

# Tottenham Hotspur Stadium (Plot 3, Section 73)

Local Planning Authority: Haringey

Local Planning Authority reference: HGY/2023/2137

**Strategic planning application stage 1 referral**

Town & Country Planning Act 1990 (as amended); Greater London Authority Acts 1999 and 2007; Town & Country Planning (Mayor of London) Order 2008.

**The proposal**

Minor material amendments (Section 73) to the height, design, maximum floorspace, and associated works to Plot 3 (hotel/residential) of hybrid planning permission HGY/2015/3000 through variation of conditions A4 (consented drawings and documents), A6 (conformity with environmental statement), A7 (maximum quantity/ density), and D1 (Plot 3 specific drawings); including an increase in height from 23 to 29 storeys and an increase in hotel floorspace from 15,537 sq.m. to 16,132 sq.m.

**The applicant**

The applicant is **Tottenham Hotspur Property Company Ltd** and the architect is **F3**.

**Strategic issues summary**

**Land use principles:** The uses have been established by the original extant consent and no changes are proposed to the permitted uses, which remain supported.

**Affordable housing:** The 2016 hybrid permission secured no affordable housing due to the significant funding challenge associated with provision of the new stadium, which required other elements of the development to contribute towards its construction. Although no additional housing is proposed, the changes to the hotel element would materially alter the economic circumstances of the scheme, and the application should therefore be considered under the viability tested route.

**Historic environment:** Compared to harm identified to the significance of heritage assets through the original hybrid permission, GLA officers consider that no additional harm would be caused.

**Urban design:** The Local Plan identifies the location as suitable for tall buildings. The increased slenderness of the building compared to that permitted is supported, and the limited increase in height does not raise strategic concerns. The layout of public realm would be improved compared to the permitted scheme.

**Transport:** An Active Travel Zone assessment and Road Safety Audit should be undertaken, and a bus contribution secured.

**Climate change and environment:** Further information is required on energy, whole lifecycle carbon, circular economy, green infrastructure, and water.

**Recommendation**

That Haringey Council be advised that the application does not yet comply with the London Plan for the reasons set out in paragraph 74. Possible remedies set out in this report could address these deficiencies.

## Context

1. On 22 August 2023, the Mayor of London received documents from Haringey Council notifying him of a planning application of potential strategic importance to develop the above site for the above uses. Under the provisions of The Town & Country Planning (Mayor of London) Order 2008, the Mayor must provide the Council with a statement setting out whether he considers that the application complies with the London Plan, and his reasons for taking that view. The Mayor may also provide other comments. This report sets out information for the Mayor's use in deciding what decision to make.
2. The application is submitted under Section 73 of the Town and Country Planning Act 1990 (as amended), following the grant of planning permission for the Northumberland Park Development Project in 2016 (GLA ref: D&P/2292g/02; LPA ref: HGY/2015/3000), an application of Potential Strategic Importance referable under the following categories of the Schedule to the Order 2008:
  - 1A *“Development which comprises or includes the provision of more than 150 houses, flats, or houses and flats.”*
  - 1B *“Development (other than development which only comprises the provision of houses, flats, or houses and flats) which comprises or includes the erection of a building or buildings - (c) outside Central London and with a total floorspace of more than 15,000 square metres.”*
  - 1C *“Development which comprises or includes the erection of a building of (c) more than 30 metres high and is outside the City of London.”*
3. Once Haringey Council has resolved to determine the application, it is required to refer it back to the Mayor for his decision as to whether to direct refusal; take it over for his own determination; or allow the Council to determine it itself.
4. The environmental information for the purposes of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 has been taken into account in the consideration of this case.
5. The Mayor of London's statement on this case will be made available on the [GLA's public register](#)<sup>1</sup>.

## Site description

6. The Plot 3 site forms part of the ongoing phased redevelopment of Tottenham Hotspur Stadium and associated surrounding land, as approved by the 2016 Hybrid Consent (see 'case history' below). The Plot 3 site is bounded by the Stadium to the north; two temporary five a-side football pitches and events space to the east, granted planning permission in 2022 (LPA Ref: HGY/2022/0167); Park Lane to the south; and the Tottenham Experience building to the west. It currently comprises a temporary podium (associated with the Stadium), which includes areas of public realm and temporary structures.

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<sup>1</sup> <https://planapps.london.gov.uk/planningapps/HGY-2023-2137>

7. The Tottenham High Road/North Tottenham Conservation Area lies adjacent to the site to the north-west and south-west. There are several statutorily and locally listed buildings surrounding the site, including the Grade II Listed Warmington House (744 High Road) to the west, which has been incorporated into the Tottenham Hotspur Experience building. Other listed buildings include 774 (Fletcher House), 790 (Dial House), 792, 794, 796 (Percy House), 798-802, 808 & 810 High Road; with a locally listed public house (732 High Road) opposite the site to the south.

8. The site is close to the A1010 High Road, which forms part of the Strategic Road Network (SRN). The A10 Bruce Grove/A1010 High Road junction and the A406 North Circular Road/A1010 Fore Street junction are respectively a kilometre to the south and 1.4 kilometres to the north, and are the nearest points of vehicular access to the Transport for London Road Network (TLRN). White Hart Lane station (London Overground and Greater Anglia) is 500 metres to the north-west, and Bruce Grove station is 900 metres to the south. Northumberland Park station (National Rail) is 800 metres to the east. Seven Sisters station (Victoria Line and London Overground) is over 2 kilometres to the south, and Tottenham Hale (Victoria Line) is 2.3 kilometres to the south-west. The nearest bus stops are along the High Road, served by 149, 259, 279, 349, and N279, with other bus routes from Northumberland Park station (341, 476, W3). The site is within 500 metres of Cycleway 1. The site has a Public Transport Accessibility Level (PTAL) of 5, where 0 is the least accessible, and 6b the most accessible.

## **Details of this proposal**

9. The application is for minor material amendments (Section 73) to the height, design, maximum floorspace, and associated works to Plot 3 (hotel/residential) of the hybrid planning permission through variation of conditions A4 (consented drawings and documents); A6 (conformity with environmental statement), A7 (maximum quantity/density) and D1 (Plot 3 specific drawings).

10. Specifically, the height and mass of the proposed hotel building would change, including an increase in height from 23 to 29 storeys. Hotel floorspace would increase from 15,537 sq.m. (as shown in the table under 'case history' below), to 16,132 sq.m. (GIA), with no increase in the maximum number of hotel rooms (180) and no increase in maximum residential floorspace or homes across the wider site. A second stairway has also been included for improved fire safety. Other changes are proposed to the landscaping, play space, access, and parking. The applicant states that the revisions are intended to enhance the deliverability of the scheme as a result of engagement with hotel operators.

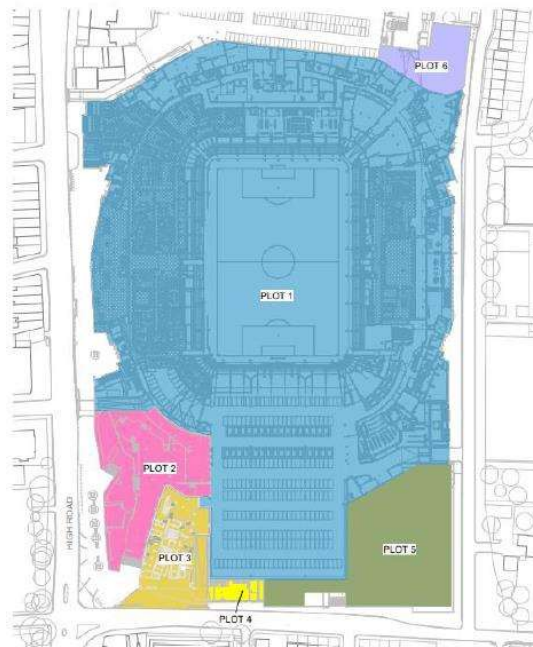
## **Case history**

11. Plot 3 forms part of the ongoing phased redevelopment of the Northumberland Park Development Project (NDP), for which the Hybrid Consent was approved in 2016 for:

*“Proposed demolition and comprehensive phased redevelopment for stadium (Class D2) with hotel (Class C1), Tottenham Experience (sui generis), sports centre (Class D2); community (Class D1) and / or offices (Class B1); housing (Class C3); and health centre (Class D1); together with associated facilities*

*including the construction of new and altered roads, footways; public and private open spaces; landscaping and related works. Details of ‘appearance’ and ‘landscape’ are reserved in relation to the residential buildings and associated community and/or office building. Details of ‘appearance’ and ‘scale’ are reserved in relation to the sports centre building. Details of ‘appearance’ are reserved in relation to the health centre building. Proposal includes the demolition of 3 locally listed buildings and includes works to a Grade II Listed building for which a separate Listed Building application has been submitted (Ref: HGY/2015/3001).”*

12. Full planning permission was granted for the Stadium (Plot 1: Blue in the diagram below), the Tottenham Experience (Plot 2: Pink), and the Hotel (Plot 3: brown); and outline planning permission for the Extreme Sports Building (Plot 4; yellow), the Residential Buildings and Flexible B1/D1 Space (Plot 5: green) and the Community Health Building (Plot 6; purple).



13. Plots 1 and 2 have been implemented and were completed in 2019. Plot 3 has been implemented up to ground level. Reserved matters relating to the scale of Plot 4 (the Extreme Sports Building) was approved in 2021 (LPA ref: HGY/2021/1039). An application for reserved matters relating to the landscaping of Plot 5 (residential buildings and flexible B1/D1 space) was submitted in 2022 and is under consideration by the Council (LPA ref: HGY/2022/4504). An application for reserved matters relating to the appearance of Plot 6 (the Community Health Building) was approved by the Council in 2021 (LPA ref: HGY/2021/1043).

14. The Council also granted approval for various non-material amendment applications (Section 96A), including the removal of the 90 day restriction on operation of the hotel serviced apartments, for Use Class C3 (LPA ref: HGY/2017/1183) but with no increase in overall maximum residential use across the hybrid scheme. The approved site-wide maximum floorspace figures are now as below.

15. No pre-application discussions have taken place with GLA officers concerning the Plot 3 section 73 application; however, pre-application discussions have taken place with Council officers and the Council's Quality Review Panel.

Land Use	Use Class	Area (GIA sq.m.)	Units
Leisure (including stadium)	D2	122,000	n/a
Hotel	C1	15,537	180 rooms
Residential	C3	53,298	634
Tottenham Experience	Sui Generis	4,311	n/a
Business	B1	4,000 (max)	n/a
Community and Culture	D1	6,000 (max)	n/a

## Strategic planning issues and relevant policies and guidance

16. For the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004, the development plan in force for the area comprises the Haringey Strategic Policies 2013 (with alterations adopted 2017); Haringey Development Management DPD (2017); Site Allocations DPD (2017); Tottenham Area Action Plan (2017); and the London Plan 2021.

17. The following are also relevant material considerations:

- National Planning Policy Framework; National Planning Practice Guidance.
- The National Design Guide.
- On 24 May 2021, a Written Ministerial Statement (WMS) was published in relation to First Homes. To the extent that it is relevant to this particular application, the WMS has been taken into account by the Mayor as a material consideration when considering this report and the officer's recommendation. Further information on the WMS and guidance in relation to how the GLA expect local planning authorities to take the WMS into account in decision making can be found [here](#)<sup>2</sup>.

