GREATER**LONDON**AUT−ORITY

planning report GLA/4752/01

08 July 2019

Land off Angel Lane, Stratford

in the London Borough of Newham (London Legacy Development Corporation)

planning application no. 19/00097/FUL

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

Development of a multi-use entertainment and leisure building with an illuminated external display (96.5 metres) and external podium and terraces with landscaping (sui generis use including: entertainment, assembly and leisure venue; music venue/nightclub; restaurant/members' lounge/nightclub; bars, restaurants, cafés and retail; storage, vehicle parking, servicing and loading; external podium and terraces for entertainment, assembly and leisure use, café, bar and retail facilities; together with all supporting and complementary uses), and the construction of new pedestrian and vehicular bridges, highway and access works, servicing, open space, hard and soft landscaping, demolition of existing structures, associated infrastructure, plant, utilities.

The applicant

The applicant is **Stratford Garden Development Limited** and the architect is **Populous**.

Strategic issues

Land use principle: Whilst the proposed land uses are broadly supported and the possible contributions towards London's culture and creative industries and night time economy are acknowledged, the issues detailed within this report must be fully resolved before an entertainment venue of this scale and in this location, can be supported in strategic planning terms (paragraphs 26-31).

Public safety, security and event management: The capacity of the proposed development, number of event days and event timings raise significant concern in terms of crowd management, public transport capacity and public safety. The concerns raised by GLA officers must be fully resolved prior to Stage 2 referral (paragraphs 32-39).

Transport: The proposals raise a number of very significant transport concerns, in particular in relation to assessment and modelling assumptions at Stratford Regional station, highways and public transport network capacity, pedestrian flows and movements to and from the site, relationships with other major events and, overall, the impact on all users at this crucial multi-modal strategic interchange. These must be fully resolved before the application is referred to the Mayor at Stage 2 (paragraphs 40-66).

Urban design: The public realm and routes through the site should remain open, free to use and offer the highest level of public access and restrictions should be limited to exceptional circumstances for example when essential for maintenance and emergency access.

The impacts of the proposed external LED cladding require further assessment to demonstrate that the scheme's impact on surrounding residential properties, the setting of heritage assets and short and long-range views would be acceptable. Furthermore, the intention to display illuminated advertisements at the scale proposed in this location raises significant concerns and could have extensive environmental, visual and amenity impacts which will need to be fully assessed (paragraphs 67-81).

Residential amenity: In line with draft London Plan Policy D12, the proposal must ensure that surrounding residential amenity is not compromised. Appropriate mitigation measures must be secured to control the impacts of noise, vibrations and light pollution, including solar glare (paragraphs 82-87).

Issues relating to **inclusive design** (paragraphs 88-90) and **sustainable development** (paragraphs 91-99) must also be addressed.

Recommendation

That the London Legacy Development Corporation (the Corporation) be advised that the application does not comply with the London Plan and draft London Plan for the reasons set out in paragraph 103 of this report.

Context

1 On 16 April 2019 the Mayor of London received documents from the London Legacy Development Corporation (LLDC) 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 Order 2008') the Mayor has to provide the Corporation with a statement setting out whether he considers that the application complies with the London Plan and draft 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 referable under the following Categories of the Schedule to the Order 2008:

- Category 1B: *"Development with a total floorspace of more than 15,000 sq.m."*.
- Category 1C: *"Development which comprises or includes the erection of a building more than 30 metres high outside the City of London."*

3 Once the Corporation 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 or allow the Corporation to determine it.

4 The Mayor of London's statement on this case will be made available on the GLA website www.london.gov.uk.

Site description

5 The proposed development relates to a 2.98 hectare triangular parcel of land, within the London Borough of Newham and within the planning authority area of the London Legacy Development Corporation (the Corporation). As shown in image 1, the development site boundary includes development over the UKPN substation, air rights over the HS1 access road and the new bridges.

