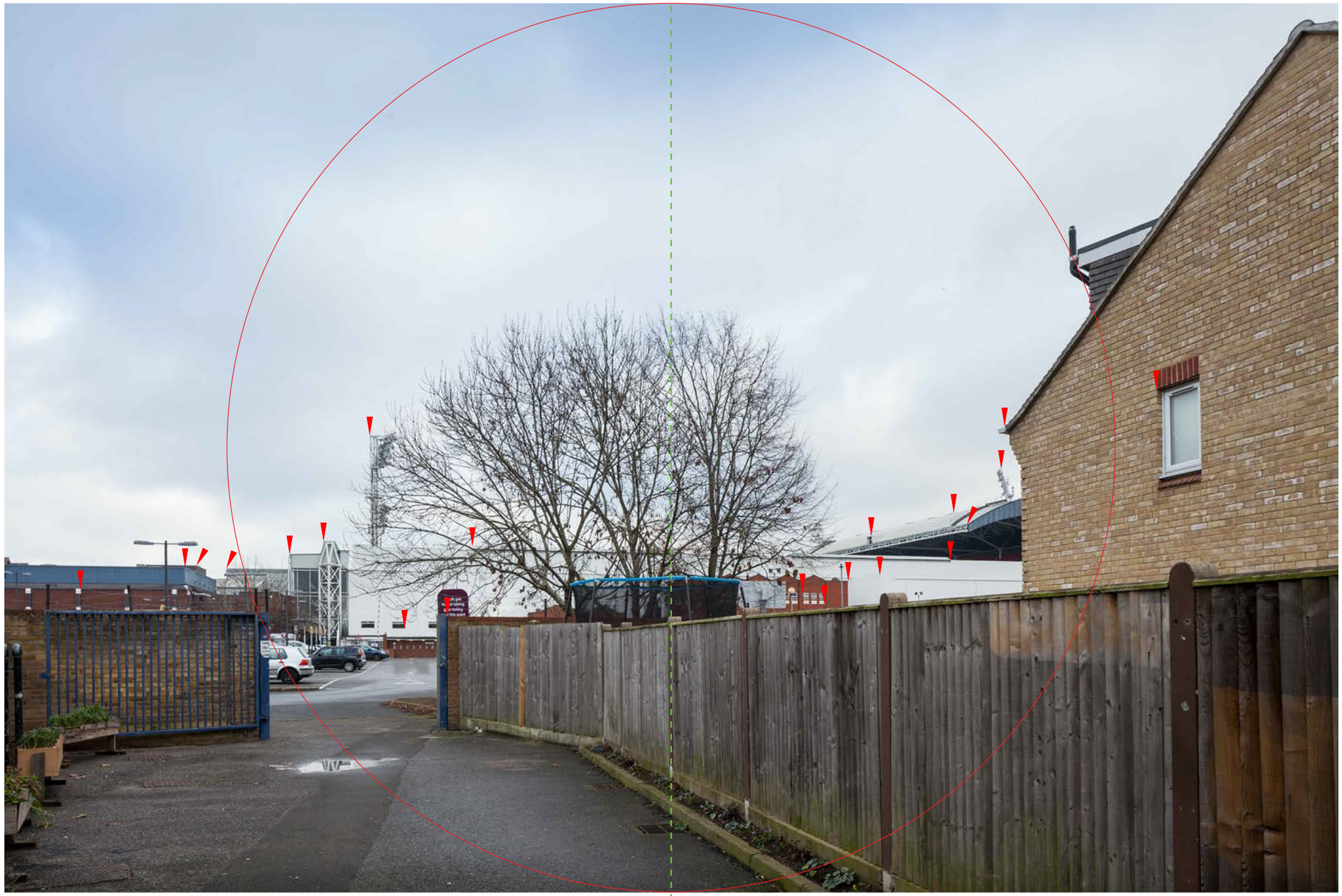
Survey Reference Points

Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
8	View from Selhurst Rd, Nr Station, Looking N	2	Verified	533142.503	167655.704	47.656m	1.65m	Canon EOS 5D Mark II	TS-E45mm f/2.8	45mm	3mm	Landscape	43.6°	04/12/2017	13:40	Basic Colour Correction