18. The relevant issues, corresponding strategic policies and guidance (supplementary planning guidance (SPG) and London Plan guidance (LPG)), are:

- Opportunity Area *London Plan.*
- Town centre uses *London Plan.*
- Housing *London Plan; Housing SPG; Housing Strategy; Play and Informal Recreation SPG; Character and Context SPG; Housing Design Standards LPG.*
- Affordable housing *London Plan; Housing SPG; Housing Strategy; Affordable Housing and Viability SPG; Affordable Housing draft LPG; Development Viability draft LPG.*

<sup>2</sup> [https://www.london.gov.uk/sites/default/files/first\\_homes\\_planning\\_practice\\_note\\_.pdf](https://www.london.gov.uk/sites/default/files/first_homes_planning_practice_note_.pdf)

- Historic environment *London Plan.*
- Urban design *London Plan; Character and Context SPG; Accessible London SPG; Public London Charter LPG; Housing SPG; Play and Informal Recreation SPG; Characterisation and Growth Strategy LPG; Optimising Site Capacity LPG; Housing Design Standards LPG; Public London Charter LPG; Fire Safety draft LPG.*
- Transport *London Plan; Transport Strategy; Sustainable Transport, Walking and Cycling LPG.*
- Climate change/environment *London Plan; Environment Strategy; Circular Economy Statements LPG; Whole-life Carbon Assessments LPG; Energy Planning Guidance; 'Be Seen' Energy Monitoring Guidance LPG; Control of dust and emissions during construction and demolition SPG; Air Quality Neutral LPG; Air Quality Positive LPG; Urban Greening Factor LPG.*

## Land use principles

19. The uses have been established by the original extant consent and no changes are proposed to the permitted uses, which remain supported. There are no significant changes to the policy context in this respect. London Plan Policy E10 supports serviced accommodation, such as hotels, as part of London's visitor infrastructure, particularly in Opportunity Areas and where well-connected by public transport. The site is immediately adjacent to Tottenham Hotspurs Stadium, a major visitor attraction. London Plan Policy H1 supports residential development, and Haringey has a ten year housing completion target of 15,920 to which the proposals would contribute.

## Housing

### Affordable housing

20. London Plan Policy H4 seeks to maximise affordable housing delivery, with the Mayor setting a strategic target for 50% of all new homes to be genuinely affordable. London Plan Policy H5 states that the threshold level of affordable housing is a minimum of 35%. Schemes can follow the 'fast track' viability route and are not required to submit viability information nor be subject to a late stage viability review if they meet or exceed the relevant threshold level of affordable housing on site without public subsidy; are consistent with the relevant tenure split; meet other relevant policy requirements and obligations to the satisfaction of the Council and the Mayor; and demonstrate that they have taken account of the strategic 50% target and have sought grant to increase the level of affordable housing.

21. Haringey has a Borough-wide target of 40% affordable housing, 60% to be social/affordable rent and 40% intermediate.

22. The hotel building includes 49 homes, as already permitted. Across the hybrid scheme, the maximum number of homes and floorspace (53,298 sq.m. and 634 homes), as well as the controls on housing mix, would remain as already permitted.

23. The independent viability assessment for the original hybrid permission conducted by the Council's advisers identified a significant funding challenge associated with the Stadium, which required other elements of the development to contribute towards the Stadium. Consequently, no affordable housing was secured in 2016. This position was confirmed via a later viability review upon completion of the Stadium.

24. The current proposals do not increase the maximum number of homes or floorspace within the wider scheme; however, the changes to the hotel element would materially alter the economic circumstances of the scheme. The applicant states that the scheme is being amended to make it more appealing to hotel operators, which would make the scheme more viable. GLA officers therefore consider that the application should be considered under the viability tested route. It is recommended that the Council appoint a consultant with specialist knowledge of the London hotel sector to assess additional value generated by the scheme. Viability information should be shared with GLA officers for their review to ascertain whether additional affordable housing can be provided as a result of the scheme amendments.

25. In response to London Plan Policy S4, a small amount of play space would be provided on the site, with more to be provided on Plot 5, together with existing provision nearby.

## **Historic environment**

26. London Plan Policy HC1 states that development proposals affecting heritage assets and their settings should conserve their significance and avoid harm. London Plan Policy D9 states that tall buildings should avoid harm to heritage assets, or demonstrate clear public benefits that outweigh any harm.

27. The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the tests for dealing with heritage assets in planning decisions. Regarding conservation areas, special attention must be paid to *"the desirability of preserving or enhancing the character or appearance of that area"*. Regarding listed buildings, special regard must be had to desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses. The NPPF states that when considering the impact of the proposal on the significance of a heritage asset, great weight should be given to the asset's conservation and the more important the asset, the greater the weight should be. Where a development leads to 'less than substantial' harm, the harm should be weighed against the public benefits.

28. The hybrid permission involved the demolition of non-designated heritage assets, and the construction of a number of large-scale buildings, resulting in various levels of harm to designated and non-designated assets. The demolitions have now taken place and the Stadium constructed.

29. The height of the hotel would increase from 23 to 29 storeys; however, it would also become more slender when viewed from east and west and would remain below the permitted height of the residential plot. Compared to the harm identified as part of the original hybrid permission, GLA officers consider that no additional harm to the significance of heritage assets would be caused, although the harm caused

means that the proposals would not be in accordance with London Policy HC1. In line with the NPPF, this harm will be weighed against the public benefits of the proposal at the Mayor's decision-making stage.

## **Urban design**

30. Chapter 3 of the London Plan sets out key urban design principles to guide development in London. Design policies in this chapter seek to ensure that development optimises site capacity; is of an appropriate form and scale; responds to local character; achieves the highest standards of architecture, sustainability and inclusive design; enhances the public realm; provides for green infrastructure; and respects the historic environment.

31. London Plan Policy D4 sets out that development proposals referable to the Mayor must have undergone at least one design review early on in their preparation before a planning application is made or demonstrate that they have undergone a local borough process of design scrutiny. It is noted that the proposed amendments have been subject to review by the Council's Quality Review Panel

### Site layout

32. The requirement for additional stairways has resulted in a widening of the east-west building plan form by c.8 metres, which also allowed a shortening of the north-south plan form by c.5 metres. The hotel building's east facade is now closer to the outline approved Plot 4 Extreme Sports Building; however, considering the leisure uses, with the residential use above the height of the Extreme Sports Building, no privacy or daylight concerns arise.

33. A reduction in the ground level footprint of the hotel fronting onto Park Lane also means that the proposed public realm offers greater openness and clearer sight lines to both the existing podium access (stairs and lift), and the extended podium at the upper level. This also allows a more civic entrance plaza/square at the junction between Park Lane and the High Road, which is welcomed. Provision of stair and lift access to the podium remain largely as previously proposed.

### Tall buildings, height, massing, and architecture

34. London Plan Policy D9 states that development plans should define what is considered a tall building for specific localities (although not less than 6 storeys or 18 metres) and identify suitable locations; and identify appropriate tall building heights on maps in Development Plans (Parts A and B). Policy D9 also sets out further requirements for assessing tall buildings (Part C) including addressing visual impacts at different distances; aiding legibility and wayfinding; having exemplary architecture and materials; avoiding harm to heritage assets (or demonstrating clear public benefits that outweigh any harm); not causing adverse glare; and minimising light pollution. Functional impacts should consider internal and external design; servicing; entrance capacity; area and transport capacity; maximise benefits to the area; and not interfere with communications. Environmental impacts should consider wind, daylight, sunlight, and temperature; air movement (dispersal of pollutants); and noise creation. Cumulative impacts should also be considered.



35. Haringey's Local Plan defines tall buildings as ten storeys and above, and the site is within the North Tottenham area identified as suitable for tall buildings, although no heights are identified. The principle of locating tall building on the site has already been accepted through the hybrid consent, and the proposed hotel would remain below the permitted height of the tallest residential building (up to 131 metres, c.35 storeys). It is noted that tall buildings are consented to the west on the opposite side of the High Road, with further tall buildings in emerging schemes.

36. In terms of visual impacts, the revised design maintains the consented slender profile when viewed from the north and south, but improves its slenderness from east and west. The tower is broken down into a hierarchy of three stepped elements, which breaks down the massing, with each step forming an accessible terrace associated with the internal uses of the building. The bronze coloured cladding at lower levels relates well to surrounding materials, with the lighter glazed facades at upper levels reducing the impact of the taller elements. The hotel would perform a clear legibility function, marking the location of the Stadium. Strategic views would not be harmed and no additional harm would be caused to heritage assets.

37. Functional concerns in relation to transport require resolution, as set out under 'transport' below. Environmental impacts identified under 'climate change and environment' below require resolution.

38. The limited increase in height does not raise strategic concern; however, GLA officers will have regard to compliance with Policy D9 as a whole at the Mayor's decision-making stage.

#### Residential quality

39. London Plan Policy D6 states that qualitative aspects of a development are key to ensuring successful sustainable housing, with further standards and guidance set out in the Housing Design Standards LPG. The relatively small footprint of the building allows very good residential quality, including 100% dual aspect.

#### Fire safety

40. London Plan Policy D12 requires a fire safety statement prepared by a suitably qualified third-party assessor, demonstrating how the development proposals would achieve the highest standards of fire safety, including details of construction methods and materials, means of escape, fire safety features and means of access for fire service personnel. Policy D5 seeks to ensure that developments incorporate safe and dignified emergency evacuation for all building users. In all developments, where lifts are installed, as a minimum, at least one lift per core (or more subject to capacity assessments) should be suitably sized fire evacuation life suitable to be used to evacuate people who require level access from the buildings. The Mayor has also consulted on a Fire Safety Draft LPG.

41. The submitted Stage 3 Fire Strategy Report and the Gateway One Fire Statement prepared by OFR meet the requirements of London Plan policies. The proposals include residential uses in a building over 18 metres, and the amendments add a second staircase in accordance with Policy D12 and the recent [government](#)

[announcement](#)<sup>3</sup>. The Fire Statements/Reports should be secured by condition or legal agreement.

### Inclusive access

42. Policy D5 of the London Plan seeks to ensure that new development achieves the highest standards of accessible and inclusive design (not just the minimum). Policy D7 requires that at least 10% of new build dwellings meet Building Regulation requirement M4(3) 'wheelchair user dwellings' (designed to be wheelchair accessible or easily adaptable for residents who are wheelchair users); and all other new build dwellings must meet Building Regulation requirement M4(2) 'accessible and adaptable dwellings'. The applicant would provide 10% of the rooms as wheelchair accessible, which would be acceptable.

43. The application confirms that 10% (5) of the homes would meet Building Regulation M4(3), with the remainder meeting M4(2) requirements. These would be distributed across sizes and floors. Typical layouts have been provided. The Council should secure M4(2) and M4(3) requirements by condition. Seven disabled persons parking spaces in the basement have already been delivered.

## **Transport**

### Public Transport improvements

44. There has been significant investment in the transport network in the area since the 2016 consent. Cycleway 1, 500 metres to the west, has been completed; Northumberland Park station has been upgraded as part of improvements to rail capacity between Stratford and Angel Road, including a third track; Angel Road Station has been replaced by the new Meridian Water station; White Hart Lane station has been rebuilt, including higher capacity and step-free access; Tottenham Hale station has been improved, including a new bus station, upgraded taxi rank, new entrance, concourse, and step-free access; and public realm improvements have been completed on White Hart Lane and around Northumberland Park.

45. The Transport Assessment (TA) addendum provides a person-trip assessment, and based on the 2015 bus mode share, this indicates 60 bus (access and main mode) trips during the AM peak, and 70 during the PM peak. Based on secured bus contributions from schemes within in the vicinity of the site, a contribution of £48,000 would be proportionate, which could be pooled with other secured bus contributions.

### Healthy Streets and Vision Zero

46. An Active Travel Zone (ATZ) assessment, including night-time assessment, should be undertaken, particularly given the increased quantum of development, the nature of the land use, and changes in the local area since 2015. The scope of the assessment should be agreed with TfL and the Council. As well as non-event day assessment, this should consider issues for active travel access on an event day,

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<sup>3</sup> <https://www.gov.uk/government/news/long-term-plan-for-housing>

and measures proposed to ensure walking and cycling to the site is unimpeded, as well as access to public transport services.

47. In line with TfL/GLA Women's Safety and Anti-Racism actions, analysis of personal safety statistics and proposed responses should be included. Further information is available in the [Mayor's Women's Night Safety Charter Toolkit](#)<sup>4</sup>.