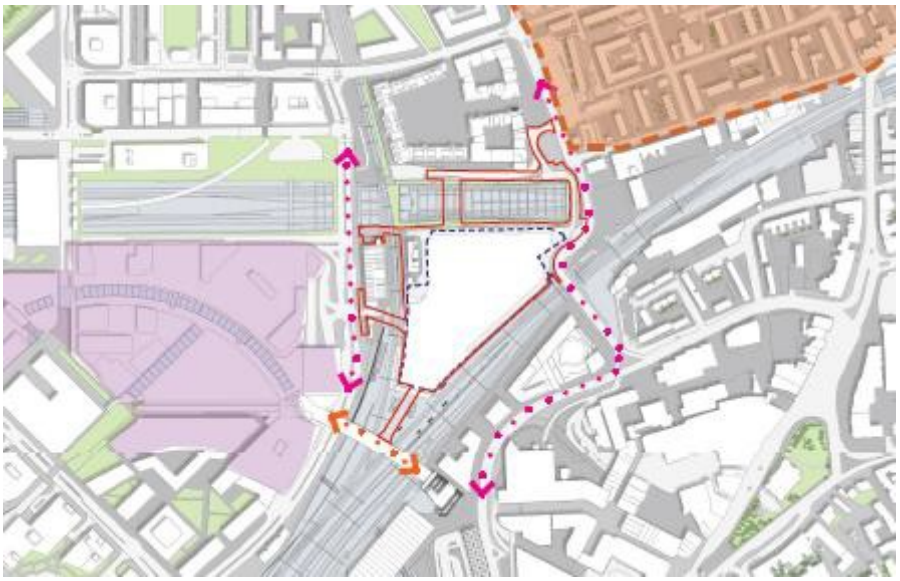

Image 1: Proposed site area (shown in red) within the surrounding context

6 The site is currently vacant, comprising hardstanding, and was last used as a temporary coach park during the 2012 Olympic and Paralympic Games. Stratford Garden Development Limited is in ownership of the site.

7 The site is triangular and bound by railway lines running to the east and west, and by the subterranean High Speed 1 (HS1) rail box to the north. Beyond the HS1 railway lines to the north is a residential development known as 'Chobham Farm'. The eastern boundary adjoins Angel Lane for vehicular access and the Great Eastern Main Line and Central line railway corridor. Beyond the railway corridor to the east are developments comprising student housing, residential, hotel and commercial (office) uses. To the west, the site is bound by railway corridor between Stratford and Tottenham Hale, an energy centre, Montfichet Road and the Westfield Shopping Centre. The wider area includes the Queen Elizabeth Olympic Park and the London (Olympic) Stadium.

8 The application site lies within the Lower Lea Valley (LLV) Opportunity Area and the area covered by the Mayor's Olympic Legacy Supplementary Planning Guidance (OLSPG). The site also sits within the Stratford Metropolitan Town Centre, which is identified as a future potential International Centre within the draft London Plan. The site is recognised by the LLDC as an area of regeneration and is formally allocated within the LLDC Local Plan 2015 (Site Allocation SA3.1) for a large-scale town centre use with supporting elements.

9 In transport terms, Stratford Regional station is located adjacent to the south west of the site and provides access to London Underground services on the Jubilee and Central lines, two branches of the DLR, London Overground, TfL Rail and National Rail services. Stratford International station is located 500 metres to the west of site and provides access to High Speed domestic National Rail services and DLR. Maryland station is located 550 metres to the east of the site and also provides access to TfL Rail. There are two bus stations at Stratford Town Centre and Stratford City, with numerous bus routes, as well as scheduled coach services and two taxi ranks. The eastern boundary of the site connects to Angel Lane, which forms part of the Strategic Road Network (SRN) with the

nearest section of the Transport for London Road Network (TLRN) being the A12, which can be accessed approximately 2 kilometres to the west and north of the site. The site records the highest public transport accessibility level (PTAL) of 6b, on a scale of 0-6b.

10 The site is not located in a Conservation Area and contains no listed buildings. The nearest heritage asset is the Saint John's Conservation Area, which includes the Grade II Listed Saint John's Church. The conservation area is located approximately 300 metres to the south-east of the site.

Details of the proposal

11 The proposed development comprises a spherical shaped multi-use entertainment venue, with associated ancillary uses within a multi-layered podium and comprises the following main elements:

Proposed Use	GIA (sq.m.)	Podium/sphere	Approximate capacity (maximum)
Main events	47,654 sq.m.	sphere	21,500 (seated & standing)
Restaurant/members lounge/ night club	2,406 sq.m.	sphere	450 – seated layout 1,000 – standing layout
Music club	2,200 sq.m.	Podium	1,500
Plaza commercial	1,099 sq.m.	Sphere	
Back of house	3,234 sq.m.	Sphere	
Cafes (including pop-ups)	385 sq.m.	podium	

12 The Sphere would be 120 metres wide and 96.5 metres high. Externally it would be clad in triangular LED panels which would display a range of static and moving images, including advertisement, digital art and content related to the events within the arena. When the LED's are not active, the sphere would appear black. It is proposed to zone the façade to utilise differing light intensities to control light spread and pollution to surrounding properties.

13 It would sit on a multi-layered podium (levels 0-3) that would fill the site and a concourse level would be located at level 1, with back of house activities at level 0 below. Podium level 2 would be the main arrival level and fills the entirety of the site. Upper podium level (level 3) would partially cover the site and contain areas of public realm and entrances to the main arena.

14 The applicant would build three pedestrian bridges to provide access to the development. Proposed bridges 1 and 2 would adjoin the eastern side of Montfichet Road, to the west. The third bridge would be located at the southern end of the site and would adjoin the established town centre link bridge. An additional pedestrian and vehicular surface level access point would be established from Angel Lane to the north-east of the site. Another vehicular only bridge would be located at the northern end of the site across HS1 box, towards the revised access road also connecting to Angel Lane.

15 The applicant proposes that the Sphere would operate up to 365 days per year, with approximately 300 'event days' (events within the main arena) per year, including (but not limited to) concerts, immersive experiences, product launches, corporate events and sporting events.

