

NORTHUMBERLAND DEVELOPMENT PROJECT **HOTEL**

S73 APPLICATION

ENVIRONMENTAL STATEMENT: NON-TECHNICAL SUMMARY ADDENDUM

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1 Introduction

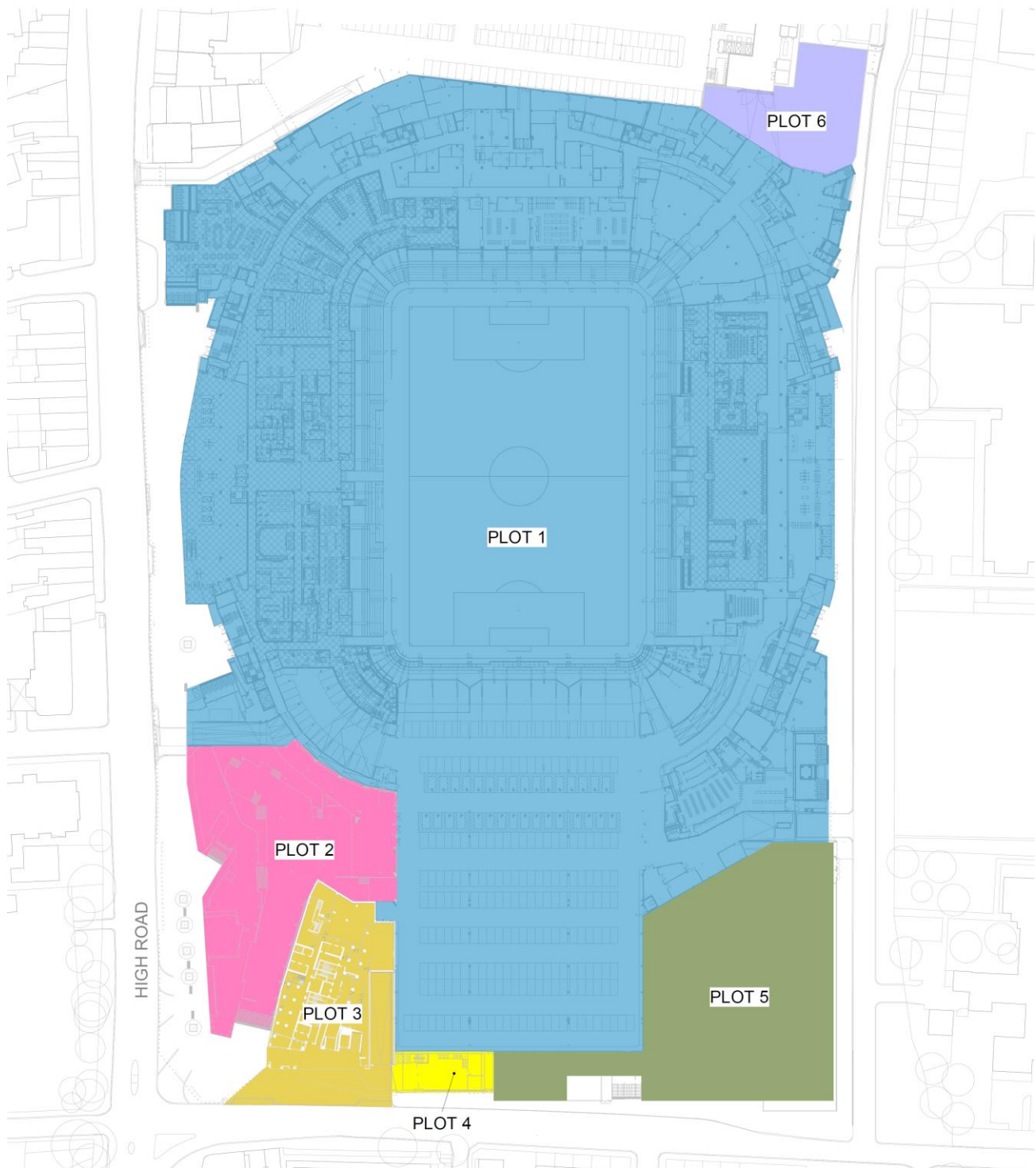
Background

- 1.1 This Non-Technical Summary ('NTS') presents a summary of the findings of an Environmental Statement ('ES') Addendum that was prepared on behalf of Tottenham Hotspur Property Company Limited (the 'Applicant'). It accompanies an ES Addendum that has been prepared to accompany a Section 73 Application ('S.73 Application') submitted to the London Borough of Haringey ('LB Haringey').
- 1.2 The site of the Development is the Northumberland Development Project ('NDP'). This extends to 8.97 hectares of land and is located approximately 175m east of White Hart Lane rail station in north London and is subsequently referred to as the 'Site'.
- 1.3 The Applicant is seeking to amend the planning permission that was granted for the NDP on 15 April 2016¹. This application was accompanied by an ES ('2015 ES'), which should be read alongside this ES Addendum (together 'ES (as amended)'). This planning permission permitted demolition works and construction of the NDP (hereafter 'Consented Scheme').
- 1.4 The Consented Scheme incorporates full planning consent for development of a new stadium (Plot 1), the 'Tottenham Experience' building (Plot 2), and a hotel (Plot 3), and outline planning permission for an extreme sports building (Plot 4), residential buildings (Plot 5) and a community health building (Plot 6)². Figure 1.1 presents the Indicative Plot boundaries.
- 1.5 The proposed amendments ('Amendments') are focussed on changes to Plot 3 of the NDP, i.e. the hotel building. The ES Addendum provides further environmental information that appraises the potential environmental effects of the Amendments to Plot 3 of the Consented Scheme.
- 1.6 The Amendments will amend the massing of the Plot 3 building, making it taller and slenderer from east to west relative to the Consented Scheme massing. The floorspace in Plot 3 will increase overall by approximately 595 square metres (sqm), from 15,537 sqm to 16,132 sqm. No change is proposed to the maximum permitted number of hotel bedrooms (180) or residential units (49) in the hotel. A more detailed description of the Consented Scheme as altered by the Amendments (the 'Development') is provided in Section 5 of this NTS.

¹ Planning reference: HGY/2015/3000.

² Planning permission for Plot 6 has lapsed. As such, for the basis of this assessment, it is assumed that the health care provision for the (unbuilt) residential uses of the Consented Scheme (and Development) will be met by planned provision elsewhere in the vicinity of the Site.

Figure 1.1: Indicative Plot Boundaries



What is an EIA and ES?

- 1.7 Environmental Impact Assessment (EIA) is a process which is required by UK legislation for certain development projects which are likely to have significant impacts on the environment. The purpose of EIA is to ensure that decision makers and the public understand environmental effects of a development before deciding whether to grant planning permission. The findings of the EIA process are reported in an ES which is submitted with a

planning application. When further environmental assessment is carried out, this is submitted within an ES Addendum submitted alongside the originally submitted ES.

- 1.8 The EIA process has been used to inform the Development and has identified measures to mitigate likely significant environmental effects and maximise opportunities for environmental enhancement. The findings of the EIA are reported in the ES (as amended) which accompanies the planning application to inform decision making. This document provides a non-technical summary of the ES (as amended).
- 1.9 The EIA process was co-ordinated by Quod and a team of competent experts and used as an iterative design tool to inform the Development. The ES Addendum was prepared by competent experts in line with current UK legal requirements¹² and good practice. The ES (as amended) identifies the likely significant environmental effects.
- 1.10 The ES Addendum comprises:
- **Volume I:** Non-Technical Summary (this document);
 - **Volume II:** ES Addendum Main Report; and
 - **Volume III:** Appendices.

Commenting on the Planning Application

- 1.11 The ES Addendum and all S.73 Application documents are available online on LB Haringey's website. The Non-Technical Summary Addendum can also be obtained free of charge upon request in hard copy or as an electronic file. Please email reception@quod.com quoting Reference No. Q230098 for further details or contact 020 3597 1000.

2 EIA Regulatory Framework

- 2.1 An EIA was commissioned voluntarily by the Applicant as the Development is of a type and scale of development that requires an EIA.
- 2.2 The EIA considers likely significant effects during the construction and operation of the Development. The construction phase assessment addresses the temporary activities involved in building the Development. The operational assessment considers the situation when the Development is fully complete and being used.

How was the scope of the EIA determined?

- 2.3 The 2015 ES was undertaken in accordance with the EIA Regulations in place at the time of assessment, i.e. the EIA Regulations 2011 (as amended 2015).
- 2.4 A formal EIA Scoping Opinion was not sought from LB Haringey. An EIA scoping study was undertaken to establish the 'scope' or focus of the EIA and identify which environmental topics should be included in the 2015 ES for detailed assessment.
- 2.5 The scoping study considered the emerging proposals for the Consented Scheme, the existing environmental baseline conditions and the potential for likely significant environmental effects. The scope of the EIA was agreed with LB Haringey through an issue of a draft Scoping Report that formed the basis of discussion held with the Council in June 2015. This determined the scope of the EIA.
- 2.6 The scope of the 2015 ES includes the topics set out in Table 3.1.

Table 3.1 Technical Topics Scoped into the 2015 ES

Environmental Statement Topics

Air Quality	Noise and Vibration
Archaeology	Socio-Economics
Cultural Heritage	Traffic and Transport
Ecology	[Wind] Microclimate
Flood Risk and Surface Water Drainage	Daylight and Sunlight
Ground Conditions and Hydrogeology	Electromagnetic Interference
Townscape and Visual Amenity	

- 2.7 All topics previously assessed in the 2015 ES have been reappraised in this ES Addendum. The ES Addendum has been carried out in accordance with the current EIA Regulations³. The EIA Regulations introduced new environmental topics for consideration: climate change,

³ The Town and Country (Environmental Impact Assessment) Regulations 2017, as amended 2018.

human health and major accidents and / or disasters. While an assessment of Climate Change and Greenhouse Gases has been scoped into the ES Addendum as a new chapter, human health and major accidents and / or disasters have been scoped out. Rationale for this was set out in an EIA Scoping Note issued to LB Haringey in June 2023.

- 2.8 The ES Addendum considers the potential for 'effect-interactions' which can arise from individual effects of the Development interacting to give rise to a significant effect, such as noise and air quality on the same receptor. This is provided in Section 21.

How were environmental effects identified and assessed?

- 2.9 The EIA has assessed the likely significant environmental effects of the Development against baseline conditions (i.e. existing state of the Site). Baseline conditions have been established using a range of different methods including desk-based research, site surveys and modelling.
- 2.10 The 2015 ES predicts the likely significant environmental effects of demolition and construction activities for the Consented Scheme against the existing baseline conditions at the time of assessment. These were assessed based on the detailed drawings for Plots 1-3 and outline planning controls (i.e. Parameter Plans).
- 2.11 Environmental effects were identified and assessed using a variety of methods, including computer modelling and calculations. Effects were then assessed as being significant or not significant. Each assessment attaches a level of 'significance' to the effects that were identified, i.e. either major, moderate, minor or negligible.
- 2.12 The significance of effects was determined using best practice and published standards. The two key criteria for determining the significance of the effect are the scale of change taking place compared to the baseline (magnitude of the impact) and the sensitivity or value of the resource or receptor being affected. Environmental effects are described as being either adverse (negative), negligible or beneficial (positive) and whether they are temporary or permanent.
- 2.13 Where the passage of time and the S.73 Application would not materially affect the topic assessments and conclusions set out in the 2015 ES (i.e. no changes to the significance of any effects reported in the 2015 ES are expected), justification in the form of 'statements of conformity' are provided in this ES Addendum for those technical chapters. A statement of conformity provides an explanation of why, in light of this S.73 Application, the previous assessment findings in the 2015 ES remain valid. Where a change in legislation, policy, baseline conditions or the nature and scale of the Amendments are considered to have potential to give rise to a change in the significance of effects stated in the 2015 ES, further assessments have been undertaken to supplement the 2015 ES and these are reported in this ES Addendum for the relevant technical chapters with supplementary information.
- 2.14 Table 3.2 summarises the technical scope of the ES Addendum and provides a summary of the main changes to the 2015 ES.