48. Tottenham Hotspur Stadium Local Area Management Plan has been in practice since 2019, designed to limit impact on local residents and businesses on event days, as well as managing movements to and from the Stadium. The applicant should demonstrate that the proposed amendments would be compatible with these arrangements, both during construction and operation.

#### Access, delivery and servicing arrangements

49. The TA addendum includes evidence of engagement with Haringey highways related to access, delivery, and servicing arrangements. The forecast vehicle trip assumptions are reasonable. Further information should be provided on more sustainable approaches to servicing and deliveries, including though not limited to booking system, consolidation, and cargo bikes. There is potential conflict between active modes, and delivery and service vehicle movements. The TA addendum should set out how servicing and deliveries are proposed to operate on event days.

50. The overlay of active mode routes (cycle and pedestrian) and delivery vehicles should be provided, which will help identify any potential conflicts. A Stage 1 Road Safety Audit (RSA) should be provided for the proposed access arrangements on Park Lane. A Healthy Streets Designers Check or similar is also recommended. There should be no impacts on the Strategic Road Network (High Road), and arrangements should contribute to Vision Zero objectives and mode shift.

#### Cycle parking

51. The TA Addendum proposes cycle parking in accordance with London Plan policy requirements and London Cycle Design Standards (LCDS), which is welcomed. Plans that confirm dimensions are in accordance with the LCDS should be provided, including lift dimensions and number and width of doors, including at least 20% Sheffield stands and a further 5% wider spaces for non-standard bicycles. For staff, end of journey facilities should be provided such as lockers and showers. The route from the cycle parking area to Cycleway 1 should be assessed as part of the ATZ assessment.

#### Car parking

52. The hybrid consent included 76 car parking spaces at basement level, which have been constructed as part of the wider scheme. Due to the increase in the cycle parking provision, the number of car parking spaces is proposed to be reduced to 7 wheelchair accessible spaces and 57 standard spaces. The reduction in car parking compared to the 2015 consent is welcomed; however, the current London Plan requires car free development given the nature of the land use and the location, and

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<sup>4</sup> [https://www.london.gov.uk/sites/default/files/wpsc\\_toolkit\\_final.pdf](https://www.london.gov.uk/sites/default/files/wpsc_toolkit_final.pdf)

alternatives use for the spaces should be considered. The approach to Electric Vehicle Charging Points and disabled persons' car parking is acceptable. A Parking Design and Management Plan should be secured with any permission.

### Travel Plan and construction logistics

53. A framework Travel Plan has been provided, which sets out specific objectives in support of London Plan policy and sets out baseline mode share forecasts. Further information on target mode share targets should be provided.

54. Further information on the approach to construction should be provided, and confirmation if a site-specific Construction Logistics Plan is proposed.

## **Climate change and environment**

### Energy strategy

55. London Plan Policy SI2 sets out energy strategy requirements for major development proposals; Policy SI3 sets out requirements for energy infrastructure; and Policy SI4 sets out requirements to manage heat risk. All major developments are required to meet a net-zero carbon target and only where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, a contribution to a carbon offset fund or reductions provided off-site can be considered.

56. The submitted energy statement does not yet comply with Policies SI2, SI3, and SI4. The applicant is required to further refine the energy strategy and submit clarifications on specification; further details to demonstrate the cooling hierarchy has been followed; further information on proposed connection with Energetik; demonstration that renewable energy has been maximised; and confirmation of compliance with 'Be Seen' requirements, to be secured by section 106 agreement.

57. For the domestic element, the development is estimated to achieve an 80% reduction in CO2 emissions, compared to 2021 Building Regulations. This falls short of the net zero-carbon target, although it meets the minimum 35% reduction on site. For the non-domestic element, a 4% reduction is expected, which falls short of the net zero-carbon target and does not meet the minimum 35% carbon reductions on site. The carbon savings should be improved. Once the on-site carbon savings have been maximised, a carbon offset payment is required to be secured, based on a net-zero carbon target using the GLA's recommended carbon offset price (£95/tonne) or the Borough's carbon offset price. Detailed technical comments, including conditions and section 106 requirements have been shared with the applicant and the Council.

### Whole Life-cycle Carbon

58. London Plan Policy SI2 states that development proposals referable to the Mayor should calculate whole life-cycle carbon emissions and demonstrate actions taken to reduce life-cycle carbon emissions. The Mayor has published a Whole Life-Cycle Carbon (WLC) Assessment LPG and a reporting template<sup>5</sup>.

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<sup>5</sup> <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/whole-life-cycle-carbon-assessments-guidance>

59. The applicant has submitted a WLC report which appears to cover much of the assessment requirements; however, the GLA template must also be submitted. This is important to allow results to be recorded and tracked through to post-construction stages, and to allow a proper review of the results against material quantities and other assumptions made. Should permission be granted, post-construction monitoring should be secured through planning condition or legal agreement<sup>6</sup>.

### Circular Economy

60. Policy SI7 of the London Plan requires applications that are referable to the Mayor to submit a Circular Economy (CE) Statement, and Policy D3 requires development proposals to integrate circular economy principles as part of the design process. The Mayor has published a Circular Economy Statements LPG.

61. No Circular Economy Statement has been submitted. The applicant should provide a Circular Economy Statement in line with the LPG, including the completed Excel template. Should permission be granted, post-construction monitoring should be secured through planning condition or legal agreement<sup>7</sup>.

### Green infrastructure

62. London Plan Policy G1 states that development proposals should incorporate green infrastructure. Policy G4 states that development proposals should where possible create areas of publicly accessible open space. Policy G5 states that major development should include urban greening as a fundamental element of site/building design and an Urban Greening Factor (UGF) of 0.4 is recommended for predominately residential schemes, as detailed in the Urban Greening Factor LPG.

63. The proposals integrate green infrastructure and urban greening, including the incorporation of biosolar roofing, which supports multifunctionality, in accordance with Policy G1. It includes public realm areas with planting, in accordance with London Plan Policy G4, which is particularly important as the site is in an area identified as being deficient in public open space within the London Green Infrastructure Focus Map. The UGF score is calculated as 0.14, which is considerably below the target set by Policy G5. Whilst there are some positive features, the applicant should review the proposals to increase the UGF. Robust justification should be provided if the target score cannot be achieved.

### Flood risk, sustainable drainage, and water consumption

64. London Plan Policy SI12 requires development proposals to ensure that flood risk is minimised and mitigated, and that residual risk is addressed. Policy SI13 states that development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible, in line with the drainage hierarchy. Policy SI5 states that development proposals should minimise the use of mains water; incorporate measures to help achieve lower water

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<sup>6</sup>[https://www.london.gov.uk/sites/default/files/model\\_condition\\_-\\_whole\\_life-cycle\\_carbon\\_23-3-22.pdf](https://www.london.gov.uk/sites/default/files/model_condition_-_whole_life-cycle_carbon_23-3-22.pdf)

<sup>7</sup>[https://www.london.gov.uk/sites/default/files/suggested\\_circular\\_economy\\_conditions\\_version\\_24.03.22.pdf](https://www.london.gov.uk/sites/default/files/suggested_circular_economy_conditions_version_24.03.22.pdf)

consumption; ensure that adequate wastewater infrastructure capacity is provided; and minimise the potential for misconnections between foul and surface water.

65. The site is in Flood Zone 1, with a small area to the south-west being within Flood Zone 2, and is within a Critical Drainage Area. A Flood Risk Assessment (FRA) has been submitted. It should also be confirmed in the FRA that ground levels within Flood Zone 2 would remain as existing, and as such, will not displace fluvial floodwater off-site. Latest EA reservoir mapping shows that the southern extent of the site is at risk of reservoir flooding when river levels are normal. If the applicant can confirm the ground levels in Flood Zone 2 remain the same and that no sensitive receptors are proposed, a Flood Warning and Evacuation Plan (FWEP) should not be required. There is the potential for elevated groundwater beneath the site, and groundwater monitoring should be undertaken to inform the exact mitigation measures required, to be secured by condition. The level of risk to the site from sewers is unclear as this is not fully reviewed in the FRA. Further information should be provided, including the analysis of local sewer networks. The FRA provided for the proposed development does not yet comply with Policy SI12.

66. In terms of sustainable drainage, a greenfield runoff rate has been provided in Appendix E, the SuDS Proforma; however, this has not been referenced in the main body of the report and no consideration has been given to the practicality of discharging at greenfield rate. Discharge rates can be readily restricted to well below 5l/s. The drainage strategy assumes that infiltration is not feasible; however, there is a reasonable possibility that the site is suitable for infiltration. Soakage tests at various points should be undertaken to examine the feasibility of infiltration.

67. The drainage strategy proposes below ground attenuation tanks. Rainwater harvesting and green roofs should also be provided to satisfy the requirements of Policy SI13. A conservative scenario has been adopted whereby no reuse of rainwater is assumed. The applicant should revise the drainage strategy to incorporate a range of SuDS to provide the required water quantity, quality, biodiversity, and amenity benefits. No calculations for the greenfield runoff rate are provided, which does not provide sufficient detail to support the proposed drainage strategy. Hydraulic calculations should be provided, including a range of return periods and storm durations, and included on the drainage drawings. An assessment of exceedance flood flow routes above the 100-year event plus 40% climate change is discussed; however, these should be presented and included on drainage strategy drawings. The surface water drainage strategy does not yet comply with Policy SI13.

68. In terms of water efficiency, no water efficiency information has been provided for the residential component. The Sustainability Statement notes that 3 Wat 01 credits are targeted for the non-residential uses on site, with water consumption reduced by 40%, in line with Policy SI5. Water efficient fittings, and leak detection systems are proposed, which is welcomed. The applicant should also include water harvesting and reuse to reduce consumption of water across the site. This can be integrated with the surface water drainage system to provide a dual benefit. The proposed development does not yet meet the requirements of Policy SI5.

## Air quality

69. London Plan Policy SI1 states that development proposals should not lead to deterioration of existing poor air quality; should not create any new areas that exceed air quality limits or delay compliance in areas that are in exceedance of legal limits; and should not create unacceptable risk of high levels of exposure to poor air quality. Proposals must be at least Air Quality Neutral and large-scale development proposals should provide an air quality positive statement. Air Quality Neutral and Air Quality Positive LPGs have been published.

70. The air quality assessment is of sufficient technical quality. Previous modelling is still relevant as there is no increase in traffic generation or car parking. The development is air quality neutral and is in accordance with Policy SI1.

## **Local planning authority's position**

71. Haringey Council planning officers are currently assessing the application. In due course the Council will formally consider the application at planning committee.

## **Legal considerations**

72. Under the arrangements set out in Article 4 of the Town and Country Planning (Mayor of London) Order 2008, the Mayor is required to provide the local planning authority with a statement setting out whether he considers that the application complies with the London Plan, and his reasons for taking that view. Unless notified otherwise by the Mayor, the Council must consult the Mayor again under Article 5 of the Order if it subsequently resolves to make a draft decision on the application, in order that the Mayor may decide whether to allow the draft decision to proceed unchanged; or direct the Council under Article 6 of the Order to refuse the application; or issue a direction under Article 7 of the Order that he is to act as the local planning authority for the purpose of determining the application (and any connected application). There is no obligation at this stage for the Mayor to indicate his intentions regarding a possible direction, and no such decision should be inferred from the Mayor's statement and comments.

## **Financial considerations**

73. There are no financial considerations at this stage.

## **Conclusion**

74. London Plan policies on land use, affordable housing, historic environment, urban design, and climate change and environment are relevant to this application. The application does not yet comply with all of these policies, as summarised below:

- **Land use principles:** No changes to the land uses in the extant consent are proposed, and the uses remain supported.
- **Affordable housing:** The hybrid permission secured no affordable housing due to the significant funding challenge associated with provision of the new stadium, which required other elements of the development to contribute towards its construction. Although no additional housing is proposed, the

changes to the hotel element would materially alter the economic circumstances of the scheme, and the application should therefore be considered under the viability tested route.