16 The following event timings are proposed for the main arena:

Event Type	Indicative Doors Opening Time	Indicative Event Start Time	Indicative Event Finish Time
Matinee event (Monday-Sunday)	11:00-14:00	12:00-15:00	15:00-18:00
Evening Event (Monday-Thursday)	18:00-19:30	20:00-21:00	23:00-00:00
Evening Event (Friday-Saturday)	18:00-19:30	20:00-21:00	23:00-00:15
Evening Event (Sunday)	18:00-19:30	20:00	22:30-23:30
Overnight Event (Monday- Sunday)	18:00-19:30	20:00-21:00	00:30-05:00

17 The overall site capacity would be 25,000 people, which includes the maximum capacity of the main venue 21,500 (standing and seated). The applicant has confirmed that when the main arena is operating at full capacity, the capacity of the ancillary spaces would be limited to 2,500 people. Approximately 1,000 members of staff would be required for full capacity events.

18 A separate application to display advertisements has been submitted to the LLDC which is not referable (ref: 19/00098/ADV) and seeks permission for the display of advertisements on the external surface of Sphere and at other locations within the site. Whilst the content of the advertisement is not a strategic planning issue, the visual impact of the external appearance of the sphere has been considered within this report.

Case history

19 A pre-planning application meeting was held in August 2018, with written advice issued on 29 August 2018. In summary, the proposed use was supported in principle, however the applicant was advised that further detailed information was required on public safety and event management, public access and public realm, inclusive design and transport – in particular the scheme's impact on public transport and impacts on Stratford Regional station. Given the scale and setting of the development, the applicant was also asked to produce key views to demonstrate the impact of its proposal, especially during illumination and that full details of materials, including illuminance zones and periods of illuminance would be required..

20 A follow-up pre-planning meeting was held on 3 October 2018, which focused on the proposed energy strategy, however no written response was issued.

21 During pre-planning discussions, the applicant was also encouraged to continue to engage with the LLDC, TfL and the London Borough of Newham on the matters GLA officers raised. Throughout the pre-planning process TfL raised significant concerns, including in relation to the assumptions made in the transport assessment and a number of specific methodological issues were set out in a separate letter sent to the applicant on 12 February 2019 recommending that they be addressed ahead of any submission.

Strategic planning issues and relevant policies and guidance

22 The relevant issues and corresponding policies and guidance are as follows:

- Land use principle *London Plan; Culture & Night Time Economy SPG;*
- Community infrastructure *London Plan;*
- Culture *London Plan;*
- Night time economy *London Plan;*
- Entertainment facilities *London Plan;*
- Urban design *London Plan; Character & Context SPG;*
- Inclusive access *London Plan; Accessible London SPG;*
- Sustainable development *London Plan; Sustainable Design and Construction SPG; London Environment Strategy;*
- Transport and parking *London Plan; the Mayor's Transport Strategy.*

23 For the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004, the development plan in force for the area is the Legacy Development Corporation Local Plan (2015) and the London Plan (Consolidated with Alterations since 2011).

24 The revised National Planning Policy Framework (February 2019), National Planning Practice Guidance and draft London Plan (consultation draft, December 2017 incorporating early suggested changes), and the Mayor's Olympic Legacy Supplementary Planning Guidance (OLSPG, 2012) are also relevant material considerations.

25 It is noted that the LLDC is in the process of reviewing its Local Plan and implementing a new Night Time Economy SPD. A draft version of the local plan was consulted on between November 2017 and June 2018. The draft revised Local Plan is expected to be adopted in 2019.

Principle of development

Policy context and land use

26 The application site lies within Lower Lea Valley (LLV) Opportunity Area and the area covered by the Mayor's Olympic Legacy Supplementary Planning Guidance (OLSPG). The OLSPG sets out an overall vision for the area, which includes making it one of the best places to live and work in London, improving connectivity across and into the new Queen Elizabeth Olympic Park, and creating new family housing and schools.

27 The site also sits within Stratford Town Centre. The London Plan Policy 2.15, and Annex Two (Table A2.1) designate the centre as a Metropolitan Town Centre and in line with London Plan Policy 2.15 and draft London Plan Policies SD6 and SD7, development in such centres should sustain and enhance the vitality and viability of the town centre function, accommodate economic and housing growth through intensification and contribute to an enhanced environment. Retail, commercial, arts, cultural and leisure development should be focussed on sites within town centres and related to the size, role and function of a town centre and its catchment in line with London Plan Policy 4.7.

28 At a local level, the application site is located within Sub Area 3: Central Stratford and Southern Queen Elizabeth Olympic Park which supports a diverse range of education and sporting facilities, retail, leisure and business expansion with high quality housing. The site is also identified as allocated site SA3.1 'Stratford Town Centre West' which states that the eastern parcel of the allocated site (the application site) is identified for a large-scale town centre use with supporting elements.