Table 3.2: Structure of ES Addendum and Summary of Changes to 2015 ES

Topic	Summary of Changes to 2015 ES	Reason(s) for Change / Update	Change to Legislation and Policy	Change to Baseline	Change to Effects	Change to Mitigation
Air Quality (2015 ES Chapter 6)	No material change - Statement of Conformity provided. Revised Air Quality Neutral Assessment provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	London Plan Air Quality Neutral Guidance. Introducing concept of Air Quality Positive for large-scale Development.	Improvement on previous background concentrations.	Assessment conclusions remain the same.	None required.
Archaeology (2015 ES Chapter 7)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	No relevant changes to legislation or policy have been identified.	Basement excavations across the Site were undertaken in 2015.	Assessment conclusions remain the same.	None required.
Cultural Heritage (2015 ES Chapter 8)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	NPPF updated. London Plan updated. Historic England (HE) Advice Notes 3 and 4 updated. The	North Tottenham Conservation Area condition amended from 'very bad' to 'poor'.	Assessment conclusions remain the same.	None required.

Topic	Summary of Changes to 2015 ES	Reason(s) for Change / Update	Change to Legislation and Policy	Change to Baseline	Change to Effects	Change to Mitigation
			updates do not change the validity of the conclusions within the 2015 ES.			
Ecology (2015 ES Chapter 9)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	No relevant changes to legislation or policy have been identified.	No relevant changes baseline conditions have been identified.	Assessment conclusions remain the same.	None required.
Surface Water Drainage and Flood Risk (2015 ES Chapter 10)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	Update to climate change allowances and Planning Practice Guidance.	No relevant changes baseline conditions have been identified.	Assessment conclusions remain the same.	None required.
Ground Conditions and Hydrogeology (2015 ES Chapter 11)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of	No relevant changes to legislation or policy have been identified.	No relevant changes baseline conditions have been identified.	Assessment conclusions remain the same.	None required.

Topic	Summary of Changes to 2015 ES	Reason(s) for Change / Update	Change to Legislation and Policy	Change to Baseline	Change to Effects	Change to Mitigation
		Conformity has been provided.				
Townscape and Visual Amenity (2015 ES Chapter 12)	Replacement Chapter to the 2015 ES. Chapter is supported by new Accurate Visual Representations (AVRs).	Provides an updated assessment of the potential effects of the Development on the setting of townscape and visual receptors in the vicinity of the Site.	No relevant changes to legislation or policy have been identified.	Baseline photography has been updated for all viewpoint locations where able.	Changes in likely significant effects have been reported from six viewpoint locations.	None required
Noise and Vibration (2015 ES Chapter 13)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	No relevant changes to legislation or policy have been identified.	Plot 1 and Plot 2 are complete and operational. Ambient noise levels are slightly lower than those recorded for the 2015 ES.	Assessment conclusions remain the same.	None required.
Socio-Economics (2015 ES Chapter 14)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided. Chapter	No relevant changes to legislation or policy have been identified.	No relevant changes baseline conditions have been identified.	Assessment conclusions remain the same.	None required.

Topic	Summary of Changes to 2015 ES	Reason(s) for Change / Update	Change to Legislation and Policy	Change to Baseline	Change to Effects	Change to Mitigation
		includes assessment of revised play space.				
Traffic and Transport (2015 ES Chapter 15)	No material change - Statement of Conformity provided.	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	No relevant changes to legislation or policy have been identified.	Chapter provides updated baseline traffic flows which show reduced background flows compared to those presented in the 2015 ES.	Assessment conclusions remain the same.	None required.
Microclimate (2015 ES Chapter 16)	Replacement chapter to the 2015 ES	Provides an updated assessment of the potential effects of the Development on the setting of human receptors in the vicinity of the Site.	No relevant changes to legislation or policy have been identified.	Plots 1 and 2 have been constructed and are operational. Surrounding cumulative schemes identified within the 2015 ES have been built out and now form part of the existing baseline.	Reduction from moderate adverse to negligible for pedestrian comfort wind conditions	Inclusion of new landscape mitigation
Daylight, Sunlight and Overshadowing (2015 ES Chapter 17)	Replacement chapter to the 2015 ES	Includes assessment of the Development against the baseline scenario, for external receptors only. Provides further	No relevant changes to legislation or policy have been identified.	Plots 1 and 2 have been constructed and are operational. Surrounding cumulative	Assessment conclusions remain the same.	None required.

Topic	Summary of Changes to 2015 ES	Reason(s) for Change / Update	Change to Legislation and Policy	Change to Baseline	Change to Effects	Change to Mitigation
		assessment of the potential for likely significant effects resultant from the Amendments.		schemes identified within the 2015 ES have been built out and now form part of the existing baseline.		
Electronic Interference (Chapter 18)	No material change - Statement of Conformity provided	The Amendments will not materially affect the significance of effects previously reported in the 2015 ES; therefore, a Statement of Conformity has been provided.	No relevant changes to legislation or policy have been identified.	No relevant changes baseline conditions have been identified.	Assessment conclusions remain the same.	None required.
Climate Change and Greenhouse Gases	N/A – Chapter 19 new EIA topic assessment					
Effect Interactions	N/A – Chapter 20 new EIA topic assessment					

3 Project Site and Setting

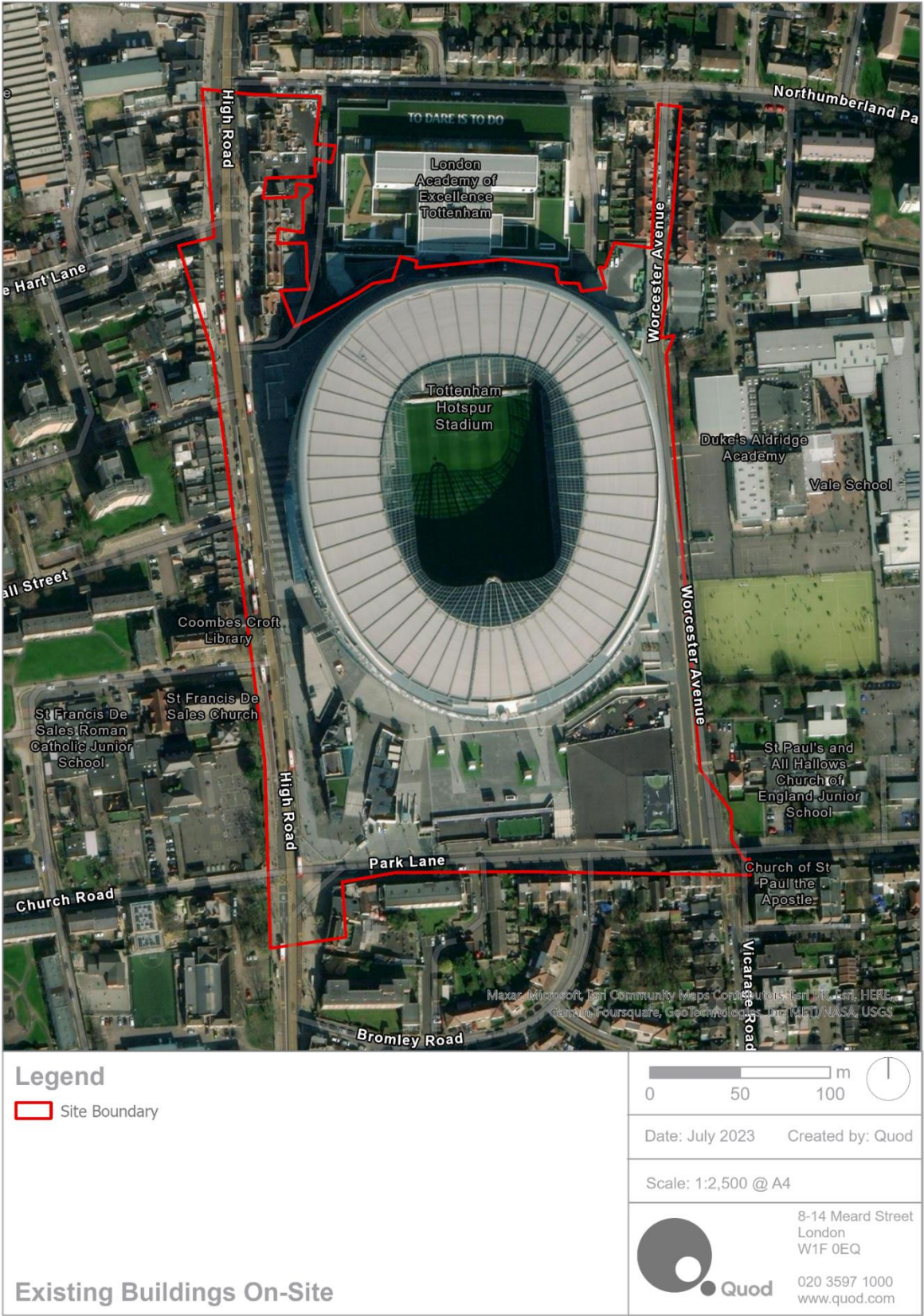
Where is the Site?

- 3.1 The Site is located within north London, within the administrative boundary of the London Borough Haringey (LB Haringey). It is set around the Tottenham Hotspur Football stadium, which is located at Bill Nicholson Way, 748 High Road, London N17 0AP.
- 3.2 The Site is bound by Lilywhite House to the north, Worcester Avenue to the east, Park Lane to the south, and High Road to the west (A1010). The planning application boundary for the S.73 Application is not altered from that defined for the Consented Scheme. The Site boundary is shown on Figure 2.1.
- 3.3 The Site's surrounding area is a mix of residential and commercial uses. Immediately to the east of Worcester Avenue is Northumberland Park Community Secondary School and Saint Paul's and All Hallows Church of England Infant and Junior Schools. Immediately to the west of High Road lies St Francis de Sales Roman Catholic infant and junior school and further west is the Lancastrian Primary School.

What are the land uses within the Site?

- 3.4 The Site comprises the NDP project. Plots 1 (the Stadium) and 2 (the Tottenham Experience) of the Consented Scheme are completed and operational, as illustrated in Figure 2.1. These two Plots form the majority of the Site. The enabling works, below ground infrastructure to facilitate Plots 1 and 2, excavation and construction of the basement and podium associated with Plot 1 and Plot 3 have been delivered. The basement is present underneath the Plots 1 and 3, with the associated podium present on-site. The remainder of the Site is currently occupied by temporary uses including public realm and temporary structures.
- 3.5 Temporary football pitches are present within the south east corner of the Site below Plot 5. This use is allowed due to a temporary application which was submitted in December 2021 (Ref. HGY/2022/0167). This was granted in April 2022, which gave permission for community events, sports and activation space including football pitches, lighting and hoarding to be implemented within a period of up to three years.

Figure 2.1: Existing Buildings On-Site



How is the Site accessed?