- **Historic environment:** Compared to harm identified to the significance of heritage assets through the original hybrid permission, GLA officers consider that no additional harm would be caused.
- **Urban design:** The Local Plan identifies the location as suitable for tall buildings. The increased slenderness of the building compared to that permitted is supported, and the limited increase in height does not raise strategic concerns. The layout of public realm would be improved compared to the permitted scheme.
- **Transport:** An Active Travel Zone assessment and Road Safety Audit should be undertaken, and a bus contribution secured.
- **Climate change and environment:** Further information is required on energy, whole lifecycle carbon, circular economy, green infrastructure, and water.

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For further information, contact GLA Planning Unit (Development Management Team):

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We are committed to being anti-racist, planning for a diverse and inclusive London and engaging all communities in shaping their city.



## Energy Memo: GLA Consultation

### Case details

Date of first review:	12/09/2023
Case Name:	Tottenham Hotspur Stadium
Case Number:	2023/0586
Case Officer:	Martin Jones
London Borough:	Haringey
Application Type (Outline/Hybrid/Detailed):	S73 Application
Applicant:	Tottenham Hotspur Property Company Limited
Energy Consultant:	Buro Happold
Document Title:	Energy Strategy Addendum
Document Date:	02/08/2023

### Development proposals

Use	Floorspace/Number of units
Residential	TBC units
Hotel	TBC m <sup>2</sup>

**Compliance Schedule - To be completed by the GLA Energy Officer**

Policy	Policy Sub-Area	Required Data (in line with EAG)	Status	Policy Compliance	GLA Comment Reference	
<b>SI 1 - Improving Air Quality</b> <small>(relating only to air quality impacts of energy systems; separate air quality officer consultation required)</small>	Measures/design features to reduce exposure to air pollution	Measures to minimise NOx emissions from energy systems	N/A	<b>Compliant</b>		
<b>SI 2 - Minimising Greenhouse Gas Emissions</b> <small>(excluding SI-2-F- WLC; separate WLC consultation required)</small>	Be Lean emissions reduction	Details of energy efficiency measures	Received but items still outstanding	Potential Compliance-Pending Information	3.4	
		Alignment with Cooling and Overheating	Received but items still outstanding		6.7	
		Be Lean 10% and/or 15% reduction achieved	Received but items still outstanding		3.4	
	Be Clean	EUI and space heating demands provided	Not yet received - applicant to submit and provide reference -->			14
		SI 3 - Energy Infrastructure data provided (see below)	Received but items still outstanding			8.9
	Be Green Renewable generation maximisation	Roof Layout detailing maximised PV proposal	Received but items still outstanding			10
		PV array metrics provided	Not yet received - applicant to submit and provide reference -->			10
		Heat Pump arrangement confirmed	N/A			11
	Total carbon reduction on-site	Confirmation of carbon emission factors used	Received: SAP 10.2 proposed and nothing further required			
		GLA carbon emission reporting spreadsheet v2.0	Not yet received - applicant to submit and provide reference -->			2
		Supporting Modelling Outputs (BRUKLs/DER Worksheets)	Received but items still outstanding			17
	Carbon offset payment confirmed	On-site minimum met	Received but items still outstanding			15
		Draft S106 wording of carbon offset (from borough)	Not yet received - applicant to submit and provide reference -->			16
Be Seen commitment provided	Written confirmation/understanding of data requirements	Not yet received - applicant to submit and provide reference -->		13		
	Confirmation of Planning Stage 1 submission	Not yet received - applicant to submit and provide reference -->		13		
<b>SI 3 - Energy Infrastructure</b>	Aligned with heating hierarchy	Applicant/Heat Network Stakeholder correspondence	Received but items still outstanding		8	
		Heating system details provided	Received but items still outstanding		9	
	Acceptable Design	Futureproofed DHN connection drawings	Received but items still outstanding		9	
		Site heat network drawings	Not yet received - applicant to submit and provide reference -->		9	
<b>SI 4 - Managing Heat Risk</b>	Aligned with cooling hierarchy	Details of management measures proposed	Not yet received - applicant to submit and provide reference -->		5	
		Completed GHA overheating tool	Not yet received - applicant to submit and provide reference -->		18	
		CIBSE dynamic overheating analysis	Received but items still outstanding		6.7	
		Confirmation that cooling criteria have been met	Received but items still outstanding		7	

Application Metrics	Outline Value (if applicable)	Detailed Stage 1 Value	Detailed Final Value
Domestic carbon emissions		80%	
Non-domestic carbon emissions		4%	
Carbon offset payment amount		£168,211	
kWp renewable generation capacity		TBC	
kWh annual renewable energy generation		TBC	
Sqm of proposed PV array		TBC	
Calculated SCOP of heat pumps		N/A	
Heat fraction provided by heat pumps		95% (waste heat)	
Flow/Return temperatures proposed		TBC	
Distribution loss assumption		TBC	
Energy Use Intensity		TBC	
Space Heating Demand		TBC	
Whole Life Carbon Assessment		Received and Under Separate Consultation	
Innovative Features			

**Detailed Comments - Applicant MUST provide detailed responses to the below items**

Comment No.	GLA Stage 1 Date: 12/09/23	Applicant's Stage 1 response Date:	GLA Post Stage 1 response Date:	Applicant's Post Stage 1 response Date:
<b>Documents to be secured</b>				
<b>Energy Strategy Addendum (02/08/2023)</b>				
<b>General compliance comments</b>				
1	The energy strategy could be compliant with the London Plan 2021 policies however, the applicant is required to submit the additional information to demonstrate policy compliance which has been requested below.			
2	The applicant's response to GLA's energy comments should be provided directly within this Energy Memo. Any wider supporting material submitted should be referenced within the applicant's memo response			
3	The applicant should submit the GLA's Carbon Emission Reporting spreadsheet in excel format. The applicant should ensure that all tabs are completed as per methodology on Introduction tab			
4	Based on the information provided, the domestic element of the proposed development is estimated to achieve a reduction of 16.1 tonnes per an (23%) in regulated CO2 emissions compared to a 2021 Building Regulations compliant development. The supporting TER and DER worksheets for all sample units should be provided.			
5	The applicant proposes a thermal bridging y-value of 0.01W/m2K. Within the modelling of the thermal bridging there are several values that have 0 psi. The applicant should confirm if this is due to the curtain walling and demonstrate that these have been included in the unbricked curtain wall system U-Value calculation.			
6	Based on the information provided, the non-domestic element of the proposed development is estimated to achieve a reduction of 2.8 tonnes annum (6%) in regulated CO emissions compared to a 2021 Building Regulations compliant development. The applicant should provide the BRUKL output documents as these could not be located within the submission folder.			
7	The applicant should note that the London Plan includes a target of a minimum 15% improvement on 2021 Building Regulations from energy efficiency which applicants should target. The applicant should therefore consider modelling additional energy efficiency measures to meet the EE target.			

5 The applicant should consider and minimise the estimated energy costs to occupants and outline how they are committed to protecting the consumer from high prices. This should cover the parameters set out in the guidance and include a confirmation of the quality assurance mechanisms that will be considered as part of the strategy. See GLA Energy Assessment Guidance June 2022 paragraphs 7.16-7.19 for further details.

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#### Overheating

The results of the Dynamic Overheating Analysis, using the CIBSE TM59 methodology, demonstrate that all sample units comply with DSY1 assuming a g-value of 0.4-0.5 and mechanical cooling. The applicant has provided a scenario with windows unrestricted that demonstrates compliance with DSY1. The applicant should confirm the ventilation strategy and opening areas assumed for this scenario. The applicant has then suggested the use of active cooling throughout the residential part.

6 Any cooling provision (both cooling capacity and number of units provided with cooling) should be minimised. The applicant should quantify the number of units that will require cooling and the expected cooling load associated. They should clarify whether all facades will be affected by noise restrictions or there are some that are passing (such as living rooms on the sample units provided). They should consider lower energy intensive active methods such as trim cooling peak lopping. The applicant should provide details on the set point and control strategy, to ensure that the system will not be used for comfort cooling.

The applicant has confirmed that the overheating assessment has taken account all the requirements and limits set out in Approved Document O.

The applicant should also investigate the risk of overheating using the DSY 2 & 3 weather files.

For the non-domestic mechanically controlled areas, the area weighted average (MJ/m2) and total (MJ/year) cooling demand for the actual and notional building should be provided and the applicant should demonstrate that the actual building's cooling demand is lower than the notional.

7 The applicant is encouraged to submit a Dynamic Overheating Analysis to assess the overheating risk on any hotel rooms to mitigate overheating passively. This should follow the CIBSE TM52 methodology for the London Design Summer Year 1 (DSY1) weather file: 2020s, High emission, 50% percentile scenario. The applicant is also encouraged to also investigate the risk of overheating using the DSY 2 & 3 weather files.

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#### Be Clean

The applicant has identified the Proposed Energetik district heating network within the vicinity of the development and is proposing to connect to the network. They have suggested that they have been engaging to discussions with Energetik since 2019 and the latest telephone conversation suggested that the DEN will be available on the heat on date of the development. The table shows that there is a connection and supply agreement for the residential and non-residential part. This should be provided.

8 Connection to the network should continue to be prioritised and further evidence of active two-way correspondence with the network operator should be provided. This must include for completeness the following: confirmation or otherwise from the network operator that the network has the capacity to serve the new development, together with supporting estimates of the CO<sub>2</sub>mission factor, installation cost and timescales for connection.

This connection is to be secured through suitable condition or legal wording The applicant should not that only technical feasibility should be included in the condition.

The applicant should be conditioned to connect to the Proposed Energetik District Heating network and are required to continue discussions with Energetik to progress this connection. A draft connection agreement should be provided to the local authority prior to commencement of works onsite to demonstrate that a connection will be established by the developments heat on date.

The applicant is proposing a communal heat network supplied by a centralised energy centre. It should be confirmed that all apartments and domestic building uses will be connected to the heat network.

A drawing/schematic showing the route of the heat network linking all buildings/uses on the site has been provided alongside a drawing indicating floor area, internal layout and location of the energy centre.

9 The applicant has provided a commitment that the development is designed to allow future connection to a district heating network. This should include a single point of connection to the district heating network. This requirement is to be secured through suitable condition or legal wording.

A drawing has been provided demonstrating space for heat exchangers in the energy centre/centres, and a safe-guarded pipe route to the site boundary. Since there is a very strong opportunity to connect, a further more detailed drawing should be provided demonstrating the equipment and space allowance that will be made in consultation with Energetik

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#### Be Green

The applicant is proposing to install PV panels. The applicant should provide the capacity (kWp), total net area (m2) and annual output (kWh) of proposed PV array. A roof layout has been provided, however, it appears that there might be additional space for PV as lower roof areas have not been provided and the stairs overrun.

10 The applicant should reconsider the PV provision and the should provide a detailed roof layout demonstrating that the roof's potential for a PV installation has been maximised and clearly outlining any constraints to the provision of further PV, such as plant space or solar insolation levels. The applicant is expected to situate PV on any green/brown roof areas using bio solar arrangement and should indicate how PV can be integrated with any amenity areas.

The on-site savings from renewable energy technologies should be maximised regardless of the London Plan targets having been

As per comment 8 above connection to the proposed DHN should be prioritised. If the connection is not available the applicant should take into account the below. The applicant should propose one communal heat network supplied by one centralised energy centre. Justification should be given in terms of WLC for any demands not served by centralised heat pumps.

Should heat pumps be proposed, further information on the heat pumps should be provided including:

11 a. An estimate of the heating and/or cooling energy (MWh/annum) the heat pumps would provide to the development and the percentage of contribution to the site's heat loads. They should demonstrate how the heat fraction from heat pump technologies has been maximised.  
b. Details of the Seasonal Coefficient of Performance (SCOP) and/or Seasonal Energy Efficiency ratio (SEER) and how these have been calculated for the specific proposed system's operation. This should incorporate the expected heat source and heat distribution temperatures (for space heat and hot water) and the distribution loss factor, which should be calculated based on the above information and used for calculation purposes.