29 In land use terms, the London Plan and draft London Plan give broad support to the development of new cultural and entertainment venues in town centres. The flexibility of the arena, in terms of design and mode (seating and standing) would help to maximise the multiple use of the facility and would deliver spaces that would be suitable and attractive to a range of cultural uses. The proposed smaller music venue (music club) would operate as a nightclub or as a smaller venue with a maximum capacity of 1,500 and the applicant should explore opportunities to support local and grassroots music and performing arts within the proposed cultural offer and surrounding area with strategic stakeholders, including the Mayor's Culture Team and Newham culture officers, as well as relevant sector representatives such as the Music Venue Trust. Further details regarding the proposed operating profile of the smaller music venue should be provided.

30 In addition to the entertainment arena, the proposal would incorporate approximately 3,890 sq.m. of ancillary commercial floorspace, in the form of retail, cafes, restaurants and bars. These uses are appropriate for the site's town centre location and would support London's night time economy, in accordance with the Mayor's 24-hour vision for London and draft London Plan Policy HC6. The acceptability of the proposed night time uses are however subject to safe and convenient night-time transport and resolving all public safety concerns. The proposal would also contribute to London's visitor economy and help further promote Stratford and the wider Queen Elizabeth Olympic Park as an international destination.

31 In principle, the use of the application site for a major leisure use is supported and the ancillary commercial uses are appropriate for the site's town centre location and would deliver economic benefits and employment opportunities. The main event space and smaller music venue are welcomed in terms of their potential contribution towards London's culture and creative industries and night time economy, however, the issues detailed within this report must be fully resolved before the scale and concept of the venue could be supported in strategic planning terms.

Public safety, security and event management

32 The proposed development is envisaged operating up to 365 days a year, with approximately 300 event days within the main arena, which could be used for several events a day. The maximum proposed capacity of the development is 25,000 people, however the applicant considers this would only occur in rare circumstances, with average attendance at the main venue expected to range between 6,000-17,500 people, depending on the event type. The timing of events would generally follow 11:00-18:00 for matinee events, 18:00-00:00 for Monday to Thursday events, 18:00-00:15 for Friday and Saturday evening events, and 18:00-23:30 for Sunday evening events. Other late night/early morning finishing events are also proposed.

33 In line with London Plan Policy 7.2 and draft London Plan Policies D1, D3, D8, D10 and D11, the proposal must achieve a safe and secure environment for all its users and incorporate safe emergency evacuation. As discussed during pre-application discussions, the proposed capacities and event timings raise strong concerns in terms of crowd control and public safety. This is of further concern given the high-density nature of the surrounding area, site constraints which require bridge access, and capacity issues associated with Stratford Regional station.

34 The following documents have been submitted in support of the proposal:

- CONOPS (concept of operations): identifying the public, crowd management and local transport management considerations relating to event and non-event days. This document will inform the Venue Operations Manual (VOM);

- Security Strategy: an assessment of the threats to the proposed development and mitigation measures.

- Fire Safety principles have been detailed within a chapter of the Design and Access Statement.

35 The proposal to operate 365 days a year including up to 300 event days raises concern in terms of potential adverse impacts on surrounding residential amenity, the capacity of the pedestrian access routes and pedestrian amenity, the transport network (particularly Stratford Regional station egress/ingress and internal circulation, public transport network capacity and local highway capacity including bus, coach and taxi), and the ability to coordinate event days with surrounding venues. Whilst the supporting documents refer to event days as 'special events', GLA officers question this description given their regular occurrence and consider the number of special event days may need to be reduced to address amenity and public safety concerns. The number of maximum capacity events should also be agreed, given the significant pressure these will place on surrounding infrastructure. Overall, further information is required to demonstrate how the capacity of the site will be monitored, controlled, managed and capped and event timings must be aligned with public transport capacity (particularly for the late evening and early morning finishes), egress times and crowd management arrangements.

36 The submitted CONOPS indicates that London Stadium crowds would prevent major event crowds arriving or departing at the Sphere during stadium events. The applicant considers that these conflicts could be resolved through crowd management measures and a commitment to work with the London Stadium. GLA and TfL officers express significant concern regarding these findings and do not consider the proposed mitigation measures are appropriate. Overall, further consideration is required to demonstrate, to the satisfaction of GLA and TfL officers, that the proposed development could operate safely in conjunction with the London Stadium. The applicant should also consider how its proposed event days would operate in conjunction with other events and activities in the wider area, including Westfield and The Queen Elizabeth Olympic Park. As discussed further in the transport section of this report, consideration of potential conflict with events at the 02 Arena is also required.

37 Access and egress to the site would rely predominantly on the proposed pedestrian bridges. Whilst the principle of this approach is supported as it has the potential to improving connectivity across the wider area, the implications for crowd control and emergency evacuation must be robustly tested. Two of the bridges (Bridge 1 and 2) would land on Montfichet Road, providing access to Stratford station Northern Ticket Hall entrance, Stratford International station and the Stratford City bus, taxi and coach facilities. Given the anticipated volume of pedestrians along this route (approximately 50% of all visitors), it is proposed to re-design Montfichet Road to reduce the number of vehicle lanes and increase the capacity and provision for pedestrians and cyclists. The applicant must demonstrate that the pedestrian bridges and width of pavement along Montfichet Road would be sufficiently to accommodate the safe movement of pedestrians and enable acceptable egress times, including during full capacity events, without the need to use or impact the functioning road, and to ensure the design does not preclude bus, coach and taxi uses at all times. Transitional spaces to manage crowd flows to and from Stratford Regional station and other transport facilities must also be identified and supported by information and wayfinding (both permanent and temporary).