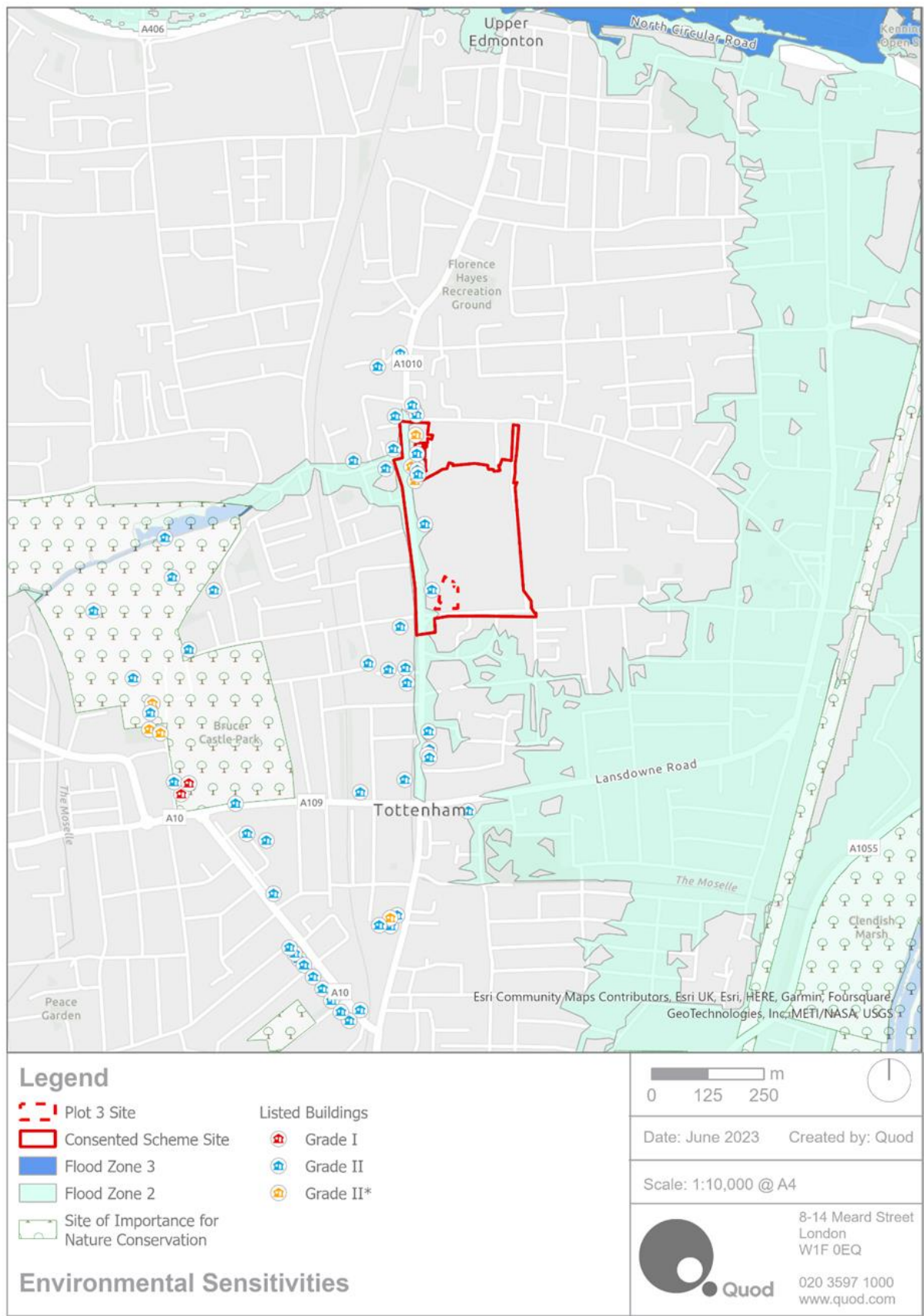
- 3.6 All the streets surrounding the Site are accessible to pedestrians and have footpaths on both sides with a number of crossing facilities. There is also internal pedestrian access within the Site, notably in relation to Plots 1 and 2.
- 3.7 The Public Transport Accessibility Level (PTAL) for the Site, which is a theoretical measure of the accessibility within London, ranges from 3 (moderate accessibility) to 5 (good accessibility). The Seven Sisters and Tottenham Hale underground stations are within walking distance of the Site. White Hart Lane rail station is a 6 minutes' walk and Northumberland Park is circa 8 minutes' walk. Bruce Grove, Tottenham Hale and Seven Sisters stations are also within walking distance of the Site. Extra rail services are run by the operator on match days to cater for this demand. The Site is also well served by bus routes from a wide range of neighbouring areas, with the nearest bus stops adjacent to the Site on High Road.

What is the environmental context of the Site?

- 3.8 Figure 2.2 shows the key environmental sensitivities within and in close proximity to the Site.
- 3.9 The Site does not include any sites which are designated for nature conservation, geology or landscape value.
- 3.10 The area to the north west of the Site is located within an Archaeological Priority Zone. The North Tottenham Conservation Area is located adjacent to the west of the Site on the High Road, extending into the north western corner of the Site. This is associated with a number of listed buildings circling the White Hart Lane and High Road Junction. At the eastern boundary of the Site, there is Grade II listed 744 High Road / Warmington House⁴. At the north west corner of the Site, there is the historic terrace known as the Northern Terrace. The 796 Percy House and 808-810 High Road which are listed at Grade II* (790 (Dial House) Grade II* and 792 High Road also form part of the terrace but are not part of the Site). No buried remains or potential remains have been identified that would require preservation *in situ*.
- 3.11 The Site is located within 2km of Walthamstow Reservoirs Site of Special Scientific Interest (SSSI), designated due to its importance for wildfowl and wetland birds. The SSSI is a component of a Special Protection Area (SPA) and Ramsar site as it supports internationally important overwintering populations of three bird species. These designations afford the site protection under both European and international law.

⁴ As part of the Consented Scheme, the locally listed buildings at 746, 748 and 750 High Road were demolished. The restoration and associated development at the Grade II listed 744 High Road / Warmington House has been completed.

Figure 2.2: Environmental Sensitivities Map



- 3.12 There are two Sites of Importance for Nature Conservation (SINC) located within proximity to the Site, designated for local ecological conservation objectives. Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park is located 330m east from the Site. Tottenham Hale and Northumberland Park Railsides is located 670m to the east of the Site.
- 3.13 The Site lies within an Air Quality Management Area (AQMA) declared by LB Haringey for exceedances of the nitrogen dioxide (NO₂) annual mean and the particulate matter (PM₁₀) 24-hour mean objectives.
- 3.14 The majority of the Site is in Flood Zone 1⁵ with small areas along the western boundary in Flood Zone 2. The Site area located within Flood Zone 1 comprises land assessed as having less than 1 in 1000 annual probability of river or sea flooding in any year. However, immediately to the west of Tottenham High Road is the culverted Moselle Brook, which is assessed as being in Flood Zone 2, i.e. having between a 1 in 100 and 1 in 1000 annual probability of river flooding. The Moselle Brook flows eastwards from Tottenham Cemetery through a series of culverts before ultimately flowing into the River Lea to the east of the Site.

What future development is planned for the Site and surrounding area?

- 3.15 The area is subject to significant regeneration with planning consents in place for nearby development sites including the Goods Yard, The Depot, and the Printworks. In addition, the High Road West regeneration scheme is located adjacent to the west of the Site and was granted planning permission from LB Haringey on 31 August 2022. The Lendlease Scheme is pending judicial review.

⁵ There are 3 flood zones as defined by the Environment Agency; Flood Zone 1, 2 and 3. These are based on the likelihood of an area flooding, with Flood Zone 1 areas least likely to flood and Flood Zone 3 areas more likely to flood.

4 Description of the Project

- 4.1 The Consented Scheme involves the redevelopment of the Tottenham Hotspur Stadium and surrounding area. The Development increases the proposed floorspace of the hotel (Plot 3).
- 4.2 Once complete, the Development would provide a total of 205,914 sqm Gross Internal Area (GIA) of floorspace. The site wide floorspace for the Development is presented in Table 5.1, with the changes brought forward by the Amendments illustrated in the final column.

Table 5.1: Development Land Use Schedule

Land Use	Area GIA (sqm)	Units	Change from Consented Scheme
Leisure (including stadium)	122,000	N/A	No change
Hotel	16,132	180 rooms	+595 sqm
Residential	53,298	634	No change
Tottenham Experience	4,311	N/A	No change
Business	4,000 (max)	N/A	No change
Community and Culture	6,000 (max)	N/A	No change

Residential Mix

- 4.3 The number of units of the Development will remain in accordance with the Consented Scheme and provide an updated range of housing mixes. Whilst the size of the residential units will be larger than the Consented Scheme, they remain consistent with the approved site-wide dwelling mix with no more than 5% of units shall be studios, no less than 5% shall be three bed units and no more than 50% shall be 1-bedroom units.

Building Scale

- 4.4 The Plot 3 storey heights will increase from 23 to 29 storeys. The height of the Plot 3 building has been increased by between 21.6m (121.65m Above Ordnance Datum (AOD)) and 27m (to 127.2m AOD), with the high point representing the peak of the sloped roof. This compares to 100.00m AOD for the currently consented hotel, i.e. an increase in height of 21.6 and 27 metres. Other maximum heights that were consented for other plots remain unchanged.
- 4.5 The Development Plot heights are provided in Table 5.2. A computer generated image (CGI) of the Development is presented in Figure 5.1. A verified image of Plot 3 is presented in Figure 5.2.

Table 5.2: Development Building Heights

Plot	Maximum Height	Maximum No. Storeys	Change from Consented Scheme
Plot 1	59.15 mAOD	N/A	No change
Plot 2	25.10 mAOD	3	No change
Plot 3	127.20 mAOD	29	+6 storeys / +27.20 mAOD
Plot 4	62.00 mAOD	7	No change
Plot 5	A – 104.62 mAOD B – 78.22 mAOD C – 131.02 mAOD D – 80.22 mAOD	32	No change
Plot 6	31.8 mAOD	2	No change

Figure 5.1: Illustration of the Development



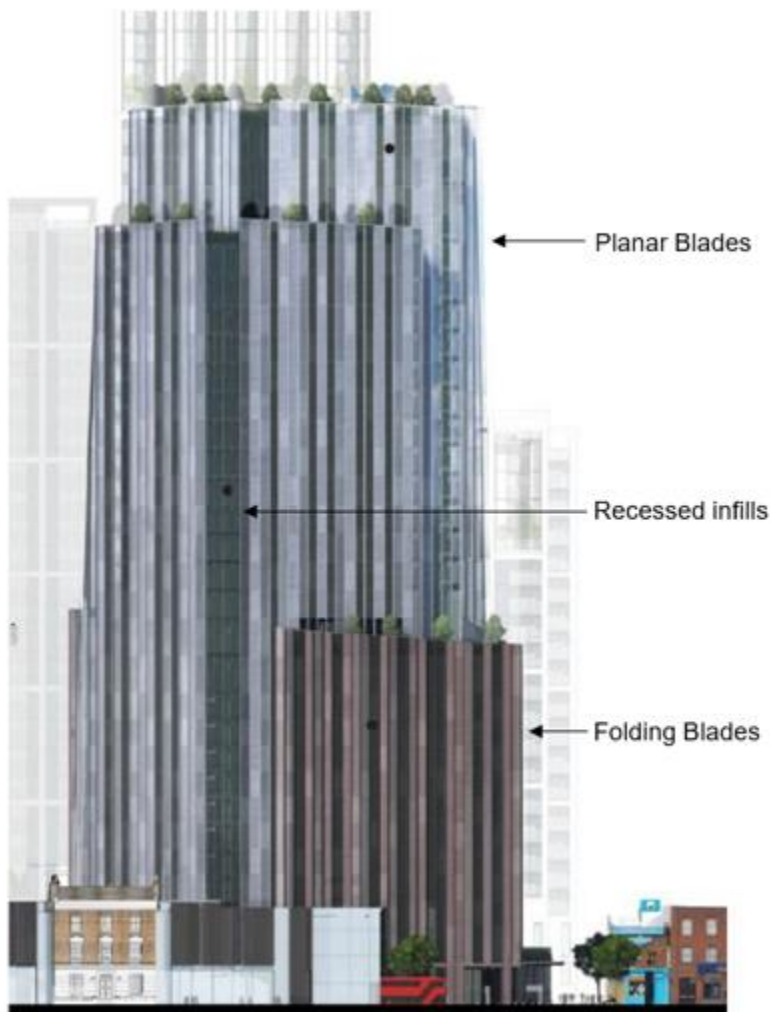
Figure 5.2: Development Massing of Plot 3 (View from West)



Appearance

- 4.6 The proposed architecture and materials used in the design of Plot 3 of the Development will be of high quality and blend into the surrounding townscape, most notably with Warmington House and the existing Plot 1 (Stadium). The main façade types are illustrated in Figure 5.3.

Figure 5.3: Plot 3 visual representation



Access and Parking

- 4.7 No changes are proposed to the site-wide access strategy from the local highway network for cars or bicycles. Access arrangements to the car parking area in the basement of the hotel will remain unchanged via the constructed ramped access provided immediately to the east of the Plot 3 Site.
- 4.8 Three separate, secure and covered pedestrian entrances are proposed from street-level from Park Lane – the first provides access to the Hotel lobby; the second to the serviced apartment residential lobby; and the third to a shared amenity area.
- 4.9 Cycle access is taken via the back-of-house access. Short-stay cycle parking for visitor and long-stay cycle parking for hotel employees and guests will be located on the ground floor and will be accessed from this point; concierge service will be provided for hotel guests. Residential cycle parking is provided at the basement level; the cycle lift is proposed to be located adjacent to the visitors cycle parking area on the ground floor.