VIEW 10 - EXISTING

View from Cut-through between Clifton Rd and Sainsbury's Car Park, Looking E



Survey Reference Points

Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
10	View from Cut-through between Clifton Rd and Sainsbury's CP, Looking E	2&3	Verified	533102.768	168244.749	51.615m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	5mm	Landscape	73.7°	04/12/2017	12:16	Basic Colour Correction

VIEW 12 - EXISTING

View from Whitehorse Lane (Near Petrol Station), Looking SE

Survey Reference Points

Tripod Location

VP	Description	AVR Type	Method	Easting	Northing	Height	Tripod Height	Camera	Lens	Focal Length	Shift	Orientation	HFOV	Date	Time	Post Processing
12	View from Whitehorse Lane (Nr Petrol Station), Looking SE	2	Verified	533099.987	168394.508	55.447m	1.65m	Canon EOS 5D Mark II	TS-E24mm f/3.5L II	24mm	3mm	Landscape	73.7°	04/12/2017	14:55	Basic Colour Correction

TABLE OF SURVEY REFERENCE POINTS

Point #	Eastings	Northings	Height (AOD)
VP1	532982.304	168737.588	94.935
1C1	533023.185	168679.553	92.728
1C2	533024.130	168680.776	95.093
1C3	533021.886	168674.667	93.178
1C4	533019.923	168681.488	91.338
1C5	533222.234	168341.338	87.624
1C6	533291.053	168248.134	87.176
1C7	533307.384	168242.842	83.224
1C8	533030.491	168701.551	92.616
1C9	533027.008	168694.959	91.933
1C10	533021.536	168684.559	91.897
1C11	533018.505	168677.377	88.745
1C12	532999.694	168661.581	85.830
1C13	532998.521	168659.869	85.822
1Centre Line	533021.089	168675.621	92.143
VP2	532970.467	168545.392	70.263
2C1	533039.225	168516.396	64.553
2C2	533276.624	168388.723	86.996
2C3	533275.401	168384.795	87.611
2C4	533227.146	168363.409	66.413
2C5	533222.382	168341.445	87.594
2C6	533291.227	168248.204	87.134
2C7	533076.822	168403.560	64.737
2C8	533081.347	168402.715	64.270
2C9	533383.636	168042.457	62.485
2C10	533011.675	168500.135	64.741
2C11	533010.095	168498.959	64.721
2C12	533072.807	168404.366	64.133
2Centre Line	533018.376	168500.389	63.834
VP3	533262.404	168507.625	60.140
3C1	533269.911	168494.131	60.108
3C2	533271.938	168490.515	65.845
3C3	533267.875	168491.307	60.769
3C4	533283.693	168418.634	62.516
3C5	533348.029	168302.522	76.449
3C6	533352.465	168297.097	86.980
3C7	533336.549	168266.051	84.180
3C8	533283.767	168396.732	66.982
3C9	533276.559	168388.789	87.006
3C10	533275.066	168389.047	80.375
3C11	533274.097	168395.655	69.941
3C12	533267.875	168410.907	66.802
3C13	533264.180	168433.370	62.072
3C14	533256.004	168446.895	60.056
3C15	533254.483	168445.281	59.790
3C16	533246.734	168440.949	62.084
3C17	533246.493	168459.732	58.898
3C18	533214.290	168414.710	67.155
3C19	533248.316	168486.532	62.819
3C20	533320.093	168279.067	78.422
3Centre Line	533260.983	168470.031	59.271
VP5	533436.732	168292.715	65.298
5C1	533320.445	168232.206	76.234
5C2	533333.825	168243.311	76.247
5C3	533347.203	168254.424	76.244
5C4	533360.592	168265.527	76.238
5C5	533374.011	168276.619	76.256
5C6	533375.474	168279.983	80.572
5C7	533347.953	168244.123	65.533
5C8	533364.656	168257.976	65.566
5C9	533408.311	168288.422	68.076
5C10	533377.241	168278.763	73.157
5C11	533363.321	168294.656	82.777
5C12	533352.957	168296.949	87.001
5C13	533355.584	168300.185	81.73
5C14	533407.924	168297.204	68.751
5C15	533220.972	168337.96	87.572