38 As discussed further in the transport section below, the proposed capacity and event times must also be reviewed in terms of station capacity especially at Stratford Regional station, network capacity and local highway and public realm impacts. The applicant must also demonstrate how the safe dispersal of crowds can occur in the event of overcrowding at stations along with adequate and appropriate resilience planning.

39 Overall, GLA and TfL officers are currently not satisfied that the proposal could operate in a safe and acceptable manner in accordance with London Plan Policy 7.2 and draft London Plan Policies D1, D3, D8, D10 and D11. The concerns outlined above must be fully resolved before the proposed quantum of development, crowd capacities and event timings and frequency can be supported at a strategic level. The principles of the proposed operation and event management strategy must also be agreed with the Corporation, the London Borough of Newham, TfL, Network Rail, Transport operators and other relevant bodies before the application is referred to the Mayor at Stage 2.

Transport

40 London Plan Policy 6.1 and Policy T1 of the draft London Plan require development to support improved public transport capacity and confirms a strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated. London Plan Policy 6.3 and Policy T4 of the draft London Plan require that impacts of development are fully assessed and mitigated.

41 The proposed development requires further significant analysis and discussion between TfL, Network Rail, Crossrail, transport operators, the LLDC, London Borough of Newham and the applicant and a range of strategic and detailed TfL issues must be addressed including omissions, assumptions, methodology and clarifications, particularly in the submitted Transport Assessment, full details of which will be provided separately to the LLDC. TfL notes that previously raised significant methodological concerns have still not been addressed, which will have an important bearing on likely impacts and hence the acceptability of the proposals.

42 Furthermore, the submitted Transport Assessment does not include detailed consideration of the adverse effects of the proposals on other travellers in the local area, nor sufficient comparisons of 'with' and 'without' development. A range of scenarios and other event times and event coincidences must therefore be assessed along with a clear explanation of mode shares, origins and destinations and line distribution. The range of uses and combinations of afternoon and evening events and evening events causes a range of significant concerns given existing PM peak network crowding and PM peak congestion at Stratford Regional station.

43 The applicant's assessment assumes that the impacts of the development proposal on station congestion are treated as 'special events', thereby avoiding and reducing requirements and potential mitigations. However, 300 event days per year is considered to be a regular occurrence and should therefore be regarded as 'normal operation', with station capacity, design and management requirements reflecting this situation.

Rail network arrival and departures

44 The event arrival profiles for evening events appear compressed and fall later in the weekday PM peak than would be expected. There is concern that this seeks to downplay likely impacts. For example, given the range of other attractions at Stratford, the Sphere's arrival profile is expected to overlap with the PM peak to a greater extent, which would have a more significant impact on the PM peak periods than presented.

45 The assumptions for event departures, egress times, and station entry and clearance times are also over optimistic. Based on 78% of users using Stratford Regional station and the desired finish times and clearance times, this requires the station to absorb 775 entries per minute, on top of other background use. This flow rate is higher than is currently achievable for an event at the London Stadium; and moreover, this assumption exceeds the current physical capacity of the station. Furthermore, it does not take account of network capacity and frequency. A more realistic assumption would have potentially significant implications on the relationship between event capacities, finish times and local area clearance times.

46 The assumptions for event departures and late evening network capacity are over optimistic as Stratford does not currently have the late evening/early morning rail based public transport capacity to clear significant event sizes and onward interchange and connections beyond Stratford raise additional concerns given the proposed finish times and expected queuing clearance. Whilst it is acknowledged that Stratford benefits from the night tube at weekends, the existing low frequency of the service would not be able to accommodate significant concentrated pulses of passengers.

47 The applicant must consider the availability of alternative routes and journey times to central London National Rail terminals and other major interchanges for late evening/early morning onward connections to final destinations, especially where no night tube or other rail-based services operate.

Rail network and station impacts and mitigation

48 The applicant's assumptions for pedestrian flows through the station require significant additional further work and further discussions are required with TfL, Network Rail and train operators in this respect, and will require significant investment and network and station management arrangements in order for the station to operate under acceptable conditions and anticipated levels of crowding, and it is likely to be only possible to mitigate these impacts through measures including station capacity/congestion improvements; line capacity; and operational, staffing and management measures as restricting the number and timing of events.

49 TfL/Network Rail/Crossrail and rail stakeholders are investigating options for integrated congestion relief schemes across Stratford Regional station, including new entrances and interventions to divert passenger flows from pinch points at entrances, subways and staircases to achieve a design target of an acceptable level of crowding which will be required by the mid-2020s. Additional trips generated by this application scheme and others proposed in and around Stratford will have significant impacts on capacity across the station on staircases, escalators, lifts, platforms and gate-lines as well as the associated risks of worsening delay and passengers' journey experience.