- 4.10 The cycle parking for the Development has been increased to be in line with the current London Plan standards. The Development will provide 104 long stay and eight short stay cycle parking spaces for all land uses.
- 4.11 The Consented Scheme included 76 car parking spaces at basement level and these have been constructed as part of Plots 1 and 2. The increase in the cycle parking and changes in the Development reduce the number of car parking spaces provided in the basement. Seven wheelchair accessible spaces and 60 standard spaces will be retained. Electric vehicle charging will be provided to 20% of the spaces as active charging facilities and the remaining 80% will have passive provision meaning that all spaces can be upgraded to provide electric vehicle charging if there is demand.

Delivery and Servicing

- 4.12 The delivering and servicing arrangements for Plots 1, 2 and the other future plots remain as per the Consented Scheme.
- 4.13 Delivery and Service Patterns have changed for Plot 3. The design team have identified a need to accommodate up to four vehicles for deliveries and servicing during a peak period. Delivery and servicing are proposed to be taken from a designated loading area at the forecourt of the Plot 3 Site accessed from Park Lane. This would be able to accommodate a 6m van accessing and leaving the designated residential loading area and a 15m coach accessing and leaving the Plot 3 Site forecourt.
- 4.14 Delivery and serving for Plot 3 will be divided between the basement and the podium (ground floor). Car-derived vans will be used for smaller deliveries in the basement and large deliveries and waste collection will take place at the podium level.
- 4.15 Coach and taxi drop off will be accommodated in front of the hotel, separate to the loading facilities to ensure demand is appropriately managed. Fire tenders are also able to access the drop off zone.

Basements

- 4.16 The proposed basements across the Development remain consistent with the Consented Scheme. These have been delivered as part of enabling works across Plots 1 and 3.

Landscaping and Play Space

- 4.17 The Consented Scheme did not propose any on-site playspace, as the original masterplan allowed for serviced apartments which did not generate estimations for the number of children expected to move into the Development.
- 4.18 Based on the unit/tenure mix, the total demand for playspace generated by Plot 3 is 220.6 sqm. Playspace is proposed within a 35 sqm area on the Level 13 terrace. This will provide an accessible doorstep playable space for the 0 – 5 year category which is safe, overlooked and easily accessible for residents and visitors of residents. The remainder of the playspace required by the Amendments will be delivered within Plot 5 of the Consented Scheme, at reserved matters stage.

- 4.19 The landscaping strategy aims to improve pedestrian access into the Site at street level with a more open aspect incorporating an overhead roof structure with open sides. Within this structure, accessible lifts and stairs are provided to make the podium level more accessible.
- 4.20 Planting will be introduced to enhance the overall greenery of the site.
- 4.21 A revised landscape design at the junction between Park Lane and the High Road proposes an entrance plaza/square at street level, creating an enhanced civic public realm at the southern approach from the High Road to the Hotel and wider stadium precinct. A combination of paving is proposed including the existing herringbone block paving, high quality stone paving and stone sets. Two large seating areas are proposed adjacent to Park Lane which are integrated with a raised planter to include three trees. Bollards are proposed in the paving and are required for safety purposes.
- 4.22 At podium level, an enclosed terrace for the restaurant is proposed at the northern edge with some open-air seating. This will be complemented by high quality stone paving, raised planters for increased greenery and four trees. A southern terrace is also proposed with additional seating, planters and smaller multi-stem trees.

Drainage

- 4.23 The Amendments do not change the currently approved drainage strategy. A site-wide Flood Risk Assessment (FRA) was produced as part of the 2015 ES. An updated FRA and drainage strategy accompanies this S.73 Application which aims to set out how the Development meets the flood and drainage requirements of national and local policy.

Energy

- 4.24 The Amendments do not change the currently approved energy strategy. However, an Energy Strategy Addendum accompanies the S.73 application and provides a review of the current measures and forms a low carbon transition plan for the existing energy network.

Alternatives

- 4.25 The EIA Regulations require an ES to include a description of the reasonable alternatives to the Development that were considered by the Applicant, indicating the main reasons for the choices made, including a comparison of the environmental effects. No alternative sites were considered by the Applicant as the Site is based in a location long associated with a stadium use and is within the control of the Applicant.

Is 'No Development' a reasonable alternative?

- 4.26 The 'No Development' alternative is not considered further in this ES Addendum as the Consented Scheme has planning permission for redevelopment and construction is already underway, with Plots 1 and 2 complete and operational.

What alternative forms of development have been considered?

- 4.27 The 2015 ES considered the potential option of delivery of an existing planning permission from 2011 which would have seen a stadium with capacity of 56,250 together with 285 residential units, a hotel and other supporting infrastructure. During the delay in development of this scheme and granting of planning permission, this option was no longer considered to meet the necessary technical requirements. The Consented Scheme was therefore considered an optimal alternative in 2015 due to the improvements offered by the design in crowd safety on High Road, and enhancements to other aspects of the scheme design.
- 4.28 The main reason for taking forward the Development over the Consented Scheme is to improve the design of the hotel building to respond to the latest building and fire regulations which require a second stair core, enhance ground level landscaping to improve localised wind conditions, and improve visual legibility in respect of the adjacent Conservation Area and local views.

5 Construction

What Construction has been undertaken On-Site?

- 5.1 Construction of the Consented Scheme commenced with earthworks and basement excavation in 2015. Within the 2015 ES, the construction stages were split into three phases:
- Phase 1 – Stadium Phase (A) (i.e. Plot 1);
 - Phase 2 – Stadium Phase (B) (i.e. Plot 2); and
 - Phase 3 – Mixed-use Phase.
- 5.2 Phases 1 and 2 (i.e. Plots 1 and 2) have now been built out and are operational as of 2019. As part of the delivery of Plots 1 and 2 and below ground works to Plot 3, the ground excavation and remediation has been completed.
- 5.3 The basement, which is located beneath Plots 1 and 3, was excavated in two phases. Sheet pile walls were installed and basements were excavated to between 7.01mAOD on the west and 6.773mAOD on the east of the Site.

How long will construction of the Development take?

- 5.4 The Consented Scheme assumed a 2022 opening year for all of the Plots.
- 5.5 It is now anticipated that the Development would be completed and fully occupied by 2028 and therefore the preparation and construction works would span approximately 4 years.
- 5.6 Due to the outline nature of Plots 4 - 6, there is greater uncertainty of the form and delivery of each future Plot that will come forward. While the exact durations of the construction programmes of future Plots will be defined during Reserved Matters Applications, for the purposes of this ES Addendum, the durations of these construction stages have been based on those presented in the 2015 ES.
- 5.7 As such, the previous sequencing of works outlined in the Indicative Phasing Plan associated with the Consented Scheme is revised for construction of the remainder of the Consented Scheme based on Table 6.1.

Table 6.1: Construction and Phasing Programme

Description of Works	Start Date	Anticipated Completion	Duration
Construction of Plot 3 (Hotel)	Q4 2025	Q4 2027	24 months
Construction of Plot 4 (Extreme Sports Centre)	Q2 2026	Q2 2027	12 months

Description of Works	Start Date	Anticipated Completion	Duration
Construction of Plot 5 (Residential)	Q4 2026	Q4 2028	24 months
Construction of Plot 6 (Community Centre)	Planning permission lapsed.		N/A

What works will be undertaken during construction?

5.8 The description of construction works for the Development remains largely unchanged from that set out for the Consented Scheme in the 2015 ES. This is summarised as follows:

- Main cores – construction of cores assisted by tower cranes.
- Floor slabs – the progress of the cores would be closely followed by the construction of the floor slabs which would also be assisted by tower cranes.
- Fit out – including partitions to the apartments and the installation of primary services including the risers.
- Commissioning and completion – to bring the buildings to completion and ready for occupation.

What environmental management and mitigation measures will be in place?

5.9 A number of management plans are controlled by planning conditions for the Consented Scheme, including Phase-specific Construction Environmental Management Plans, Air Quality Dust Management Plans and Construction Waste Management Plans. This would be implemented during the construction of Plot 3 and future phases.

How will material be managed and reused?

5.10 As noted in the 2015 ES, relatively little demolition work would take place across the Site as the areas for Plots 3-6 are predominantly clear. While there are provisional uses present on the south eastern portion of the Site including temporary football pitches, there are no permanent structures on-site that would require demolition. The majority of the waste material generated from the Development as a whole was from excavation of the basement areas which is now complete.

What measures will be in place to manage construction works and traffic?

5.11 The core working hours for site preparation and construction for the Development would be in line with the agreed timings of the Consented Scheme as follows:

- 08:00 – 20:00 hours.

5.12 Any work outside these hours would be subject to prior agreement and/or reasonable notice given to the LB Haringey.

- 5.13 All the construction traffic would route to the Site by way of the A1010 High Road/Fore Street that connects to site to the A406 North Circular Road. Construction Travel Plans (CTP) would be prepared for construction workers. The CTP would specify no construction worker parking on-site and construction workers would be encouraged to use the local public transport infrastructure. Unapproved parking on public roads would not be allowed. Provisions would be made for essential on-site parking. Any local traffic management measures for site access would be agreed with LB Haringey.
- 5.14 During the removal / diversion of associated existing services there may be the requirement for temporary road closures and / or diversions to occur. Details of this would be discussed and agreed with the LB Haringey at the appropriate time.

6 Air Quality

- 6.1 The impact of the Development on air quality during both construction and operation has been assessed. The assessment summarises current conditions within the study area and identifies mitigation measures where appropriate for adverse air quality effects that may arise as part of the Development. It includes an assessment of dust and particulate matter emissions due to on-site construction activities. The impact of increases in traffic on air quality has also been assessed during both construction and operation stages of the Development, combined with other development projects. In addition, the energy, heating and hot water strategy has also been considered.

How were the environmental effects identified?

- 6.2 The effect of dust and particulate matter (solid particles and liquid droplets in the air) emissions due to on-site construction activities has been assessed qualitatively. This considers earthworks, construction and tracking of dust onto the road network. The impact of construction and operational phase vehicle traffic on air quality has been assessed quantitatively using specialist computer modelling. An air quality model has been developed and checked against local air quality monitoring and worst-case assumptions have been used throughout. Changes in air pollutant concentrations due to the Development have been determined at existing human and ecological receptors. The exposure of future site users was also assessed.
- 6.3 The assessment has been undertaken in accordance with current guidance from Institute of Air Quality Assessment and Management (IAQM)⁶, updated since 2015.

What is the baseline?

- 6.4 Baseline air quality concentrations have been obtained from local authority monitoring and a site-specific monitoring survey has been undertaken at the Site. The survey includes one automatic monitoring site measuring nitrogen dioxide (NO₂) and particulate matter (PM₁₀) concentrations, and 12 NO₂ diffusion tube monitoring sites, which have been operational since 2019. Monitoring indicates that baseline air pollutant concentrations are in compliance with UK air quality objectives on and surrounding the Site. The Site lies within an Air Quality Management Area (AQMA) declared by LB Haringey for exceedances of some pollutants.

What are the potential effects during construction?

- 6.5 The construction works have the potential to create dust. During construction it will be necessary to apply a package of mitigation measures to minimise dust emission. Appropriate mitigation measures, that are proportionate to the level of risk, have been identified which form part of the site-specific CEMP. With these measures in place, it is expected that any residual effects will not be significant.

⁶ <https://iaqm.co.uk/guidance/>

- 6.6 The impacts of increased traffic during the construction phase have also been assessed. The impact of pollution arising from construction traffic on surrounding human receptors will be negligible and effects not significant.

What are the potential effects of the completed Development?

- 6.7 The impacts of road traffic emissions from the Consented Scheme were modelled for a future year of 2018 and 2021 in the 2015 ES. The Consented Scheme has not been fully built out by 2021 and the Development is now not anticipated to open until 2028. Vehicle emissions are expected to reduce in the future (as a result of local, regional and national measures). Furthermore, measured air quality concentrations in the vicinity of the Site have continued to reduce in recent years. Therefore, it is judged that the effects of the Development from road traffic emissions will be less than those predicted in the 2015 ES.
- 6.8 The impacts of local traffic and the boiler and generator plant on the air quality for new residents living within the Development have been shown to be acceptable at the worst-case locations assessed, with concentrations being well below the air quality objectives.
- 6.9 The overall operational air quality impacts of the Development are likely to remain as reported for the Consented Scheme in the 2015 ES, or reduce, with no additional effects or mitigation identified.

What would be the cumulative effects with other developments?