5C16	533275.347	168384.887	87.58
5C17	533407.471	168299.574	66.925
5C18	533423.297	168301.332	72.715
5C19	533427.554	168297.518	65.168
5C20	533430.182	168290.404	65.324
5Centre Line	533429.436	168292.836	65.318
VP7	533237.896	168133.079	50.896
7C1	533234.784	168141.4	51.01
7C2	533216.919	168163.156	53.214
7C3	533232.074	168154.229	51.853
7C4	533203.285	168180.675	53.607
7C5	533229.652	168168.823	62.209
7C6	533239.15	168170.058	57.765
7C7	533245.082	168173.399	58.532
7C8	533248.584	168175.497	56.563
7C9	533253.583	168185.068	62.234
7C10	533252.532	168167.753	54.012
7C11	533259.937	168185.117	58.536
7C12	533295.224	168248.907	87.173
7C13	533295.494	168247.196	84.433
7C14	533307.619	168223.645	80.617
7C15	533311.119	168224.463	76.277
7C16	533324.536	168235.624	76.284
7C17	533337.937	168246.729	76.284
7C18	533318.204	168231.862	63.379
7C19	533245.757	168140.892	51.756
7C20	533241.938	168140.245	50.958
7Centre Line	533241.402	168170.549	56.456
VP8	533142.503	167655.704	47.656
8C1	533145.037	167696.754	48.747
8C2	533148.478	167684.610	47.547
8C3	533161.906	167768.773	51.059
8C4	533165.228	167774.529	51.852
8C5	533167.172	167779.890	53.312
8C6	533180.911	167829.842	56.226
8C7	533188.866	167817.591	56.214
8C8	533189.608	167813.149	52.385
8C9	533190.695	167811.483	51.122
8C10	533201.415	167836.086	56.782
8C11	533196.897	167810.320	50.581
8C12	533186.005	167807.245	49.409
8C13	533159.996	167687.615	49.662
8C14	533150.457	167675.647	47.628
8C15	533161.780	167697.434	49.504
8C16	533161.095	167687.341	50.025
8C17	533163.881	167750.081	49.989
8C18	533154.722	167705.368	47.552
8C19	533145.800	167681.592	47.667
8Centre Line	533150.429	167694.152	47.541
VP10	533102.768	168244.749	51.615
10C1	533174.485	168346.204	60.281
10C2	533181.398	168337.746	62.991
10C3	533205.917	168364.208	66.209
10C4	533208.716	168361.129	65.830
10C5	533211.088	168350.370	67.814
10C6	533214.226	168346.623	69.926
10C7	533218.420	168340.910	87.006
10C8	533202.568	168322.115	55.668
10C9	533117.727	168255.380	53.864
10C10	533227.116	168273.275	60.344
10C11	533229.222	168270.721	58.753
10C12	533231.571	168267.740	62.053
10C13	533242.513	168263.241	63.771
10C14	533215.402	168319.980	68.023
10C15	533266.474	168256.188	67.507
10C16	533318.684	168277.732	78.451
10C17	533327.656	168259.621	84.043
10C18	533291.313	168248.175	87.188
10C19	533290.538	168254.681	76.599
10C20	533117.001	168245.029	56.461
10C21	533114.887	168243.305	56.259
10Centre Line	533112.372	168248.568	53.527
VP12	533099.987	168394.508	55.447
12C1	533115.125	168394.516	55.601
12C2	533191.720	168395.860	60.824
12C3	533186.752	168392.100	67.272
12C4	533276.539	168388.673	87.011
12C5	533275.387	168384.864	87.631
12C6	533165.781	168391.452	61.748
12C7	533207.173	168375.729	66.211
12C8	533158.598	168376.982	58.974
12C9	533160.900	168362.724	63.005
12C10	533204.547	168333.177	67.602
12C11	533218.761	168338.825	81.962
12C12	533218.341	168341.036	87.011
12C13	533354.073	168300.713	86.977
12C14	533334.695	168264.489	84.195
12C15	533321.141	168253.254	84.216
12C16	533296.181	168237.591	78.349
12C17	533295.116	168249.288	87.114
12C18	533114.314	168382.955	60.517
12C19	533141.865	168341.292	57.199
12C20	533106.239	168382.867	56.081
12Centre Line	533170.482	168351.177	58.115