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#### Whole Life-Cycle Carbon Assessment

The applicant has submitted a WLC assessment which will be reviewed separately, comments will be provided. The WLC assessment should be presented separately in excel using the GLA's WLC assessment template and should follow the GLA WLC guidance. The template and guidance are available here: <https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/whole-life-cycle-carbon-assessments-guidance>. Applicants will also be conditioned to submit a post-construction assessment to report on the development's actual WLC emissions.

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#### Be Seen Energy Monitoring

A commitment should be provided that the development will be designed to enable post construction monitoring and that the information set out in 'Be Seen' guidance is submitted to the GLA's portal at the appropriate reporting stages. This will be secured through suitable legal wording.

13 The 'Be Seen' reporting spreadsheet has been developed to enable development teams to capture all data offline before this is submitted via the webform. Once the planning stage CO<sub>2</sub> emissions have been agreed with GLA, the applicant should confirm that the planning stage data has been submitted to GLA.

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#### Energy Use Intensity and Space Heating Demand Reporting

14 EUI and space heating demands should be provided. The applicant should confirm the methodology used for these calculations.  
The applicant should provide commentary if the expected performance is higher than the reference values of Table 4 of GLA guidance.

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**Other points**

- 15 The carbon dioxide savings of the non-domestic element fall short of the on-site target within the London Plan.  
The applicant should consider the scope for additional measures aimed at achieving further carbon reduction.
- 16 The applicant has confirmed the carbon shortfall in tonnes CO2 and the associated carbon offset payment that will be made to the borough. The **draft s106 agreement** should be submitted when available to evidence the carbon offset agreement with the borough.
- 17 The applicant should provide the relevant modelling output sheets (i.e. TER, DER, BRUKL) for all the different stages of the energy hierarchy.
- 18 The applicant should complete and submit the Good Homes Alliance Early Stage Overheating Risk Tool.
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**Move resolved comments under this section**

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**Domestic (detailed)**

SAP 10.2	Total residual regulated CO <sub>2</sub> emissions	Regulated CO <sub>2</sub> emissions reductions	
	(tonnes per annum)	(tonnes per annum)	(per cent)
Baseline i.e. 2021 Building Regulations	71		
Energy Efficiency	54.9	16.1	23%
CHP	12.7	42.2	59%
Renewable energy	14.2	-1.5	-2%
<b>Total</b>		56.8	80%

**Non-domestic (detailed)**

SAP 10.2	Total residual regulated CO <sub>2</sub> emissions	Regulated CO <sub>2</sub> emissions reductions	
	(tonnes per annum)	(tonnes per annum)	(per cent)
Baseline i.e. 2021 Building Regulations	46.5		
Energy Efficiency	43.7	2.8	6%
CHP	43.7	0	0%
Renewable energy	44.8	-1.1	-2%
<b>Total</b>		1.7	4%

**Carbon offsetting (detailed)**

	Shortfall (tonnes per annum)	Shortfall (£)
Domestic	14.2	40470
Non-domestic	44.8	127680
<b>Total</b>	59	168150

## Energy Memo: GLA Consultation

### Case details

Date of first review:	12/09/2023
Case Name:	Tottenham Hotspur Stadium
Case Number:	2023/0586
Case Officer:	Martin Jones
London Borough:	Haringey
Application Type (Outline/Hybrid/Detailed):	S73 Application
Applicant:	Tottenham Hotspur Property Company Limited
Energy Consultant:	Buro Happold
Document Title:	Energy Strategy Addendum
Document Date:	02/08/2023

### Development proposals

Use	Floorspace/Number of units
Residential	TBC units
Hotel	TBC m <sup>2</sup>

Compliance Schedule - To be completed by the GLA Energy Officer

Policy	Policy Sub-Area	Required Data (in line with EAG)	Status	Policy Compliance	GLA Comment Reference
<b>SI 1 - Improving Air Quality</b> (relating only to air quality impacts of energy systems; separate air quality officer consultation required)	Measures/design features to reduce exposure to air pollution	Measures to minimise NOx emissions from energy systems	N/A	Compliant	
<b>SI 2 - Minimising Greenhouse Gas Emissions</b> (excluding SI-2-F-WLC; separate WLC consultation required)	Be Lean emissions reduction	Details of energy efficiency measures	Received but items still outstanding	Potential Compliance-Pending Information	3,4
		Alignment with Cooling and Overheating	Received but items still outstanding		6,7
		Be Lean 10% and/or 15% reduction achieved	Received but items still outstanding		3,4
	Be Clean	EUI and space heating demands provided	Received but items still outstanding		14
		SI 3 - Energy Infrastructure data provided (see below)	Received but items still outstanding		8,9
	Be Green	Roof Layout detailing maximised PV proposal	Received and nothing further required		10
		PV array metrics provided	Received and nothing further required		10
	Renewable generation maximisation	Heat Pump arrangement confirmed	N/A		11
		Confirmation of carbon emission factors used	Received; SAP 10.2 proposed and nothing further required		2
		GLA carbon emission reporting spreadsheet v2.0	Received and nothing further required		17
	Total carbon reduction on-site	Supporting Modelling Outputs (BRUKL/DER Worksheets)	Received and nothing further required		15
		On-site minimum met	Received but items still outstanding		16
Carbon offset payment confirmed	Draft S106 wording of carbon offset (from borough)	Not yet received - applicant to submit and provide reference -->	13		
	Written confirmation/understanding of data requirements	Not yet received - applicant to submit and provide reference -->	13		
Be Seen commitment provided	Confirmation of Planning Stage 1 submission	Not yet received - applicant to submit and provide reference -->	13		
	Confirmation of Planning Stage 1 submission	Not yet received - applicant to submit and provide reference -->	13		
<b>SI 3 - Energy Infrastructure</b>	Aligned with heating hierarchy	Applicant/Heat Network Stakeholder correspondence	Received but items still outstanding	Potential Compliance-Pending Information	8
		Heating system details provided	Received and nothing further required		9
	Acceptable Design	Futureproofed DHN connection drawings	Received but items still outstanding		9
		Site heat network drawings	Not yet received - applicant to submit and provide reference -->		9
Details of management measures proposed	Details of management measures proposed	Not yet received - applicant to submit and provide reference -->	5		
	Details of management measures proposed	Not yet received - applicant to submit and provide reference -->	5		
<b>SI 4 - Managing Heat Risk</b>	Aligned with cooling hierarchy	Completed GHA overheating tool	Received and nothing further required	Potential Compliance-Pending Information	18
		CIBSE dynamic overheating analysis	Received but items still outstanding		6,7
		Confirmation that cooling criteria have been met	Received but items still outstanding		7
<b>Application Metrics</b>		<b>Outline Value (if applicable)</b>	<b>Detailed Stage 1 Value</b>	<b>Detailed Final Value</b>	
Domestic carbon emissions			80%		
Non-domestic carbon emissions			8%		
Carbon offset payment amount			£196,365		
kWp renewable generation capacity			17		
kWh annual renewable energy generation			13,064		
Sqm of proposed PV array			77		
Calculated SCOP of heat pumps			N/A		
Heat fraction provided by heat pumps			95% (waste heat)		
Flow/Return temperatures proposed			60/35°C		
Distribution loss assumption					
Energy Use Intensity			51.1 Resi / 239.0 Non-resi		
Space Heating Demand			5.5 Resi / 17.1 Non-resi		
Whole Life Carbon Assessment					
Innovative Features			Received and Under Separate Consultation		

Detailed Comments - Applicant MUST provide detailed responses to the below items

Comment No.	GLA Stage 1 Date: 12/09/23	Applicant's Stage 1 response Date:	GLA Post Stage 1 response Date: 03/11/2023	Applicant's Post Stage 1 response Date:
<b>Documents to be secured</b>				
Energy Strategy Addendum (02/08/2023)				
<b>General compliance comments</b>				

1	The energy strategy could be compliant with the London Plan 2021 policies however, the applicant is required to submit the additional information to demonstrate policy compliance which has been requested below. The applicant's response to GLA's energy comments should be provided directly within this Energy Memo. Any wider supporting material submitted should be referenced within the applicant's memo response.	Noted. A revised energy statement has been issued (October 2023, revision P05)	The energy strategy could be compliant with the London Plan 2021 policies however, the applicant is required to submit the additional information to demonstrate policy compliance which has been requested below. The applicant's response to GLA's energy comments should be provided directly within this Energy Memo. Any wider supporting material submitted should be referenced within the applicant's memo response.
2	The applicant should submit the GLA's Carbon Emission Reporting spreadsheet in excel format. The applicant should ensure that all tabs are completed as per methodology on Introduction tab.	Noted. The spreadsheet has been issued with the above report.	The applicant has provided the emissions spreadsheet. Spreadsheet may need updating depending on responses to the following comments.
3	<b>Be Lean</b> Based on the information provided, the domestic element of the proposed development is estimated to achieve a reduction of 16.1 tonnes annum (23%) in regulated CO2 emissions compared to a 2021 Building Regulations compliant development. The supporting TER and DER worksheets for all sample units should be provided. The applicant proposes a thermal bridging g-value of 0.01W/m2K. Within the modelling of the thermal bridging there are several values that have 0 psi. The applicant should confirm if this is due to the curtain walling and demonstrate that these have been included in the unisited curtain wall system U-Value calculation.	SAP worksheets were provided in the Appendix. Confirmed, this is due to curtain walling. Linear thermal losses between all the curtain wall elements were included in the facade calculations. The Energy Statement has been updated demonstrating that these were considered. Further to this, a summarising table of how the thermal bridges were considered, how they have been modelled in SAP and their psi-values has been provided in the report.	The applicant has detailed the thermal bridges included in the curtain wall U-value. The applicant should provide the curtain wall U-value calculations. <b>This item is outstanding.</b>
4	Based on the information provided, the non-domestic element of the proposed development is estimated to achieve a reduction of 2.8 tonnes per annum (6%) in regulated CO2 emissions compared to a 2021 Building Regulations compliant development. The applicant should provide the BRUKL output documents as these could not be located within the submission folder. The applicant should note that the London Plan includes a target of a minimum 15% improvement on 2021 Building Regulations from energy efficiency which applicants should target. The applicant should therefore consider modelling additional energy efficiency measures to meet the EE target.	BRUKLs are included with Energy Statement Revision P05 issue. Energy demand is excessively dominated by domestic hot water demand. Waste Water Heat Recovery would be an ideal design solution, but the DSM methodology does not account for this. An alternate approach has been proposed but will need to be signed off and agreed with the Building Control officer.	Based on the information provided, the non-domestic element of the proposed development is now estimated to achieve a reduction of 5.5 tonnes per annum (9%) in regulated CO2 emissions. This is an improvement on the previous amount of 6%. The applicant should detail what changes have been made to improve the carbon savings. The applicant could propose WWHR to reduce the overall DHW consumption - this would be welcomed. It is acknowledged that it is currently not accounted for in DSM methodology but will reduce CO2 emissions in real-life. <b>This item is outstanding.</b>
5	The applicant should consider and minimise the estimated energy costs to occupants and outline how they are committed to protecting the consumer from high prices. This should cover the parameters set out in the guidance and include a confirmation of the quality assurance mechanisms that will be considered as part of the strategy. See GLA Energy Assessment Guidance June 2022 paragraphs 7.16-7.19 for further details.	Correspondance from Energetik: All our tariff charges are updated annually in accordance with inflation, and guaranteed by our contract with the end user. Our Availability charge is updated according to changes in the Consumer Price Index (CPI). Our Unit Charge for heat is updated according to changes in the retail gas component of CPI. Our charges change by CPI for the Availability Charge and the gas component of CPI for the Unit Charge each year on 1st April. However, there has been an unprecedented rise in the gas component of CPI over the last 2 years. For the last two years Energetik has applied a 'price discount' to its Unit Charge to help protect its customers from the highly volatile energy prices. This has ensured that we remain below the price of gas.	The applicant should review the measures outlined in paragraphs 7.16-7.19 in the GLA Energy Assessment Guidance and outline how the design will minimise cost to occupants. <b>This item is outstanding.</b>