- 6.10 It is reasonable to assumed that other construction sites would implement good practice site management measures such that significant cumulative air quality effects would not be expected during the construction phase.
- 6.11 Traffic generated by surrounding committed cumulative developments on human health have been considered qualitatively and are not considered to lead to significant effects on human health.

How does the Development compare to the Consented Scheme?

- 6.12 The potential impacts from air quality associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes as reported in 2015 ES.

The potential changes resultant from the Amendments are not materially considered to affect the air quality conclusions stated for the construction phase and completed Development. The Amendments, alongside improvements in baseline concentrations and traffic emissions since the 2015 ES was prepared, and updates to the energy strategy, are expected to reduce the overall impacts associated with the completed Development. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, or reduce, with no additional effects or mitigation identified.

7 Archaeology

- 7.1 The archaeology chapter of the ES (as amended) considers the effects of construction and operation of the Development on heritage assets, including archaeological sites and known areas of archaeological potential, historic buildings and structures, and historic landscape character.

How were the environmental effects identified?

- 7.2 A desk-based assessment and two phases of archaeological evaluation informed the assessment. The trial trenches indicated that the Site has been subject to extensive excavation and that no deposits of significance remain within the tested areas.

What is the baseline?

- 7.3 LB Haringey's Archaeological Priority Area (APAs) were reviewed in 2021. The majority of the Site is located in the Lea Valley APA, covering the flood plain of the River Lea and Moselle Valley. Some areas in the western part of the Site extend into the Ermine Street APA covering the route of a major Roman road with the potential to contain remains of Roman settlement and roadside activities. No buried remains or potential remains have been identified that would require preservation *in situ*⁷.
- 7.4 Basements were proposed as part of the Consented Scheme and excavation works were completed in 2015, comprising single-level basements underneath Plot 1 (Stadium) and Plot 3 (Hotel).

What are the potential effects during construction?

- 7.5 Potential impacts on buried archaeological assets will only occur during the construction works associated with the Development. Basement excavation and sub-structure works have been completed for Plot 3. Works that could have an impact may comprise site levelling, creation of site compounds and access roads, piling and cutting of services of other related foundations and footings. Any effects will be permanent, due to the nature of the potential archaeological resource.
- 7.6 The Amendments do not propose further basement excavation works. While there will be piling and other ground disturbance activities for delivery of the Development, these will not change as a result of the Amendments. Therefore, the likely residual effects of the Development upon potential below ground archaeological remains is considered to be minor adverse.

⁷ Object remains situated in the original place.

What are the potential effects of the Completed Development?

- 7.7 Any potential effects on buried heritage assets will occur as a result of ground disturbance during demolition and construction works. No impacts or effects will occur on buried heritage assets during the completed Development stage.

What would be the cumulative effects with other developments?

- 7.8 Below ground archaeology archaeological remains within the Site are considered to be of a small scale and localised nature. Any related archaeological remains which extended beyond the Site boundary, if present, would not be impacted by the Development itself. The cumulative schemes identified would have been subject to an archaeological assessment and appropriate mitigation measures. As such, there would be no cumulative effects with other scheme.

How does the Development compare to the Consented Scheme?

- 7.9 The potential impacts from archaeology associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes as reported in the 2015 ES.
- 7.10 The potential changes resultant from the Amendments are not materially considered to affect the archaeology conclusions stated for the demolition and construction stage and completed Development stage. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely effects resulting from the Development are likely to remain as reported, with no additional effects or necessary mitigation identified.
- 7.11 The Amendments will not significantly vary the Consented Scheme and, provided that all mitigation measures suggested in the 2015 ES are implemented, the assessment conclusions reported in the 2015 ES are considered to remain valid.

8 Cultural Heritage

- 8.1 The cultural heritage chapter of the ES (as amended) considers the effects of construction and operation of the Development on heritage assets, including archaeological sites and known areas of archaeological potential, historic buildings and structures, and historic landscape character.

How were the environmental effects identified?

- 8.2 A desk-based heritage assessment was produced which was informed by a site walkover and historic records searches. After identifying the value of significance for each asset (based on the relevant legal and policy framework and professional judgement), potential effects of the construction and operation of the Development have been identified and the relative degree of change has been assessed. A worst-case assessment has been undertaken for this evaluation using maximum building heights and other information.

What is the baseline?

- 8.3 There are a number of designated and undesignated heritage assets on the Site. The Grade II listed Warmington House 744 High Road is located at the eastern boundary of the Site. At the north west corner of the Site is the historic terrace known as the Northern Terrace. The 796 Percy House and 808-810 High Road which are listed at Grade II* (790 (Dial House) Grade II* and 792 High Road also form part of the terrace but are not part of the Site). As part of the Consented Scheme, the locally listed buildings at 746, 748 and 750 High Road were demolished. The restoration and associated development at the Grade II listed 744 High Road / Warmington House has been completed.
- 8.4 The western edge of the Site is located within the North Tottenham Conservation Area, one of six designated conservation areas which make up the Tottenham High Road Historic Corridor. Since submission of the 2015 ES, a section of the North Tottenham Conservation Area, previously comprising 'Sub-Area C', has been removed from the Conservation Area (this was the part of the High Road between Moselle Street and Park Lane, to the east of the Site (inc. the stadium and Warmington House). The boundaries of the Conservation Area have also changed in the northernmost end, where a section has been removed, and a small element on the south side of White Hart Lane has also been removed.

What are the potential effects during construction?

- 8.5 With the implementation of mitigation measures, the potential impacts of the construction phase should be minimised as far as practically possible. As such, the residual impact during the construction phase is envisaged to be minor adverse.

What are the potential effects of the Completed Development?

- 8.6 The Development would see the transformation of this area of north London with investments leading to substantial and essential regeneration. Major beneficial effects from the restoration

and reuse of Grade II Warrington House and minor to moderate beneficial effects on the North Tottenham Conservation Area, notably the Stadium and Tottenham Experience, have been realised. The potential beneficial effects that were identified in the 2015 ES for Plot 3 (the Hotel) are still anticipated, along with minor beneficial effects also identified on the setting of the Grade II* and Grade II listed buildings on Northern Terrace.

What would be the cumulative effects with other developments?

- 8.7 Potential cumulative effects from the Development on the setting of nearby built heritage assets are not significant. The Amendments to Plot 3 would not have a material impact on their setting relative to the Consented Scheme in the context of these assets.

How does the Development compare to the Consented Scheme?

- 8.8 The potential impacts on surrounding cultural heritage receptors, associated with the Development as changed by the Amendments, have been considered. This has considered the changes to the effects reported in 2015 ES.
- 8.9 The potential changes resulting from the Amendments are not considered to materially affect the surrounding cultural heritage receptors or the conclusions stated for the construction or completed Development assessment. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application. All likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

9 Ecology

- 9.1 The ecology chapter of the ES (as amended) considers the effects of construction and operation of the Development on ecological receptors.

How were the environmental effects identified?

- 9.2 The ecological status of the Site has been assessed through baseline survey work and reported in the ES (as amended). A site walkover carried out in July 2023 through an extended Phase 1 Habitat Survey⁸ to verify previously assessed baseline conditions (in 2015).

What is the baseline?

- 9.3 The Site is located within 2km of Walthamstow Reservoirs Site of Special Scientific Interest (SSSI), designated due to its importance for wildfowl and wetland birds. The SSSI is a component of the Lee Valley Special Protection Area (SPA) and Ramsar site as it supports internationally important overwintering populations of three bird species. These designations afford the site protection under both European and international law.
- 9.4 There are two Sites of Importance for Nature Conservation (SINC) located within proximity to the Site, designated for local ecological conservation objectives. Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park is located 330m east from the Site. Tottenham Hale and Northumberland Park Railsides is located 670m to the east of the Site.
- 9.5 The Site is largely occupied by buildings, bare ground and hard standing with limited areas of amenity grassland and scattered semi-mature/mature trees.

What are the potential effects during construction?

- 9.6 All designated sites will be subject to negligible impacts from the Development. The effects on breeding birds and off-site wildlife sites from the construction phase are not significant.
- 9.7 Implementation of site-specific CEMPs will ensure best practice measures are in place to prevent any significant effects to ecological receptors. The Development includes landscaping to provide replacement and increased habitat for species (namely bats and birds) and includes bat and bird boxes within the scheme design to increase the resource for bats and birds at the Site.

What are the potential effects of the completed Development?

- 9.8 The effects on off-site wildlife sites from the operational phase are not significant.

⁸ A Phase 1 Habitat Survey is undertaken to provide a standard record of habitats and ecological features on a site.

- 9.9 Steps will be taken to ensure that good practice procedures both in construction and health and safety during the Project site development and any required remediation will be adhered to. Environmental management procedures should be outlined in a site-specific Environmental Management Plan (EMP) to be agreed with the Environment Agency and Haringey Council prior to commencing the works.

What would be the cumulative effects with other developments?

- 9.10 No potentially significant effects are predicted to any of the wildlife sites identified as receptors in the ecological assessment, as none of these sites are particularly vulnerable to increases in recreational pressure and all of them are sufficiently far from the Site to avoid any significant effects during the construction phase. As a result, no significant cumulative effects are anticipated as a result of the construction of any of the identified committed developments.

How does the Development compare to the Consented Scheme?

- 9.11 The potential impacts on ecology associated with Amendments have been considered against the conclusions reported in 2015 ES.
- 9.12 The potential changes resulting from the Amendments are not materially considered to affect the ecology conclusions stated for the construction stage and completed Development stage. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

10 Surface Water, Drainage and Flood Risk

- 10.1 The Water Resources, Flood Risk and Drainage chapter of the ES (as amended) considers the effects of construction and operation of the Development on the potential surface water drainage and flood risk effects the project may have on the area surrounding the Site. The assessment includes a summary of the current conditions found within the area and identifies mitigation measures where appropriate for significant effects that may arise as part of the Development.

How were the environmental effects identified?

- 10.2 The assessment was informed by a review of the identified effects from the 2015 ES and the updated Drainage Strategy and Flood Risk Assessment prepared for the planning application.

What is the baseline?

- 10.3 There are no surface watercourses within the Site boundary, however Moselle Brook has been culverted. The culvert lies beneath High Road west of the Site. Moselle Brook was *“originally a natural tributary of the River Lee but has since been mostly culverted and in now artificially flows into Pymmes Brook”*⁹. The culvert outfalls into the Pymmes Brook approximately 1.9 km south east of the Site. Pymmes Brook joins the Thames River approximately 12km south of the Site.
- 10.4 The Environment Agency Source Protection Zones (SPZ) maps show that the Site is mostly within the outer zone of a groundwater SPZ. The north west corner is outside the groundwater SPZs.
- 10.5 The majority of the Site is in Flood Zone 1 with small areas along the western boundary in Flood Zone 2. The Site area located within Flood Zone 1 comprises land assessed as having less than 1 in 1000 annual probability of river or sea flooding in any year.

What are the potential effects during construction?

- 10.6 During the construction phase of the Development, good site practice will be carried out including:
- The Site will be kept clean and all runoff from the Site will be collected and passed through a settlement tank and/or oil separator as required before discharging at an agreed rate into the Thames Water Sewer or Moselle Brook;
 - Drip trays will be used under all standing plant;
 - The soil affected by a spillage will be removed and sent to a licensed waste site and water for washing down will also be sent to an approved waste site;

⁹ As stated in the North London Strategic Flood Risk Assessment.

- Precast concrete units will be used to minimise the use of fresh concrete on the Site. When necessary, premix concrete and mortar will be used;
- During deep excavations, e.g. for the basements, the protective clay layer will be monitored to ensure the aquifer or a path to the aquifer is not exposed;
- Any existing boreholes will be decommissioned to the satisfaction of the Environment Agency. Existing water utilities will be identified and blocked if they are not to be used in the Development; and
- The Contractor will follow the Environmental Action Plan for the Site.

10.7 With these mitigation measures in place, the construction effects are found to be minor or minor neutral.

What are the potential effects of the Completed Development?

10.8 During the operational phase of the Development, the drainage system, SuDS components and pumped outlets will be regularly maintained to ensure their effective operation in a flood event.

10.9 The new drainage system is designed to store the runoff from a 1:100 year flood event increased for the climate change effect in the underground storage tanks and in the oversized pipes in excess of the agreed discharge rates. Thus ensuring that the Development does not flood and the Site does not increase flood risk elsewhere. Back up pumping facilities should be available to ensure the pumped outfalls remain operation. Runoff from the paved areas will be stored separately from the roof runoff. Hydrocarbons and silt will be removed from the runoff from the paved areas before entering the drainage system. The paved areas will be regularly cleaned to remove pollutant.