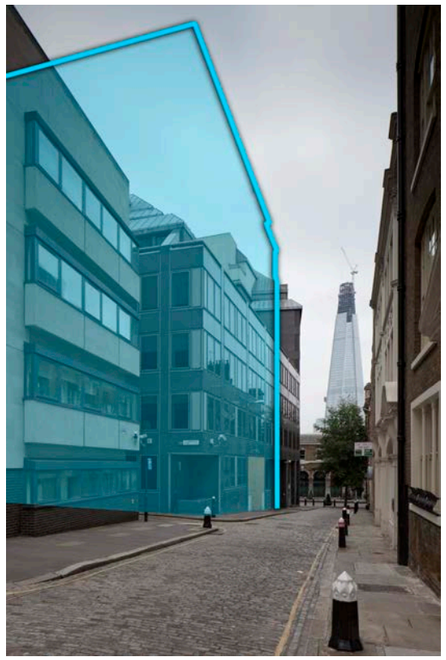
APPENDIX 4: AVR TYPE DESCRIPTION

Text extracted from The London View Management Framework (SPG March 2012 - Part 3, page 248) Appendix C: Accurate Visual Representations.

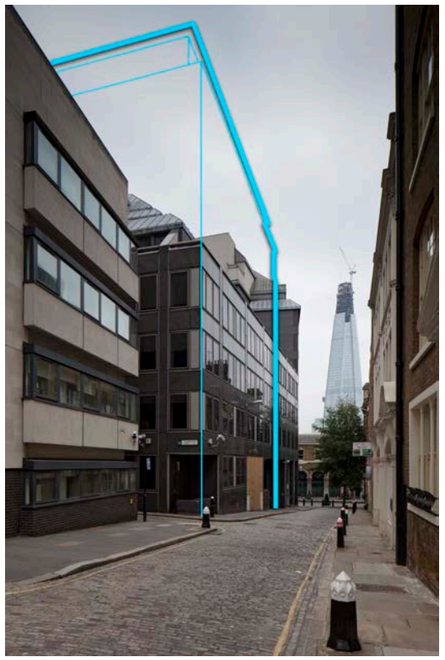
"To assist agreement between all parties prior to AVR preparation, the following classification types are presented to broadly define the purpose of an AVR in terms of the visual properties it represents. This classification is a cumulative scale in which each level incorporates all the properties of the previous level."

AVR (Level) 0	Location and size of proposal
AVR (Level) 1	Location, size and degree of visibility of proposal
AVR (Level) 2	As level 1 + description of architectural form
AVR (Level) 3	As level 2 + use of materials

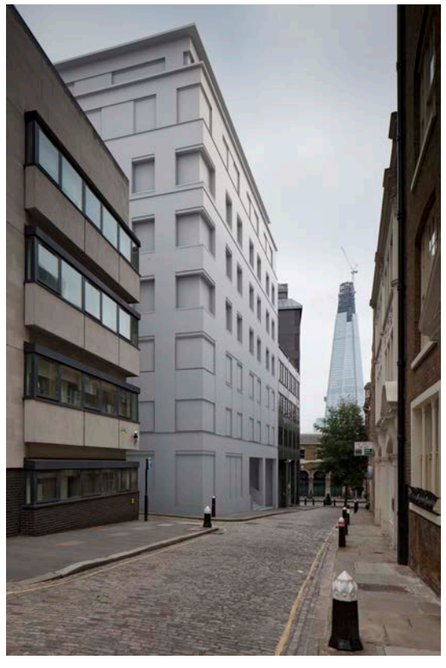
AVR0
Showing location and size (in this case as a toned area superimposed on photograph)



AVR1
Confirming degree of visibility (in this case as an occluded 'wireline' image)



AVR2
Explaining architectural form (in this case as a simply shaded render in a uniform opaque material)



AVR3
Confirming the use of materials (in this case using a 'photorealistic' rendering technique)

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