50 It is therefore considered that an appropriate significant contribution related to the transport impact of the trips generated from this site will be required towards congestion relief schemes, and internal wayfinding and signage and/or other measures to ensure safety which would enable the delivery of interventions prior to first occupation of the site or other suitable triggers to be agreed. TfL, Network Rail, Crossrail, railway operators, LLDC, London Borough of Newham and other stakeholders engaged in the Stratford station governance group will work to investigate the phased delivery of necessary interventions.

51 The effect of 300+ event days for additional PM peak network capacity and in particular late evening finishes could conceivably be mitigated by enhancing the capacity of frequencies or services to become normal operation, which may be an expectation of the applicant or visitors to the proposed development. However, the scope for enhanced late evening frequencies and capacity may be limited as it needs to be balanced with the network wide needs for a comprehensive programme of train maintenance, depot capacity and access, and overnight maintenance and engineering requirements. It is also dependent on driver availability and station staffing across the network. In the event that additional capacity could be delivered on rail (or bus) networks this would require significant contributions by the applicant to address the above to mitigate the impacts of the development. Engagement with TfL, Network Rail, train operators and other transport providers will be required to investigate this further in terms of scheduling and procuring any additional transport services or enhanced capacity as part of a regular timetabled service change, where feasible to mitigate the proposed number of events and coincidences.

52 Besides the infrastructure and any service interventions, the additional significant trips will give rise to increased requirement for station staffing to allow Stratford station to operate safely and to deliver on passenger journey experience and time. TfL and rail stakeholders consider that an increase in the station staff resource is required as a result of this development to mitigate the impact of increased patronage especially given that many visitors to the development will be national visitors unfamiliar with the station, alongside the need to manage the impact and disruption to other background users of the station. The required mitigation will need to be calculated by TfL, Network Rail and rail operators in discussion with the LLDC and then agreed with the applicant. It must be secured in an appropriate legal agreement. Any necessary staff outside the station for events and otherwise will be for the applicant to provide as appropriate in line with other event management procedures (addressed above).

53 Other station and network capacity interventions and station staffing may be required at Maryland and Stratford International stations, in particular for event coincidences. They may also be required at further local stations such at Hackney Wick, Stratford High Street and Pudding Mill Lane as well as further afield as services calling at other stations may be full on departure from Stratford Regional station and at central London interchanges and National Rail terminal stations. We are concerned for example about the ability of the Jubilee line to accommodate late night crowds from the proposed development and the O2 arena.

Car and cycle use, access and parking

54 The proposal has 37 car parking spaces including three blue badge spaces for operational staff uses only, which is in line with draft London Plan, although as set out in paragraph 92 it is not clear why visitor blue badge parking cannot also be provided within the site. For travel by customers, measures to minimise high levels of car access need to be explored and TfL officers have concerns that car travel to/from the development may be attractive, given the relative ease of access by road and the availability of parking in the vicinity of the venue (notably at Westfield Stratford City and at Newham town centre car park). As such, car travel may be higher than assumed, and not in line with London Plan Policy 6.1 and Policy T1 of the draft London Plan. Different scenarios including significant numbers of cars leaving the area at the same time will need to be tested, and any mitigation and parking controls agreed with LLDC, TfL and local highway authorities.

55 The site proposes 100 staff cycle parking spaces on the podium and 50 spaces on Montfichet Road, based on a 0.2% modal share for the largest events. This provision does not meet the London Plan standards for a D2 assembly and leisure use and is not accepted. Officers are also concerned that the low provision of cycle parking does not acknowledge the infrastructure improvements in place, such as Cycle Superhighway 2, and further proposed enhancements to cycling connections to the QEOP and catchment area for cycling trips. The applicant must demonstrate higher levels of cycle parking provision and where this will be provided alongside details of the quality Officers consider that a wider approach to the requirements for visitors by bicycle to the proposed development and station interchange and Metropolitan centre, including cycle hire, will need to be considered as a whole with LLDC and London Borough of Newham to identify and secure exemplary cycle provision and ease of access.

Healthy Streets and public realm

56 London Plan Policy 6.7 and Policy T2 of the draft London Plan require developments to support the Healthy Streets approach including to demonstrate how they will delivery improvements that support the ten Healthy Streets indicators and reduce the dominance of vehicles on London's streets. Given the range of uses and expected hours of operation there is expected to be an increase in all highway modes. Newham Council has recently delivered Stratford Gyratory enhancements, and the impact of additional events on the local highway network the bus station and taxi rank will need to be assessed.

57 The applicant sets out a new design for Montfichet Road in line with emerging principles for re-assigning highway capacity. Further investigation of the role of Montfichet Road as a multi-modal interchange needs to be undertaken to inform development of design options. TfL considers that the applicant's proposal to locate bus and coach stops serving Stratford further away from the Northern Ticket Hall entrance and Westfield Shopping Centre entrance will adversely affect passenger amenity.