10.10 With these mitigation measures in place, the effects of the Completed development on sensitive receptors are found to be minor or minor neutral.

What would be the cumulative effects with other developments?

10.11 Cumulative effects have not been considered as any effects are likely to be localised to the Site, with cumulative effects across multiple sites unlikely due to the nature of impacts and mitigation strategies implemented across all development sites.

10.12 No further mitigation is considered necessary as stated in the 2015 ES

How does the Development compare to the Consented Scheme

10.13 The potential impacts from surface water drainage and flood risk associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes as reported in 2015 ES.

10.14 The potential changes resultant from the Amendments are not considered to affect the surface water conclusions stated for the construction stage and completed Development stage. Therefore, the findings of the 2015 ES are considered still valid and applicable to this

application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

11 Ground Conditions and Hydrogeology

- 11.1 The potential ground conditions and contamination related effects during the construction and operational phases of the Development have been assessed in the ES (as amended). An assessment of spillages, soil erosion, generation of suspended solids was undertaken for the construction phase. Localised spillages of fuel, which may be carried to surface watercourses and underlying groundwater through surface run-off and leaching through the soil profile during the operational phase were scoped out of the ES (as amended).

How were the environmental effects identified?

- 11.2 The assessment was informed by a desk based study of records, maps, previous site investigations and other information. Numerous ground investigations have also been undertaken at the Site in accordance with standard land contamination risk assessment guidance. These baseline studies helped to identify the ground conditions at the Site, groundwater conditions, surface water bodies, historical and current potentially contaminating activities.
- 11.3 For a risk to exist, there needs to be one or more 'source-pathway-receptor' linkages. The source (hazard) is the contaminant or gas, the pathway is the route by which contamination can generate exposure or migrate, and the receptor is the entity that is vulnerable to the adverse effects of the hazard (e.g. waterbody or human health). A Ground Model (expected below ground conditions) and contaminant linkages were combined to form a Conceptual Site Model (combination of all interpreted information for a site relevant to contamination sources, the receptors that may be affected, and the pathways that link the sources and receptors).
- 11.4 Findings of the above studies have been reviewed to identify the environmental effects, during the construction and operational phases of the Development.

What is the baseline?

- 11.5 Plots 1 and 2 are now complete and operational and basements have been constructed under Plots 1 and 3. The remainder of Site is currently occupied by temporary use structures associated with the stadium and public realm. The remediation strategy was implemented in advance of these works such that risks to current and future site uses from contamination is considered to be very low.

What are the potential effects during construction?

- 11.6 In the 2015 ES for the Consented Scheme, minor adverse residual effects were identified on human health associated with direct contact with contaminants in the Made Ground¹⁰, exposure to ground gas, and/or contaminated soils, and inhalation / ingestion of

¹⁰ Original soil has been replaced or altered by the introduction of manmade materials such as concrete or crushed brick

contaminated dust. Minor adverse impacts were identified on adjacent flora from exposure to phytotoxic contaminated dust particles. Minor adverse residual effects were also identified on the River Moselle and underlying aquifer from leaching and mobilisation of contaminants, and via fuel and chemical spills. Aside from adherence to good practice site construction measures, no additional mitigation was specified.

- 11.7 The potential effects for the Development will be the same or less than those previously reported in the 2015 ES as the remediation undertaken during the earthworks has been completed.

What are the potential effects of the Completed Development?

- 11.8 No operational effects are predicted for the completed Development due to the presence of built form, hardstanding and other embedded mitigation as necessary (e.g. oil interceptors) to minimise the potential for contaminative effects.

What would be the cumulative effects with other developments?

- 11.9 Cumulative effects have not been considered with regards to ground conditions and contamination as any effects are likely to be localised to the Site, with cumulative effects across multiple sites unlikely due to the nature of contamination and mitigation strategies implemented across all development sites.

How does the Development compare to the Consented Scheme

- 11.10 The potential impacts from ground conditions and hydrogeology associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes as reported in 2015 ES.
- 11.11 The potential changes resultant from the Amendments are not considered to affect the ground conditions and hydrogeological conclusions stated for the construction stage and completed Development stage. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

12 Townscape and Visual Impacts

- 12.1 The townscape and visual impact assessment of the ES (as amended) considers the effects of construction and operation of the Development on the townscape character and visual amenity of local people, in accordance with best practice as set out in the Guidelines for Landscape and Visual Impact Assessment 3rd Edition.

How were the environmental effects identified?

- 12.2 An assessment has been undertaken of likely effects on townscape character and visual amenity of the Development. This provided a study of the current townscape and condition of the Site and its context, identifies the townscape character areas and views potentially affected by the Development of the Site and provides assessments of the effects likely to arise in each case. This assessment has been informed 31 'Accurate Visual Representations' of the Development overlain on a selection of photography from 29 viewpoint locations. These have been presented both in the form of wireline or detailed graphical illustrations of the scheme on the photography.

What is the baseline?

- 12.3 The Site comprises Plots 1 and 2 of the Consented Scheme, public realm and temporary uses associated with the stadium. The north Tottenham Conservation Area is located directly to the west of the Site and partially extends into its north western corner. The surrounding area to the south west contains four Conservation Areas: Tottenham Cemetery, Bruce Castle, Tower Gardens, and Peabody Cottage. Further Conservation Areas to the north east of the Site are the Fore Street South and the Fore Street Angel Conservation Areas located in the London Borough of Enfield.
- 12.4 Several listed buildings and locally listed buildings are located along the High Road and within the aforementioned Conservation Areas, including the Grade I Bruce Castle, the Grade II* Parish Church of All Hallows, and the Grade II* All Hallows Vicarage the Priory in Bruce Castle Park; and the Grade II* Dial House, Percy House, and Nos.808-810 on the High Road.
- 12.5 The existing building heights in the surrounding area vary from three to 23 storeys, including Rivers Apartments and Stellar House. There is also existing planning consents in place for new tall development in the vicinity of the Site.

What are the potential effects during construction?

Townscape

- 12.6 The effects on the local area, in terms of its townscape character and public realm, and visual amenity were assessed. After mitigation is implemented, there will be between negligible and moderate adverse effects in views due to the presence of cranes, scaffolding and construction site activities. The effects would be short-term and temporary in nature and primarily affect areas located closer to the Site.

Visual

- 12.7 Construction works would have a negligible or minor and adverse effect on distant views, with high impacts in closer views owing to the presence of cranes and the large scale of the Development when under construction.

What are the potential effects of the Completed Development?

Townscape

- 12.8 The principal townscape effects on the wider and local area result from the completed Development providing a landmark building. This would have beneficial effects on townscape receptors in the surrounding context of the Site that would vary in significance from minor to major beneficial.

Visual

- 12.9 The potential visual effects of the completed Development on 31 local and distant townscape views from 29 viewpoints (with two night-time variations) were assessed. Of these views, it was found that the majority of effects would be of a beneficial nature. Only four views would be likely to have a neutral or balanced effect, i.e., views from the High Road, north of Lampden Lane and north of Brettenham Road (views 2 and 8); views from the Tottenham Cemetery (views 10 and 11), Bruce Castle Park (view 13), and Bruce Grove looking towards Edmansons Close (view 14). The significance of residual effects would again have great variations, with the majority of the effects found to be either minor or moderate. Eight views will have a major effect, i.e., views from Church Road (views 6 and 7), views from the High Road (views 19, 20, 21, and 22), and view 24 from Argyle Road and 25 from Bromley Road.
- 12.10 Overall, the Development would create a notable enhancement to the townscape character and views by providing a well-defined and formed built character and public realm, through high quality architecture and materials.

What would be the cumulative effects with other developments?

- 12.11 No adverse cumulative effects were found on townscape receptors, ranging from minor to major beneficial. The majority of views would have a beneficial effect, when the Development is seen in conjunction with other cumulative developments. In two cases there will be no change (views 8 and 13) and in 16 cases there will be no cumulative effect.

How does the Development compare to the Consented Scheme?

- 12.12 The potential impacts on Townscape character and visual amenity associated with the Amendments as detailed in the S.73 Application have been considered. This considered the changes as reported in 2015 ES.
- 12.13 It is important to note that the current townscape assessment covers a slightly greater study area than the 2015 assessment, as well as different study boundary areas due to updated baseline frames of references. It is therefore not possible to do a like-for-like comparison of significance ratings for residual effects against the 2015 assessment.

- 12.14 The potential changes resulting from the Amendments are not materially considered to affect the townscape and visual conclusions stated within the 2015 ES for the construction phase and completed Development. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application. All likely significant effects resulting from the Development are likely to remain as reported in the 2015 ES, with no additional effects or mitigation identified.

13 Noise and Vibration

- 13.1 The potential effects of noise and vibration during the construction and operation phases of the Development have been assessed in the ES (as amended). The temporary construction effects arise from construction works within the Site, construction traffic travelling along the surrounding road network and, where applicable, construction vibration. The permanent effects associated with the Development are primarily from road traffic noise, external building plant, and match day and events.

How were the environmental effects identified?

- 13.2 The assessment considers noise levels generated during football matches, music concerts and major sporting events. Noise levels have been predicted for these events and compared against the appropriate criteria. A comparison against the existing noise levels has also been made.

What is the baseline?

- 13.3 An environmental noise survey was carried out by Buro Happold in August 2022 to assess the existing noise levels around the Site. The measured noise levels were quieter than those measured in the 2015 ES. Marginal differences identified are expected to be due to changes in traffic flows on local roads and difference in monitoring locations in relation to noise sources.
- 13.4 The baseline noise environment at the Site is mainly affected by road traffic noise from the adjacent roads and the stadium itself on match and event days. There is also some plant noise from the existing buildings.
- 13.5 Existing receptors were identified at residential dwellings on adjacent roads to the Site.

What are the potential effects during construction?

- 13.6 Construction noise has the potential to cause adverse effects at existing noise sensitive receptors, such as residential properties. Noise from construction activities would be minimised and managed in line with standard good practice through a CEMP and it is still appropriate for the contractor or developer to agree a noise monitoring and control regime with the Council, prior to construction.
- 13.7 Although the construction programme has changed from 2015, construction noise and vibration generated during the construction stage will remain unaltered from that presented in the 2015 ES. There remain a range of residual effects between negligible to major adverse significance that would be localised to the phased area of works.

What are the potential effects of the completed Development?

- 13.8 The assessment identified that there would be a slight increase in noise levels during football matches mostly due to increased crowd numbers, this should be insignificant at the existing dwellings. Noise levels during NFL games and music concerts will be slightly higher. The noise levels during these events meet the appropriate criterion at the existing dwellings.
- 13.9 Mitigation measures are incorporated to ensure that internal noise levels are suitable for use.

What would be the cumulative effects with other developments?

- 13.10 There is not predicted to be any significant cumulative noise and vibration effects during construction as each construction site will employ good site practice. Once operational, the Development and cumulative schemes will operate to the latest building regulations and no significant increase in effects is expected relative to the Development in isolation.

How does the Development compare to the Consented Scheme?

- 13.11 The potential impacts from noise and vibration associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes as reported in 2015 ES.
- 13.12 The potential changes resultant from the Amendments are not materially considered to affect the noise and vibration conclusions stated for the construction phase and completed Development. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

14 Socio Economics

- 14.1 The potential socio-economic effects of the construction and operation of the Development have been assessed in the ES (as amended). This considered the impacts of the Development on the local demographics and economy, such as changes to the labour market, housing, population and social infrastructure need associated with the new population that would occupy the Site.

How were the environmental effects identified?

- 14.2 There is no standard methodology for the socio-economic assessment. Professional judgement and experience have therefore been drawn upon to assess the scale and significance of the socio-economic effects of the Development. A full methodology is provided including details of how receptor sensitivity and magnitude of effects interact to inform a judgement on scale and significance of effects.

What is the baseline?