6	<b>Overheating</b> The results of the Dynamic Overheating Analysis, using the CIBSE TM59 methodology, demonstrate that all sample units comply with DSY1 assuming a g-value of 0.4-0.5 and mechanical cooling. The applicant has provided a scenario with windows unrestricted that demonstrates compliance with DSY1. The applicant should confirm the ventilation strategy and opening areas assumed for this scenario. The applicant has then suggested the use of active cooling throughout the residential part. - Any cooling provision (both cooling capacity and number of units provided with cooling) should be minimised. - The applicant should quantify the number of units that will require cooling and the expected cooling load associated. - They should clarify whether all facades will be affected by noise restrictions or there are some that are passing (such as living rooms on the sample units provided). - They should consider lower energy intensive active methods such as trim cooling peak lopping. - The applicant should provide details on the set point and control strategy, to ensure that the system will not be used for comfort cooling. The applicant has confirmed that the overheating assessment has taken account all the requirements and limits set out in Approved Document O. The applicant should also investigate the risk of overheating using the DSY 2 & 3 weather files.	The apartments, when analysed with an unconstrained facade, comply with TM59 overheating requirements. Acoustics requirements, due to noisy crowds on event days, mean that windows would need to be closed. Consequently, during an event, the apartments may overheat and comfort cooling becomes necessary. Nonetheless, in order for the scheme to remain commercially viable, an apartment that can be operated passively but with the option of comfort cooling is more desirable. Cooling provision has been minimised through building orientation (SE-NW aligned building) and modest glazing ratios (comparable to the Notional Building). The acoustician has confirmed that all facades will be affected by noise restrictions. Trim cooling peak lopping is not feasible to achieve the cooling required as a result of the acoustics restrictions. The acoustician's report confirms that all facades will be affected by noise restrictions on bedrooms and hotel rooms. Details on the control strategy will be provided at Schematic and Detail Design. It is not normal to define this level of Detail at Concept Design. DSY 2 and DSY 3 weather files have been run on the unconstrained facade with results presented in the revised version of the energy strategy (revision P05) in table 11-2. Future mitigation has been considered.	The applicant has confirmed all facades will be affected by noise. Additionally, windows are required to be modelled as closed in the day due to noise. Comfort cooling for marketable reasons is not accepted. The applicant should detail why a trim cooling system would not be feasible. A comparison between a trim cooling and active cooling system should be provided. The applicant should be conditioned to provide a minimum cooling setpoint and appropriate controls to ensure the system will not be used for comfort cooling. <b>This item is outstanding.</b>
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<p>For the non-domestic mechanically controlled areas, provide the area weighted average (MJ/m2) and - total (MJ/year) cooling demand for the actual and notional building and - the applicant should demonstrate that the actual building's cooling demand is lower than the notional.</p> <p>7 - The applicant is encouraged to submit a Dynamic Overheating Analysis to assess the overheating risk on any hotel rooms to mitigate overheating passively. This should follow the CIBSE TMS2 methodology for the London Design Summer Year 1 (DSY1) weather file: 2020s. High emission, 50% percentile scenario. The applicant is also encouraged to also investigate the risk of overheating using the DSY 2 &amp; 3 weather files.</p>	<p>The feasibility determines that the Hotel needs to be in operation by 2028 for the European Championships, therefore a faster method of construction is required to achieve this (i.e. a curtain walling system). However, curtain walling has a limited thermal performance. Consequently, the g-value has had to be increased to ensure the U-value (as required by Part L1 FEE) can be practically achieved. However, in order to achieve acceptable aesthetics, the g-value needs to remain constant with building height across both the residential demise and the commercial hotel. So a reduced g-value can only be applied on the commercial hotel to the secondary facade typology (the folded blades). This design move has been implemented in the updated Energy Strategy so the Actual Building cooling demand is no worse than the Notional Building.</p> <p>The risk of overheating using the DSY 2 and 3 weather files has been presented in the revised Energy Statement (P05)</p> <p>CIBSE TMS2 is a natural ventilation methodology and therefore not applicable to buildings that have comfort cooling. Passive design measures have proven to limit the comfort cooling requirement given the Actual Cooling demand is no worse than the Notional.</p>	<p>The applicant has confirmed that the actual cooling demand is less than the notional. This is welcomed.</p> <p>Nothing further is required.</p>
<b>Be Clean</b>		
<p>The applicant has identified the Proposed Energetik district heating network within the vicinity of the development and is proposing to connect to the network. They have suggested that they have been engaging to discussions with Energetik since 2019 and the latest telephone conversation suggested that the DEN will be available on the heat on date of the development. The table shows that there is a connection and supply agreement for the residential and non-residential part. This should be provided.</p> <p>Connection to the network should continue to be prioritised and further evidence of active two-way correspondence with the network operator should be provided. This must include for completeness the following: confirmation or otherwise from the network operator that the network has the capacity to serve the new development, together with supporting estimates of the emission factor, installation cost and timescales for connection.</p> <p>This connection is to be secured through <u>suitable condition or legal wording</u>. The applicant should not that only technical feasibility should be included in the condition.</p> <p>The applicant should be <u>conditioned</u> to connect to the Proposed Energetik District Heating network and are required to continue discussions with Energetik to progress this connection. A draft connection agreement should be provided to the local authority prior to commencement of works onsite to demonstrate that a connection will be established by the developments heat on date.</p> <p>The applicant is proposing a communal heat network supplied by a centralised energy center. It should be confirmed that all apartments and domestic building uses will be connected to the heat network.</p> <p>A drawing/schematic showing the route of the heat network linking all buildings/uses on the site has been provided alongside a drawing indicating the floor area, internal layout and location of the energy center.</p> <p>9 The applicant has provided a commitment that the development is designed to allow future connection to a district heating network. This should include a single point of connection to the district heating network. This requirement is to be secured through a suitable condition or legal wording.</p> <p>A drawing has been provided demonstrating space for heat exchangers in the energy center/centers, and a safe-guarded pipe route to the site boundary. Since there is a very strong opportunity to connect, a further more detailed drawing should be provided demonstrating the equipment and space allowance that will be made in consultation with Energetik.</p>	<p>The table provided in the Energy Statement was a summary of the discussions and engagement with Energetik since 2019, the reference in question was to highlight the subject of discussion, it was not intended to report that a DEN supply agreement had been formalised. For clarity, there is no formal agreement as yet.</p> <p>We have updated the Energy Statement with further detail of a more recent email exchange with Energetik that help to answer your questions on capacity/timescales/emissions factor and details on installation cost.</p> <p>The applicant acknowledges that the existing permission already contains DEN connection planning obligations, which remain extant and which they still intend to comply with. The existing connection obligations in s106 are subject to both technical and financial feasibility.</p> <p>Please note that technically work on site has already started, with the foundations and part of the basement already built. That said, the client is in the process of appointing a specialist to help step up negotiations with Energetik, it is the intention to have some form of agreement in place prior to April 2024, the proposed restarting of works onsite.</p> <p>Further evidence has been included in the Appendix of the revised energy strategy. We have recently been notified that the carbon factor of the DEN is 0.022 kgCO2/kWh, slightly worse than what was previously stated. This does not significantly affect the results as the Notional Building uses the same Carbon Factor.</p> <p>ENERGETIK : Fundamentally the BRE design note and SAP means that Energetik's carbon calculation are based on displaced electricity, meaning that as electricity decarbonises so does the heat from an EFW plant. So heat networks connected to an EFW facility now use this same method without needing to calculate their own carbon factor based on the following BRE statement in the attached. We believe that we will exceed 97% of our heat from the EFW, but we accept the BRE technical note's assessment that each year 97% heat is derived from the EFW, and 3% from gas boilers.</p> <p>EFW carbon factor [kgCO2/kWh] of (0.136/10 * 0.97) = 0.013192, and Back up boiler carbon factor [kgCO2/kWh] of (0.210/0.85 * 0.03) = 0.007412 So Carbon factor for EFW [kgCO2/kWh] is 0.013192 + 0.007412 = 0.0206 kgCO2/kWh.</p> <p>Then we have around a 7% heat loss from the EFW to our energy centre to the boundary of your development, so 0.022 kgCO2/kWh at the development boundary.</p> <p>A more detail drawing has been provided in the updated Energy Statement (revision P05 dated 20/10/23) showing the anticipated plant and associated layout.</p>	<p>The applicant's response is welcomed.</p> <p>Connection to the network should continue to be prioritised and further evidence of active two-way correspondence with the network operator should be provided. This must include for completeness the following: confirmation or otherwise from the network operator that the network has the capacity to serve the new development and direct confirmation of the carbon factor.</p> <p>This connection is to be secured through a <u>suitable condition or legal wording</u>. The applicant should note that only technical feasibility should be included in the condition.</p> <p>The applicant should be <u>conditioned</u> to connect to the proposed Energetik District Heating network and are required to continue discussions with Energetik to progress this connection. A draft connection agreement should be provided to the local authority prior to re-commencement of works onsite to demonstrate that a connection will be established by the developments heat on date.</p> <p>This item is outstanding.</p> <p>The applicant has provided a drawing showing space for an energy centre within the basement. The applicant should confirm if the connection point has been agreed with the network operator.</p> <p>This item is outstanding.</p>
<b>Be Green</b>		
<p>The applicant is proposing to install PV panels. The applicant should - provide the capacity (kWp), total net area (m2) and annual output (kWh) of the proposed PV array. A roof layout has been provided, however, it appears that there might be additional space for PV as lower roof areas have not been provided and the stairs overrun.</p> <p>10 The applicant should reconsider the PV provision and they should - provide a detailed roof layout demonstrating that the roof's potential for a PV installation has been maximised and - clearly outlining any constraints to the provision of further PV, such as plant space or solar insolation levels. The applicant is expected to sit PV on any green/brown roof areas using bio solar arrangement and should - indicate how PV can be integrated with any amenity areas.</p> <p>The on-site savings from renewable energy technologies should be maximised regardless of the London Plan targets having been As per comment 8 above connection to the proposed DHN should be prioritised. If the connection is not available the applicant should take account the below. The applicant should propose one communal heat network supplied by one centralised energy center. Justification should be given in terms of WLC for any demands not served by centralised heat pumps. Should heat pumps be proposed, further information on the heat pumps should be provided including: a. An estimate of the heating and/or cooling energy (MWh/annum) the heat pumps would provide to the development and the percentage of contribution to the site's heat loads. They should demonstrate how the heat fraction from heat pump technologies has been maximised. b. Details of the Seasonal Coefficient of Performance (SCOP) and/or Seasonal Energy Efficiency ratio (SEER) and how these have been calculated for the specific proposed system's operation. This should incorporate the expected heat source and heat distribution temperatures (for space heat and hot water) and the distribution loss factor, which should be calculated based on the above information and used for calculation purposes.</p> <p>11</p>	<p>The updated Energy Strategy contains this information within Appendix E. The PV area is 90 sqm.</p> <p>As shown in the development information tab of the GLA carbon emissions reporting spreadsheet, the peak power output is kWp = 17.31 kW, total net PV area is modelled as 76.5 m2 and the annual output, as calculated in the BRUKL is 13,064 kWh/year.</p> <p>Changes to the roof plans and elevations have recently been agreed with LBH following the QRP. An updated rooftop PV layout has been provided in the revised Energy Statement, but the area is approximately the same as before. The additional PV has been shown on a roof diagram in the updated Energy report p05. Consideration for PV in other locations has been extensively reviewed but dismissed on the following grounds: Vertical PV on SE and NW facades results in unacceptable embodied carbon payback times due to inefficient generation; PV mounted on brise soleil is unacceptable for fire risk; PV mounted above plant is unacceptable for heat rejection; other flat roof availability is dedicated to amenity space.</p> <p>If the DEN option becomes unviable then this information will be provided.</p>	<p>The applicant has detailed the PV spec and provided a roof layout highlighting the optimisation of space for PV. This is welcomed.</p> <p>Nothing further is required.</p> <p>Clarification is welcomed. The applicant should be conditioned to provide an updated energy statement if the energy strategy changes.</p> <p>Nothing further is required.</p>
<b>Whole Life-Cycle Carbon Assessment</b>		
<p>12 The applicant has submitted a WLC assessment which will be reviewed separately; comments will be provided. The WLC assessment should be presented separately in excel using the GLA's WLC assessment template and should follow the GLA WLC guidance. The template and guidance are available here: <a href="https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/whole-life-cycle-carbon-assessments-guidance">https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/whole-life-cycle-carbon-assessments-guidance</a>. Applicants will also be conditioned to submit a post-construction assessment to report on the development's actual WLC emissions.</p>	<p>Noted. A revised version of the WLC spreadsheet has been provided in response to comments from the Haringey Officer and the Quality Review panel (minor changes include - quantity of demolition material, and more detail on the further reductions being considered).</p>	<p>This item will be dealt with by the WLC officer.</p> <p>Nothing further is required.</p>
<b>Be Seen Energy Monitoring</b>		
<p>13 A commitment should be provided that the development will be designed to enable post construction monitoring and that the information set out in the 'Be Seen' guidance is submitted to the GLA's portal at the appropriate reporting stages. This will be secured through <u>suitable legal wording</u>.</p> <p>The 'Be Seen' reporting spreadsheet has been developed to enable development teams to capture all data offline before this is submitted via the webform. Once the planning stage CO2 emissions have been agreed with GLA, the applicant should confirm that the planning stage data has been submitted to GLA.</p>	<p>We can confirm that the webform will be submitted once the planning stage CO2 emissions have been agreed with the GLA.</p>	<p>The applicant has detailed the proposed metering strategy within the report, with extensive metering proposed.</p> <p>Once the planning stage CO2 emissions have been agreed with GLA, the applicant should confirm that the planning stage data has been submitted to GLA.</p> <p>This item is outstanding.</p>
<b>Energy Use Intensity and Space Heating Demand Reporting</b>		
<p>14 EUI and space heating demands should be provided. The applicant should - confirm the methodology used for these calculations. - The applicant should provide commentary if the expected performance is higher than the reference values of Table 4 of GLA guidance.</p>	<p>An EUI estimation has been provided in the updated GLA Energy Spreadsheet.</p>	<p>The applicant should provide commentary if the expected performance is higher than the reference values of Table 4 of GLA guidance.</p> <p>This item is outstanding.</p>
<b>Other points</b>		
<p>15 The carbon dioxide savings of the non-domestic element fall short of the on-site target within the London Plan. The applicant should consider the scope for additional measures aimed at achieving further carbon reductions.</p>	<p>The Part L2 analysis is significantly dominated by domestic hot water demand. This is out of our control (evidenced in the BRUKL report). A Waste Water Heat Recovery system has been considered but there is no official methodology for including this design feature within a Part L2 dynamic simulation. We have investigated accounting for WWHR using the Simplified Building Energy Method, but this would need approval from the Building Control Officer. If approval is granted, this design feature would improve the carbon savings by a further +10% over the Notional Building. There are no additional practical of feasible design interventions that we can apply to the building.</p>	<p>The applicant could propose WWHR. Although there is no way to model this currently, this would be welcomed.</p> <p>This item is outstanding.</p>
<p>16 The applicant has confirmed the carbon shortfall in tonnes CO2 and the associated carbon offset payment that will be made to the borough. The <u>draft s106 agreement</u> should be submitted when available to evidence the carbon offset agreement with the borough.</p>	<p>Noted</p>	<p>The draft s106 agreement should be submitted when available to evidence the carbon offset agreement with the borough.</p> <p>This item is outstanding.</p>
<p>17 The applicant should provide the relevant modelling output sheets (i.e. TER, DER, BRUKL) for all the different stages of the energy hierarchy.</p>	<p>BRUKLs are provided as separate files.</p>	<p>BRUKLs have been included.</p> <p>Nothing further is required.</p>
<p>18 The applicant should complete and submit the Good Homes Alliance Early Stage Overheating Risk Tool.</p>	<p>See Appendix D in the updated Energy Strategy report.</p>	<p>GHA tool has been included.</p> <p>Nothing further is required.</p>
<b>Move resolved comments under this section</b>		