58 The applicant is required to clarify how kerb space and highway capacity on Montfichet Road, and other nearby roads such as Westfield Avenue, Great Eastern Road and Angel Lane and car parking areas will operate both in event overlay mode given different impacts during event arrivals and departures as well as for general multi-modal interchange outside of event periods. This includes set-down and pick-up by coaches, buses (including rail replacement services), taxis, private hire

vehicles, private vehicles and emergency vehicle access together with crowd management and queuing arrangements and any hostile vehicle mitigation measures. This will be particularly relevant for the location of kerbside uses for the early morning finishes where rail capacity will be extremely limited.

59 The submission includes dynamic pedestrian modelling, and routings for different scenarios. The applicant sets out that visitor egress times from the local area will depend on the level of background demand, ranging from 20 minutes when there is little background demand, to 30 minutes when the station is busy, 45 minutes for a coincidence with a London Stadium event and up to 60 minutes for early morning finishes. While the podium and site may in theory be able to clear, with appropriate management measures such as to the Montfichet Road crossing, this does not reflect the issue of station capacity which would likely have significant knock on impacts to whether the area can be cleared as assumed. Current experience with other event clearance times and access to the station would suggest these scenarios are over optimistic.

60 This should be agreed by the Corporation, London Borough of Newham and TfL as appropriate and is likely to require alterations to the proposed arrangements tested with further Road Safety Audits and secured through an appropriate planning mechanism.

Infrastructure protection and construction

61 The site is adjacent to a Network Rail corridor including the Central line and a range of asset protection agreements and suitable planning conditions will be required for the construction and operation phases. The submitted Environmental Statement and associated technical reports provide an assessment of the impact of solar glare affecting train operators on the adjacent railway corridors, besides any distraction from the lighting proposals. Mitigation measures outlined within these assessments must be appropriately secured.

62 Highway access will be locally from Angel Lane and the programme for the construction of the proposed development and the impact of construction routes on the local highway network and walking and cycle routes will need to be resolved. TfL and London Borough of Newham as highway authority would be concerned at the duration of any works affecting Montfichet Road to avoid impact on the operation of Stratford City bus station, on- street bus and coach stops and taxi rank until such time that a new layout is delivered, and any amendments and impact on Angel Lane and Stratford Gyratory which form part of the SRN and the performance of the bus network and any impacts on pedestrians and cyclists. The impacts on these and local highways adjacent to the site will require co-ordination and mitigation accordingly such as through the established LLDC Construction Transport Management Group (CTMG).

Monitoring and review

63 A variety of data on the transport impact of the events together with feedback on the arrangements will need to be collected for ongoing operation mitigation for Travel Plan monitoring and future event planning and mitigation. The scope of these surveys should be agreed and secured by condition.

Transport summary

64 Further information and clarification on the details of the proposals and justification/amendments to the assumptions for the transport assessment and management of the area and transport facilities are required. A number of significant transport impacts from the development have been identified which will need to be fully and robustly resolved. Officers would welcome further discussion about the most effective planning and financial mechanism for mitigating any impact identified from this development. This matter must be resolved prior to the scheme being reported to LLDC's planning committee and any referral at Stage 2. The applicant should continue to

work collaboratively with TfL, Network Rail, transport operators, LLDC and London Borough of Newham to ensure that development impacts are mitigated, with a priority to address capacity at Stratford regional station and impact across the transport networks and local area to meet other London Plan policies and objectives. These are summarised as follows:

- An appropriate significant contribution related to the transport impact arising from this site and frequency of events towards congestion relief schemes, and internal wayfinding and signage at Stratford Regional station which would enable the delivery of interventions prior to first occupation of the site or other triggers to be agreed. Other interventions at other stations, especially Maryland station and Stratford International station, may also be required.

- An appropriate contribution towards increased staffing costs to enable safe operation of railway station and bus station and taxi ranks to deal with impacts arising from the development and the frequency of events, beyond event management staffing which the applicant would need to provide.

- In light of the issues set out to be resolved, the necessary mitigation is likely to require an appropriate balance between event calendar attendance and management, transport network (public transport and local highway) capacity, station capacities, event finish times and inter-dependencies between different surface modes and with rail modes. This may require an appropriate contribution or mechanism to enhance network capacities which the applicant would need to provide, and/or limits to finish times and capacities

- An appropriate contribution to enable the delivery of highway and public realm works for access and improvements to Montfichet Road and its kerbside uses, and other access, walking, cycling connections in the vicinity of the site such as Angel Road and routes to nearby transport hubs and enhanced cycle parking to ensure alignment with draft London Plan, Healthy Streets and Vision Zero

MCIL2

65 In accordance with London Plan Policy 8.3, the Mayor charges CIL for developments permitted on or after 1 April 2012. In June 2017, the Mayor published proposals for MCIL2 to contribute to Crossrail 2 funding, which was levied from April 2019. The charge for the LLDC is £60 per sq.m.