- 14.3 The Site is located at the northern end of Tottenham High Road in LB Haringey, close to the border with the London Borough of Enfield. The High Road runs for approximately 2.5km from Seven Sisters in the south, with a fairly continuous shopping frontage which extends north into Enfield where it is called Fore Street.
- 14.4 There is a notable housing need in the area. The employment rate in the local area is low with high unemployment rates. The area in which the Development is located is among some of the least deprived neighbourhoods in England. There are ten primary schools within 1km of the Site. Within a 1km radius, there are two secondary schools. In terms of healthcare, there are ten surgeries within 1km of the Site both with no surplus capacity. Within 1km of the Site, there are eight public open spaces, including one 'Local Park' (Bruce Castle Park). It should also be noted that Tottenham Marshes District Park and Lee Valley Regional Park are located to the east of the Site, and Tottenham Cemetery is located within 1km to the west of the Site.
- 14.5 The Development is assessed in the context of relevant policy as well as against the current socio-economic baseline conditions at the local level and, where appropriate, at the Wider Impact Area (London Boroughs of Haringey and Enfield) and regional level.

What are the potential effects during construction?

- 14.6 The construction phase of the Development is expected to support around 890 FTEs¹¹ in mainly manual labour positions. The net effect of the Development during the construction phase against the baseline is considered to provide a minor beneficial impact at local and district level which could be enhanced through employment brokerage schemes. Due to the

¹¹ this figure represents a range of people likely to be involved in the construction process including in the supply chain. The number of people on-site at any one time will fluctuate over the construction period.

mobile nature of a construction workforce it is not meaningful to consider this impact at a regional level, and as such the impacts would be negligible at this scale.

What are the potential effects of the Completed Development?

- 14.7 The Development comprises commercial and flexible floorspace which could accommodate a range of uses including employment/office, retail, community and/or leisure. Collectively, these uses could generate up to 700 gross FTE jobs in a range of positions. The creation of net additional employment opportunities from the end-use phase of the development is assessed to be a major beneficial effect at the local level, and a moderate beneficial effect within the Wider Impact Area.
- 14.8 The type of employment generated will primarily be in the service sector – in retail, leisure, hospitality and catering. The occupational breakdown of jobs in these sectors is comparable to both the local skill set of residents, but more crucially the sought occupation of current unemployed people. This demonstrates a very good fit between the large number of entry-level jobs in the Development and the types of jobs in demand locally. There is also a high proportion of managerial employment in these sectors, and large employers are keen to train and retain staff, offering opportunities for local residents to gain and keep jobs, and progress to other opportunities in the sector while gaining new skills.
- 14.9 The new resident, visitor and worker population brought to the Site have the potential to generate in the region of £40 million in spending each year – once the Site is fully occupied and operational. This is assessed to be a major beneficial effect at the local level, and a moderate beneficial in the Wider Impact Area.
- 14.10 The wider economic effects associated with investment, visitor, resident and employee expenditure and GVA generation would lead to an even greater number of indirect employment generation.
- 14.11 The new homes in the indicative scheme are expected to accommodate up to 900 residents on a Site which currently has no resident population. The contribution of these new homes towards housing targets are assessed to be major beneficial at the local level, and minor beneficial in London.
- 14.12 The new resident population is expected to generate demand for social infrastructure such as schools, healthcare, open space, and play space. The number of children likely to live in the development is around 40, across all forms of entry. Given the current and future levels of secondary school provision across the Borough as a whole, the impact of the Development is assessed to be negligible.
- 14.13 The additional primary healthcare (GP) needs of the population forecast would equate to demand for around 0.5 GPs. The Project includes the provision of a community health facility which will host an NHS health centre including a GP surgery, facilities for other health specialists and represent increased access for new and existing residents. As such, the Development will have a minor beneficial effect on access to healthcare in the local area.
- 14.14 The Development includes provision of areas of open space and play space. Open space provision takes the form of private communal space, semi-private space, public open space,

and a significant public square to the south of the stadium. This will be provided within an area comparable in size to Trafalgar Square to the south of the stadium and includes a multi-use games area, high quality landscaping, cafes, dedicated events and community programmes managed by the Tottenham Hotspur Foundation. The impact of the Development on demand for open space is assessed to be a major beneficial effect at the local level, minor beneficial at the borough level and negligible at all other spatial levels.

- 14.15 In the context of open space deficiency outlined in the policy and baseline sections above, this provision of space will bring a major beneficial effect at the local scale. In addition to the amenity benefits provided by the investment in new building, the retained listed buildings and the public realm will also contribute to maximising the economic benefits.

What would be the cumulative effects with other developments?

- 14.16 The Development in combination with the cumulative schemes identified is likely to result in significant positive effects from an employment and housing delivery perspective. The effects are negligible from a social infrastructure perspective (following appropriate mitigation measures).

How does the Development compare to the Consented Scheme?

- 14.17 The potential impacts from the Socio-Economic ES chapter associated with the Development as detailed in the S.73 Application have been considered.
- 14.18 The potential changes resulting from the Amendments are not materially considered to affect the Socio-Economic conclusions stated within the 2015 ES for the construction phase and completed Development. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

15 Transport

- 15.1 The effect of the Development on transport has been assessed with other development in the area in the ES (as amended). The assessment is informed by a Transport Assessment, Transport Assessment Addendum and Travel Plans.

How were environmental effects identified?

- 15.2 The ES includes a study of the effects of the Development on traffic flows and traffic conditions on the highway network, and indirect effects such as pedestrian and driver delay and impacts on public transport. Traffic surveys were undertaken in June 2023 to understand the change in the baseline traffic flow since 2015.

What is the baseline?

- 15.3 The highway network is dominated by the A1010 High Road which runs in a north south direction and links to the A406 North Circular in the north and the A10 in the south.
- 15.4 The local area is very well served by public transport. An indicator of this are the PTAL ratings for various locations of between 3 and 5, which is 'average' and above. The rail stations (national rail and Overground) at White Hart Lane, Bruce Grove, Seven Sisters, Northumberland Park and Tottenham Hale can all be accessed from the Site. Seven Sisters and Tottenham Hale Stations are also served by the Victoria Underground Line.

What are the potential effects during construction?

- 15.5 Neutral to minor adverse effects are identified from construction traffic on the highway network associated with the Development. This takes into consideration that construction vehicle routing and scheduling of HGVs and location of construction compounds. Construction traffic routes, movements and associated effects will be dealt with through management measures set out in the phase-specific CEMPs. As no significant effects have been identified, no additional mitigation or monitoring is necessary.

What are the potential effects of the Completed Development?

- 15.6 On non-event days, traffic from the completed Development is expected to have a minor adverse effect on the local highway network, including pedestrians on High Road, with a neutral effect on the wider network. There is a minor beneficial effect on the public transport network. During event days, there would be minor adverse effects from additional queuing at public transport station.

Are there cumulative effects with other developments?

- 15.7 The assessment of transport and access has considered the cumulative effect of the Development with other committed developments. The majority of the trips from the cumulative schemes will be undertaken by sustainable modes, therefore the significance of

the cumulative impacts in relation to traffic and road safety on local roads as well as impact on the public transport network remains not significant.

How does the Development compare to the Consented Scheme?

- 15.8 The potential impacts from traffic and transport associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes against the residual effects as reported in 2015 ES.
- 15.9 The potential changes resultant from the Amendments are not materially considered to affect the traffic and transport conclusions stated for the construction phase and completed Development. Therefore, the findings of the 2015 ES are considered still valid and applicable to this application and all likely significant effects resulting from the Development are likely to remain as reported, with no additional effects or mitigation identified.

16 Wind Microclimate

- 16.1 A wind assessment has been carried out for the Site and surrounding area up to circa 600m from the Site to understand potential changes in wind microclimate resultant from the Development in the ES (as amended). The assessment has been principally carried out through analysis of computer modelling and wind tunnel assessment to simulate wind conditions experienced by pedestrians walking or enjoying the public and private spaces across and surrounding the Development.

How were the environmental effects identified?

- 16.2 The study has employed wind tunnel testing to predict the strength of wind speeds that will occur following the introduction of the completed Development.
- 16.3 This suitability of wind conditions is determined using the widely accepted industry standard Lawson criteria to determine the suitability of wind conditions on site and the impact of a proposed development on the surrounding area.

What is the baseline?

- 16.4 The prevailing wind is from the south west. Plots 1 and 2 of the Consented Scheme have been built and the remainder of the Site comprises temporary uses or public realm. The surrounding buildings are predominantly low-rise.
- 16.5 Wind conditions to the south and south-east of Tottenham Stadium exceed the criteria for guidance thresholds for wind safety. Elsewhere, all locations within the Site and immediate surroundings meet the safety criteria.
- 16.6 For recreational thoroughfares, the wind conditions are also too windy for the immediate surrounds, and wind conditions at several locations within the Site and immediate surrounds would be too windy for entrances.

What are the potential effects during construction?

- 16.7 The conditions for the Site during construction have not been directly assessed by the wind tunnel tests. During construction, conditions are expected to transition gradually from those experienced in the existing condition to those for the completed Development. As a result, it is unlikely that significant impacts that relate to wind microclimate will occur during construction.

What are the potential effects of the completed Development?

- 16.8 Following the introduction of the Development with wind mitigation measures, wind conditions substantially meet the criteria for pedestrian safety, though there are isolated locations which are not caused by the Hotel site. In addition, conditions within the site are largely suitable for

use in terms of comfort, and there are no adverse impacts on wind conditions within the immediate or wider surrounds.

What would be the cumulative effects with other development?

- 16.9 An assessment of the completed Development within cumulative schemes has identified that there would be no material difference in wind conditions and the safety and comfort criteria will largely to be met across the Site.

How does the Development compare to the Consented Scheme?

- 16.10 The potential impacts from wind conditions associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes against the residual effects as reported in 2015 ES.
- 16.11 The mitigation implemented within the Consented Scheme is relevant to the Development. No additional mitigation is proposed as all mitigation is embedded within design. The project team has worked together to minimise the overall wind impacts to sensitive receptors, such that the effects remain in line with the Consented Scheme. This has involved the consideration of massing options in relation to sensitive receptors.
- 16.12 It is therefore considered that mitigation has been embedded through the scheme design process and no further mitigation or monitoring is proposed for the Development. The residual effects remain as reported above.

17 Daylight, Sunlight and Overshadowing

- 17.1 The daylight, sunlight and overshadowing microclimate assessment of the ES (as amended) considers the effects of construction and operation of the Development on nearby residential receptors. A solar glare assessment was also carried out from certain locations on surrounding roads.

How were the environmental effects identified?

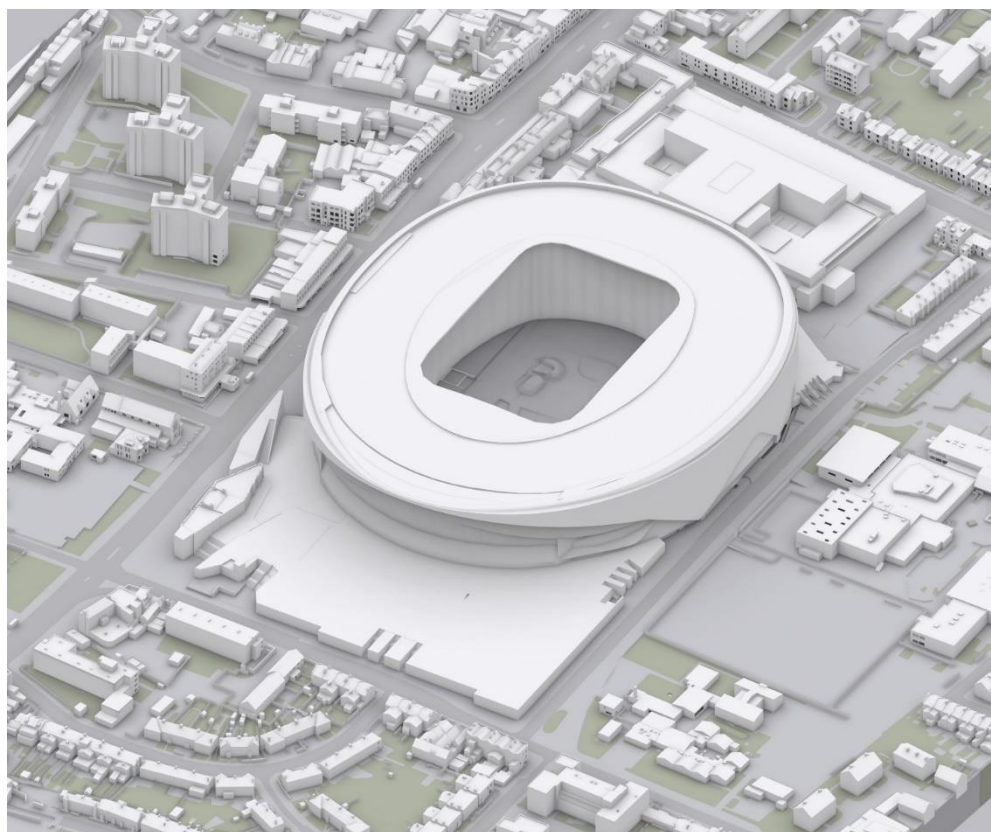
- 17.2 A technical assessment was undertaken to determine the environmental effects of the Development on the daylight and sunlight amenity to the occupiers of neighbouring sensitive properties and overshadowing to sensitive amenity areas using modelling techniques. This applied BRE methodology, which is the accepted method of assessment.