**Domestic (detailed)**

SAP 10.2	Total residual regulated CO <sub>2</sub> emissions	Regulated CO <sub>2</sub> emissions reductions	
	(tonnes per annum)	(tonnes per annum)	(per cent)
Baseline i.e. 2021 Building Regulations	71		
Energy Efficiency	54.9	16.1	23%
CHP	12.7	42.2	59%
Renewable energy	14.2	-1.5	-2%
<b>Total</b>		56.8	80%

**Non-domestic (detailed)**

SAP 10.2	Total residual regulated CO <sub>2</sub> emissions	Regulated CO <sub>2</sub> emissions reductions	
	(tonnes per annum)	(tonnes per annum)	(per cent)
Baseline i.e. 2021 Building Regulations	59.4		
Energy Efficiency	53.8	5.6	9%
CHP	53.8	0	0%
Renewable energy	54.7	-0.9	-2%
<b>Total</b>		4.7	8%

**Carbon offsetting (detailed)**

	Shortfall (tonnes per annum)	Shortfall (£)
Domestic	14.2	40470
Non-domestic	54.7	155895
<b>Total</b>	68.9	196365

## **WLC Memo: GLA Consultation**

### **Case details**

Date of first review:	02/11/2023
Case Name:	Tottenham Hotspur Stadium
Case Number:	2023/0661
Case Officer:	Martin Jones
London Borough:	Haringey
Application Type (Outline/Hybrid/Detailed):	Hybrid
Applicant:	Tottenham Hotspur Property Company Limited
WLC Consultant:	Buro Happold
Document Title:	231020_NDP Hotel WLC GLA_P04
Document Date:	25/07/2023

### **Development proposals**

<b>Use</b>	<b>Floorspace/Number of units</b>
	27,378 m <sup>2</sup>
	m <sup>2</sup>
	m <sup>2</sup>

## Samuel Uff

---

**From:** Martin Jones <Martin.Jones@london.gov.uk>  
**Sent:** 06 November 2023 09:29  
**To:** Hannah Cox  
**Cc:** Samuel Uff  
**Subject:** RE: Spurs Stadium S73  
**Attachments:** 231106 THFC Hotel GLA Energy Memo.xlsx; 231106 THFC Hotel GLA WLC Memo.xlsx

Hi Hannah

Thanks for the responses. Please see attached energy and WLC comments.

The CE template needs to be provided before CE comments can be completed, available here: <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/circular-economy-statement-guidance>.

There no response to the UGF comments – is that coming separately?

### Water

In response to our Stage 1 comments, the Applicant provided a Sustainability Statement and correspondence with Thames Water (25 October 2023).

Thames Water has confirmed that it has capacity to accept the proposed discharge rate of 4.4 l/s. This is supported, however further assessment of reducing this rate as close to QBAR for the site should be undertaken.

Further information is still required to be able to understand the sewer flood risk to the site.

The “Northumberland Development Project Hotel S73 Application” has been provided with tracked changes. This should be corrected and resubmitted.

Other comments raised in the Stage 1 response still stand as no further information has been submitted:

- Within the south-west section of the red line boundary of the site, there is the possibility of fluvial flooding as this section is located within Flood Zone 2. However from the development proposal it looks as though this will not impact the proposed hotel as per Figure 2-3. It should also be confirmed in the FRA that ground levels within the area of Flood Zone 2 are remaining the same as existing, and as such, will not displace fluvial floodwater off site.
- Latest EA reservoir mapping shows that the southern extent of the site is at risk of reservoir flooding when river levels are normal. If the applicant can confirm the ground levels in Flood Zone 2 are remaining the same and that no sensitive receptors are proposed, a Flood Warning and Evacuation Plan (FWEP) should not be required.
- Figure 4-3 is very high-level map which means it is difficult to tell the exact groundwater flood risk to the site. However as there is the potential for elevated groundwater beneath the site. Groundwater monitoring should be undertaken ideally during winter months to inform the exact mitigation measures required, to be secured by condition. This should then be used to inform mitigation at the site for the basement elements.
- It is unclear the level of risk to the site from sewers as this is not fully reviewed in the FRA. Further information should be provided within the FRA, including the analysis of local sewer networks.
- A greenfield runoff rate has been provided in Appendix E, the SuDS Proforma, however, this has not been referenced in the main body of the report and no consideration has been given to the practicality of discharging at greenfield rate.
- Discharge rates can be readily restricted to well below 5l/s using suitably protected orifice plates or proprietary products such as vortex control devices.
- The drainage strategy assumes that infiltration is not feasible. There is a reasonable possibility that the site, or parts of it, are in fact suitable for infiltration. Soakage tests at various points across the site should be undertaken to examine the feasibility of infiltration.
- In terms of SuDS, it is noted that the Sustainability Statement now includes rain gardens and permeable paving as well as the below ground attenuation tanks proposed in the drainage strategy. Rainwater harvesting and green roofs should also be provided to satisfy the requirements of The London Plan 2021 Policy SI.13. Currently a conservative scenario has been adopted whereby no reuse of rainwater is assumed. The Applicant should revise the drainage

strategy to incorporate a range of SuDS to provide the required water quantity, quality, biodiversity, and amenity benefits.

- No calculations for the Greenfield Runoff Rate have been provided. This does not provide sufficient detail to support the proposed drainage strategy. Hydraulic calculations should be provided including a range of return periods and storm durations and included on the drainage drawings.
- An assessment of exceedance flood flow routes above the 100-year event plus 40% climate change is discussed in Section 3.1.1 but these should be presented and included on drainage strategy drawings.
- No water efficiency information has been provided for the residential components of the development.
- The Applicant should also include water harvesting and reuse to reduce consumption of water across the site. This can be integrated with the surface water drainage system to provide a dual benefit.

Kind regards

Martin

**Martin Jones**

**Principal Strategic Planner, Planning**

**GREATERLONDONAUTHORITY**

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**From:** Hannah Cox <hannah.cox@quod.com>

**Sent:** 24 October 2023 17:28

**To:** Martin Jones <Martin.Jones@london.gov.uk>

**Subject:** RE: Spurs Stadium S73

**CAUTION:** This email originated from outside this organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Martin

Please use the link below to download a pack prepared by Buro Happold which responds to the comments in relation to energy and sustainability.

<https://we.tl/t-OTWoUilxgM>

The pack includes:

- Updated Sustainability Statement
- Updated Energy Strategy Addendum and Appendices
- Updated carbon emissions GLA spreadsheet
- GLA Energy Memo spreadsheet
- Circular Economy Statement
- Updated WLC GLA spreadsheet
- Response to GLA comments in respect of drainage, flood risk and water
- Evidence from Thames Water re. water capacity

Kind regards

Hannah

## Samuel Uff

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**From:** Martin Jones <Martin.Jones@london.gov.uk>  
**Sent:** 16 November 2023 15:42  
**To:** Hannah Cox; Samuel Uff  
**Subject:** RE: Spurs Stadium S73

Hi Hannah, Sam

Here are our water responses (all resolved, condition request):

In response to our Stage 2 comments (1 November 2023) the Applicant provided a Drainage, Flood Risk & Water Comments Excel document (7 November 2023).

The consultant has confirmed that “The ground levels within Flood Zone 2 are confirmed to be unchanged as this contains the existing road, pavement and a small part of public realm. It is therefore understood that there will be no displacement of fluvial floodwater off-site as a result of the proposal.”. This is supported and no further action is required.

It has been confirmed that the utilities located in the basement incorporate flood resilient measures to protect against reservoir flood risk and that no other sensitive receptors would be at risk. This is supported and no further action is required.

Further evidence has been presented regarding groundwater flood risk. Two boreholes were installed in 2016 and a groundwater level of 12.79mbgl was observed. This is supported and no further action is required.