What is the baseline?

- 17.3 A three-dimensional (3D) model was developed for the baseline conditions of Plot 3, the Site and the surrounding area, as illustrated in Figure 18.1 overleaf. This 3D model was developed using measured survey data, plans available on the planning portal and confirmed from review of Google Maps¹².
- 17.4 The existing buildings surrounding the Site are predominantly low rise in nature and comprise a mixture of residential and commercial uses. The completed stadium is in the centre of the Site, to the north of Plot 3.

¹² www.google.com/maps [accessed May 2023]

Figure 18.1: Illustration of Baseline Scenario



What are the potential effects during construction?

- 17.5 The construction of the new buildings on the Site would have a gradual effect upon the levels of daylight, sunlight and overshadowing as the massing of the Development increases over time. Whilst the effects would be noticeable during the construction phase, such effects would be less than that of the completed Development. It is therefore considered that the completed Development represents the worst-case assessment in terms of likely resultant effects.

What are the potential effects of the Completed Development?

- 17.6 A total of 1,026 windows within 117 properties were assessed for daylight levels. Negligible effects were identified on 76 properties with 17 instances of minor adverse, two instances of minor to moderate adverse, three instances of moderate adverse, two instances of moderate to major adverse, and two instances of major adverse effects.
- 17.7 A total of 134 rooms within 27 properties were assessed for potential sunlight effects. Negligible effects were identified at 60 properties with six instances of minor adverse and one instance of moderate adverse effects.
- 17.8 For overshadowing, minor adverse effects were identified for March and June 21st and minor to moderate adverse for December 21st. Only the north east corner of the Northumberland Park Community School Ground experiences an additional shadow cast by the Development when compared against the Consented Scheme but this is not considered to be a significant change.

- 17.9 Sixteen locations were assessed for potential solar glare effects. Negligible effects were identified at seven viewpoint locations with one instance of negligible to minor adverse, one instance of minor adverse, and one instance of minor to moderate adverse.

What would be the cumulative effects with other developments?

- 17.10 There would be no additional cumulative effects with other schemes alongside the Development for any aspects assessed, principally due to their distance from the Site.

How does the Development compare to the Consented Scheme?

- 17.11 The potential impacts from overall daylight, sunlight, overshadowing and solar glare impacts associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the changes against the residual effects as reported in 2015 ES.
- 17.12 The mitigation implemented within the Consented Scheme is relevant to the Development. No additional mitigation is proposed as all mitigation is embedded within design. The project team has worked together to minimise the overall daylight, sunlight, overshadowing and solar glare impact to the neighbouring sensitive receptors surrounding the Development, such that the effects remain in line with the Consented Scheme. This has involved the consideration of massing options in relation to sensitive receptors.
- 17.13 It is therefore considered that mitigation has been embedded through the scheme design process and no further mitigation or monitoring is proposed for the Development. The residual effects remain as reported above.

18 Electronic Interference

- 18.1 The electronic interference assessment of the ES (as amended) considers the effects of construction and operation of the Development on electronic interference.
- 18.2 Interference to certain telecommunications systems (e.g. television, mobile phone and radio) can arise from buildings physically blocking and absorbing associated signals. Therefore, a loss or degradation of the reception of such systems can result from the introduction of new or amended buildings and is often referred to as 'electronic interference', with the affected area referred to as the 'shadow area'. Sensitive locations to TV reception are considered to be domestic dwellings where TV is watched as an amenity along with public health and public transport services.

How were the environmental effects identified?

- 18.3 The ES (as amended) only considered the potential effects of the Development on TV reception, with potential effects on radio reception (both analogue and digital), mobile phone signals, wireless networks and emergency service communications scoped out of the assessment. Potentially sensitive locations were identified through a review of 'shadow maps'¹³ and a review of what residential premises fell within these areas.
- 18.4 Since completion of the assessment for the Consented Scheme in 2015, the majority of the population has switched over to streaming-based TV services that come directly through a landline, however the potential for impacts was reviewed in the ES Addendum.

What is the baseline?

- 18.5 Plots 1 and 2 are complete and operational on the Site. Tall development is also present in the local area, including Rivers Apartments and Stellar House.

What are the potential effects during construction?

- 18.6 There are no potential effects during construction as no solid built form is in place and it progresses towards the massing of the completed Development.

What are the potential effects of the Completed Development?

- 18.7 No residual effects were predicted from the Development during the operational phase. A mitigation strategy was completed after granting of the 2016 permission associated with the Consented Scheme for any potentially affected properties at the time and the majority of residential properties in the local area are now expected to utilise streaming based services.

¹³ Maps identifying the extent over which development could cast a shadow that could partially or fully block reception from regional transmitters.

What would be the cumulative effects with other developments?

- 18.8 No schemes were identified in the 2015 ES to have the potential to create a cumulative effect.
- 18.9 A number of new major planning permissions have been granted planning consent since 2015 but none of these planning applications assessed the potential effects on electronic interference and so cumulative effects cannot be quantified. However, significant effects are not expected, based on the rationale applied above.

How does the Development compare to the Consented Scheme?

- 18.10 The potential impacts from electronic interference associated with the Amendments as detailed in the S.73 Application have been considered. This has considered the potential changes to the effects reported in 2015 ES.
- 18.11 The Amendments will not significantly vary the Consented Scheme and, provided that all mitigation measures suggested in the 2015 ES are implemented, the assessment conclusions reported in the 2015 ES are considered to remain valid, with no additional effects or mitigation identified.

19 Climate Change and Greenhouse Gases

- 19.1 The ES (as amended) provides an assessment of greenhouse gas emissions from the Development and also considers the how resilient the project is to the effects of climate change in the future. This is a new assessment provided in the ES Addendum that was not a requirement of the EIA Regulations at the time of completion of the 2015 ES.

How were the environmental effects identified?

- 19.2 The assessment of the likely significant effects of the Development on climate change is presented in two parts:
- The assessment of likely significant effects through consideration of the Greenhouse Gases (GHG) emissions associated with the Development; and
 - The resilience of the Development to future changes in climate.
- 19.3 The assessment of GHG emissions of the Development considers the demolition & construction, operational and end-of-life phases, and has drawn on the outputs from the Whole Life Cycle Assessment and Energy Strategy. It also has assessed the potential mitigation and resilience to climate change of the Development.
- 19.4 The assessment of significance has adopted IEMA Guidance¹⁴ which requires emissions to be put into context and professional judgements be taken on the consistency of the change in GHG emissions with national policies and the quality of the mitigation being proposed.

What is the baseline?

Greenhouse gas emissions

- 19.5 The baseline consists of GHG emissions associated with the current Site use. Although the Site is partially occupied by Plots 1 and 2 of the Consented Scheme, as a conservative worst-case assessment, GHG emissions associated with the baseline for the Development are taken as zero.

What are the potential effects of the construction of the Development?

- 19.6 The net change in GHG emissions is calculated as being equivalent to 22,555 tonnes carbon dioxide equivalent (CO_{2e}) over the lifetime of the Development. This represents 32% of the lifetime net change in emissions.

¹⁴ IEMA, (2022). Assessing Greenhouse Gas Emissions and Evaluating their Significance. 2nd Edition and IEMA, (2020). IEMA EIA Guide to: Climate Change Resilience and Adaptation.

What are the potential effects of the Completed Development?

- 19.7 The net operational GHG emissions in the completed year of the Development from operations, transport, water use and maintenance and repair are 47,774 tonnes CO_{2e}. GHG emissions from end of life of the Development are estimated at 577 tonnes CO_{2e}. This represents 66% and 1% of lifetime emissions respectively.
- 19.8 In terms of context, the Development's net emissions are fractional components of local and national carbon budgets.
- 19.9 In terms of consistency with national and local policy, the assessment finds that the Development's primary operational emissions relate to construction and energy. Both these sectors are forecast to decarbonise fully by 2050 based on national policy measures. The Development includes primary design measures and further operational measures that are consistent with national and local policies to decarbonise energy and transport emissions to net zero.

What climate change mitigation has been developed and how is the Development resilient to climate change?

- 19.10 The climate resilience measures identified and adopted by the design of the Development seek to minimise climate risks due to future climate change, including flood risk, drought, and extremes of weather.
- 19.11 The assessment has found that the Development is resilient to likely climatic changes within its lifetime and the effects are not significant.

What would be the cumulative effects with other developments?

- 19.12 Effects from greenhouse gas emissions are not localised but contribute to the global atmospheric concentration of greenhouse gasses and consequently contribute to the global climate change effect. Therefore, the Development should be viewed, rather, in the context of developments and construction projects globally as it contributes to a global climatic effect.

How does the Development compare to the Consented Scheme?

- 19.13 The Development forms the Consented Scheme plus the Amendments. There is limited information on the GHG footprint of the Consented Scheme components that have been built out and therefore it is not possible to provide a quantitative GHG assessment of the Development
- 19.14 Notwithstanding, it is possible to conclude that the Consented Scheme was subject to a detailed Energy Strategy and Transport Strategy both of which were considered compliant with policy at the time of consent. The Consented Scheme was also subject to phase-specific CEMPs which would act to minimise GHG emissions over the construction phases for each Plot. National measures to decarbonise transport and energy would also equally apply to the Consented Scheme.

20 Effect Interactions

- 20.1 This section summarises the likely significant effect interactions of the Development. The assessment of effect interactions assesses the potential for interaction between individual effects of the Development upon the same receptors (i.e. local residents, properties, animals and habitats, road users etc.).

What are the potential interactive ‘intra-project’ effects?

- 20.2 During construction, the Development is likely to effect the River Moselle and underlying groundwater aquifer. Minor beneficial effects are likely to be experienced from controlled construction site measures. Minor adverse effects are likely to be experienced from increased leaching – the loss of certain materials into water bodies. Current site users are also likely to experience minor adverse construction traffic effects and minor beneficial flood risk effects.
- 20.3 During operation, the Development is likely to lead to effect interactions on existing and future users of the Site who will experience beneficial effects due to socio-economic improvements, specifically improvements in delivery of housing, educational and sports/amenity facilities, open space, and employment opportunities. Future users of the Development are also likely to experience beneficial effects on transport and access due to improvements in the surrounding transport network and internal connections.
- 20.4 Users of the surrounding road network and recreational users of the surrounding area may potentially experience some negative effect interactions due to adverse impacts on views from specified viewpoints and driver delay. Adverse noise, wind effects, traffic, and daylight and sunlight effects may also be experienced.

21 Mitigation and Monitoring

- 21.1 The section summarises the key mitigation and monitoring measures that will be implemented to minimise potential significant adverse effects during construction and operational phases of the Development.

Construction

- 21.2 The construction works will adhere to a range of good practice site procedures and protocols to minimise environmental effects, such as noise, dust and light pollution. These include:

- Adherence to provisions of CEMP(s), including the erection of construction hoarding, site lighting control, location of construction compounds; and
- Adherence to Construction Travel Plans controlling construction vehicle routing.

Completed Development

Embedded design and mitigation measures will include:

- Design approach to maximise landscape, visual and access benefits;
- Fabric-First approach to design to increase energy efficiency, and minimise carbon and climate change impacts;
- Adherence to the controls of Travel Plans;
- Energy and Sustainability Statement;
- Whole Life Carbon Assessment;
- BREEAM “Very Good’ target - to avoid / minimise natural resource use; and
- A drainage strategy incorporating sustainable drainage systems (SuDS).