The consultant has provided further investigation which demonstrates that the sewer risk to the site is low, and Thames Water have confirmed capacity within the network to take the runoff from the site. No further action is required.

As the planning application is for a S73 Minor material amendment to an existing application, the previously agreed surface water discharge of 4.4 l/s is supported and no further action is required.  
Further explanation has been provided as to why infiltration techniques have not been utilised, this is supported and no further action is required.

The development includes geocellular attenuation tanks, and rainwater harvesting is provided on the wider masterplan. This has been looked at for the hotel site but is not feasible. This is supported and no further action is required.

As this forms part of a S73 application, greenfield runoff rate calculations are not required as these were previously submitted with the wider application. The proposed discharge of 4.4 l/s for the hotel site is in line with the previously agreed wider drainage strategy proposals. No further action is required.

The applicant has stated that “Exceedance flood flow routes above the 100-year event plus 40% climate change will be presented and included on drainage strategy drawings in the next design stage.” This should be added as a condition.

The consultant has confirmed “For the residential component of the development, limiting flow rates on all water fittings have been imposed. The maximum flow rate figures proposed for the residential fittings are less than the requirements of the Approved Document Part G: Sanitation, hot water safety and water efficiency”. This is supported and no further action is required.

Kind regards  
Martin

# GREATER LONDON AUTHORITY

## Circular Economy: GLA Consultation

### Case Details

1	Development Name	Tottenham Hotspur Stadium
2	Applicant	Tottenham Hotspur Property Company Limited
3	London Borough	Haringey
4	Case Officer	Martin Jones

### Planning Application: Proposal

Minor Material Amendments to height, design, maximum floorspace and associated works to Plot 3 (Hotel / Residential development) of the hybrid planning permission HGY/2015/3000 (following previously approved amendments including HGY/2017/1183 to allow part residential (C3) use on Plot 3) for demolition and comprehensive redevelopment of the Northumberland Park Development Project through variation of Conditions A4 (Consented Drawings and Documents); A6 (Conformity with Environmental Statement) and Condition A7 (Maximum Quantity/Density) and D1 (Plot 3 specific drawings) under Section 73 of the Town and Country Planning Act.

### Planning Application: Uses - Floorspace

1		13000	m <sup>2</sup>
2		14387	m <sup>2</sup>
3			m <sup>2</sup>
4			m <sup>2</sup>
5			m <sup>2</sup>
6			m <sup>2</sup>
7			m <sup>2</sup>
8			m <sup>2</sup>
9			m <sup>2</sup>
10			m <sup>2</sup>
11			m <sup>2</sup>
12			m <sup>2</sup>
13			m <sup>2</sup>
14			m <sup>2</sup>
15			m <sup>2</sup>
	<b>TOTAL</b>		<b>m<sup>2</sup></b>

GLA STAGE 1

GLA POST STAGE 1

Document Information		Additional Information		Date of Applicant's Response	Please fill in.	Date of GLA Response	Date of Applicant's Response
1	Date of Review	16/11/2023					
2	Document Title	NDP Hotel Circular Economy Statement					
3	Author	Buro Happold					
4	Document Date	24-Oct-23					
5	Template Submitted (Y/N)	Y					
GLA Stage 1 Comments		Applicant's Stage 1 Response		GLA Post Stage 1 Response		Applicant's Post Stage 1 Response	
No	Title	Description	Action Required	Description	Description	Description	Description
Please provide a revised version of the Circular Economy Statement (written report and/or GLA CE template) that incorporates the additional required information, according to the comments below.				Please respond here.			
0	Policy and Guidance	London Plan Policy S17 requires development applications that are referable to the Mayor of London to submit a Circular Economy Statement, whilst Policy D3 requires development proposals to integrate circular economy principles as part of the design process. Applicants should follow the London Plan Guidance: Circular Economy Statements (March 2022) to produce a written Circular Economy Statement and populate the template. Applicants should complete the template in full in line with the GLA guidance and submit this as an Excel document with the written report. Applicants should ensure they are familiar with the guidance in preparation for submitting their planning application. The following comments set out how the Applicant's planning application stage Circular Economy Statement submission complies with the policy and guidance.	Nothing further is required.	It is welcomed that the Applicant has provided a Circular Economy Statement, in line with the adopted London Plan Guidance: Circular Economy Statements (March 2022), including the completed CE template and an accompanying written report. Please refer to the rows below for detailed comments.			
1	Development Details	The Applicant has provided description of the development.	Nothing further is required.				
1	Development Details	The Applicant has partially provided details of the proposed development in the template, including gross internal floor area (GIA).	The Applicant should also indicate the use types in the GIA breakdown in the Project Details section of the GLA CE template.	Please respond here.			
2	Design Approach	The Applicant has partially defined the design approach for the existing site.	Nothing further is required.	Per the comment in Row 31, the Applicant should provide a Pre-Redevelopment Audit exploring the potential to retain the existing buildings, structures and materials. This document should provide evidence for the Applicant's decision tree responses with respect to the existing site. Where demolition is proposed, deconstruction and reuse should be targeted in the first instance in line with the Circular Economy and Waste Hierarchies. Per the comment in Row 32, the Applicant should provide a Pre-Demolition Audit to demonstrate that this has been prioritised.	Please respond here.		
2	Design Approach	The Applicant has defined the design approach for the new buildings, infrastructure and layers over the lifetime of the development.	Nothing further is required.				
3	Pre-Redevelopment Audit	The Applicant has not provided a Pre-Redevelopment Audit assessing the existing site, including any buildings, structures and materials.	The Applicant should provide a Pre-Redevelopment Audit at this stage in line with the minimum submission requirements of the GLA guidance. This should provide a detailed description of the existing development and demonstrate that retention has been fully explored in the first instance before considering demolition.	Please respond here.			
3	Pre-Demolition Audit	The Applicant has not provided a Pre-Demolition Audit to define an inventory of the materials in the building to be managed upon demolition and identify components of the building which can be reused or recycled.	The Applicant should provide a Pre-Demolition Audit at this stage in line with the minimum submission requirements of the GLA guidance. This should demonstrate how the residual value of materials will be maximised and how materials will be reused and recycled.	Please respond here.			
4	Design Principles	The Applicant has partially summarised the key commitments in the Circular Economy Design Principles by Building Layer.	The Applicant should ensure that the detail provided in the commitments table in the written report is provided in the GLA CE template. The Applicant should also complete the 'Summary', 'Challenges', 'Actions & Counter-Actions, Who and When' and 'Plan to Prove and Quantify' columns, where these will support the development of the strategy post-planning.	Please respond here.			
5	Bill of Materials	The Applicant has completed the Bill of Materials including metrics through module stages A to D.	It is noted that the material intensity of the substructure is high given the retention proposed. For the frame, the material intensity is very high. The Applicant should review and provide clarification, including revision as necessary. It is noted that the Construction Waste Factors are very low, the Applicant should note that these should be input as a percentage. As far as possible, the Applicant should provide details of FFE in the Bill of Materials at this stage. The Applicant should demonstrate that 'design for disassembly' has been explored. The Applicant is encouraged to review the end-of-life scenarios proposed to demonstrate that 95% diversion from landfill can be achieved at end-of-life. The Applicant should note that for the purposes of the Bill of Materials, crushing for aggregate can be considered as recycling.	Please respond here.			
5	Bill of Materials	The Applicant has not confirmed that reused or recycled content will be 20 per cent by value for the whole building and provided supporting calculations.	The Applicant should provide details of the reused and recycled content proposed including supporting calculations in line with GLA guidance.	Please respond here.			
6	Recycling and Waste Reporting	The Applicant has provided overall waste estimates and relevant cross references in the Recycling and Waste Reporting table.	It is noted that the excavation waste is very low, the Applicant should review and provide clarification, including revision as necessary. The operational waste estimate in the Recycling and Waste Reporting table is very high and it is noted that this differs from the figure stated in Table 3-3 of the written report. The Applicant should note that municipal waste should be reported in tonnes per annum in the Recycling and Waste Reporting table. The Applicant should review and provide clarification, including revision as necessary.	Please respond here.			
6	Recycling and Waste Reporting	The Applicant has not provided a breakdown of waste management routes in the Recycling and Waste Reporting table which demonstrates compliance with London Plan Policy SI 7 targets for diversion of 95% (by weight/tonnage) construction and demolition waste from landfill and 95% (by weight/tonnage) beneficial reuse of excavation waste.	The Applicant should provide a breakdown of the expected waste management routes for each of the waste streams which demonstrate compliance with London Plan Policy SI 7 targets for diversion of 95% (by weight/tonnage) construction and demolition waste from landfill and 95% (by weight/tonnage) beneficial reuse of excavation waste.	Please respond here.			
7	Operational Waste	The Applicant has not provided an Operational Waste Management Plan to demonstrate how the proposed development will achieve the relevant targets and meet requirements of London Plan Policies D3, SI 7 and D6.	The Applicant references that an Operational Waste Management Plan has been produced. However, this has not been located as part of the CES or wider planning submission. In line with the minimum submission requirements of the GLA guidance, the Applicant should provide an Operational Waste Management Plan demonstrating how the proposed development will achieve the relevant targets and meet requirements of London Plan Policies D3, SI 7 and D6. The Applicant should refer to section 4.8 of the LPG for the requirements.	Please respond here.			
7	Operational Waste	The Applicant has partially included a commitment to meet or exceed the London Plan Policy SI7 municipal waste recycling target of 65% (by weight/tonnage) by 2030 or business waste recycling target of 75% (by weight/tonnage) by 2030.	The Applicant has provided a commitment to the London Plan Policy SI 7 municipal waste recycling target of 65% (by weight/tonnage) by 2030 in the Circular Economy Targets table, which is welcomed. However, the Applicant should also provide a commitment to the London Environment Strategy business waste recycling target of 75% (by weight/tonnage) by 2030. The Applicant is strongly encouraged to include these commitments in the Operational Waste Management Plan to support implementation.	Please respond here.			
8	Circular Economy Targets	The Applicant has partially provided a commitment to targets for demolition waste, excavation waste, construction waste, municipal waste and reused/recycled content in line with GLA policy.	The Applicant should provide commitments to achieving GLA policy targets as a minimum, including to the 20% reused and recycled content (by value) target.	Please respond here.			
8	Circular Economy Targets	The Applicant has not provided a brief explanation of how performance against each of the key policy targets will be secured through design, implementation and monitoring.	The Applicant should provide some additional information in the Circular Economy Targets table to describe how each of the policy targets will be secured, considering key actions post planning (through detailed design and construction), including the questions 'who, what, when, and how?'	Please respond here.			
9	Post-Construction Report	The Applicant has partially acknowledged acceptance for a Planning Condition to submit a Post-Construction Report to the relevant local authority and the GLA at <a href="mailto:circularstatements@london.gov.uk">circularstatements@london.gov.uk</a>	The Applicant should also set out an indicative timescale and the party responsible for the provision of this information.	Please respond here.			



<p>10 End-of-life strategy</p>	<p>The Applicant <b>has not</b> provided an End-of-Life Strategy, including how this will be communicated to future building owners, managers and occupiers and how the building information will be stored.</p>	<p>The Applicant should provide End-of-Life Strategy as per the GLA's Guidance, including how this will be communicated to future building owners, managers and occupiers and how the building information will be stored. The Applicant should also describe how the end-of-life scenarios as set out in the Bill of Materials will be facilitated by the design.</p>	<p>Please respond here.</p>	
<p>11 Supporting Documentation</p>	<p>The Applicant <b>has not</b> provided any supporting information as an appendix to the written report.</p>	<p>It is strongly encouraged that the Applicant provide the following additional supporting information as a minimum:</p> <ul style="list-style-type: none"> <li>• Site Waste / Resource Management Plan</li> <li>• Cut and fill calculations and/or Excavated - Materials Options Assessment</li> <li>• Circular Economy workshop/ meeting notes</li> <li>• Reused or recycled content calculations</li> <li>• Scenario modelling demonstrating adaptability</li> </ul>	<p>Please respond here.</p>	