Urban design

66 Good design is central to all objectives of the London Plan. London Plan Policy 7.1 sets out a series of overarching design principles for development in London. The design policies within chapter 7 and elsewhere in the London Plan include specific design requirements relating to maximising the potential of sites, views and public realm. Policy 7.4 also requires that new development has regard to its context and makes a positive contribution to local character. The intent of these policies is reflected in draft London Plan Policies D1 and D2.

Layout, connectivity and access

67 The proposed Sphere sits on a multi-layered podium, comprising levels 0-3. The podium (level 2) is the main arrival level and fills the entirety of the site. The north and south terraces (level 3) can be accessed from the north and south of the podium, and partially extend over the podium below. The terraces contain landscaped areas and provide various access points to the main venue. From the podium, visitors can drop down into the plaza (level 1), which comprises office and retail space, the music club and bars and restaurants.

68 At present, the application site is in private ownership. It has a single point of access via a private road off Angel Lane and as such, does not provide connections to Stratford Town Centre to the

west. In accordance with the intent of Sub Area 3 and Site Allocation SA3.1, the proposed development would provide four new pedestrian access points, which would provide access and egress from the site:

- Bridge 1: connect the podium to Montfichet Road and leads to Stratford International Station;
- Bridge 2: connects the podium to Montfichet Road and leads to the Northern Ticket Hall entrance of Stratford Regional Station;
- Bridge 3: connects to the town centre link bridge which in turn leads to Westfield Stratford City Shopping Centre and other entrances to Stratford Regional Station;
- Bridge 4: is vehicular only to gain access to the service road over the subterranean HS1 railway line.
- Angel Lane Entrance connects the podium to Angel Lane for pedestrian access and connects the service yard to Angel Lane.

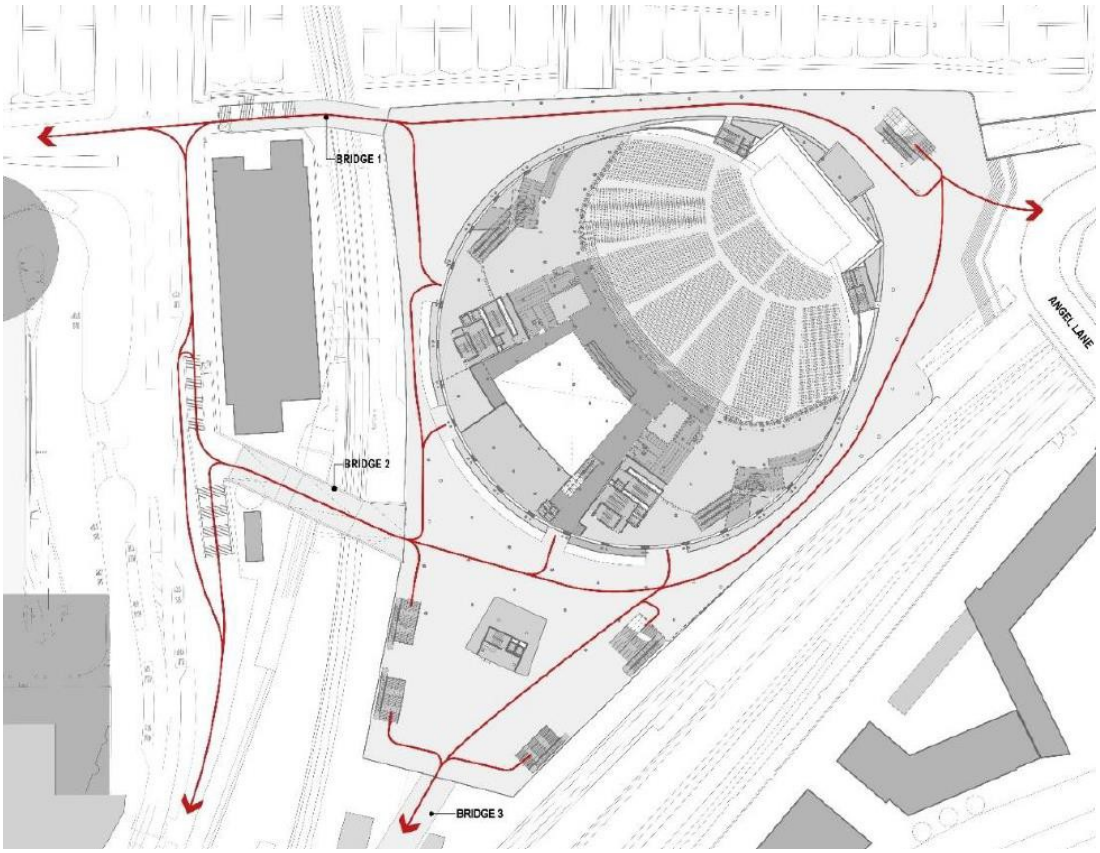

Image 2: Pedestrian access and movements

69 The proposal would improve pedestrian permeability within the surrounding area, provided that the pedestrian routes are available 24/7. Notwithstanding this and as detailed elsewhere in this report, further details are required to demonstrate how the capacity of the development would be capped and the likely occurrence of full-capacity events. GLA officers must be satisfied that size of public realm and width of access routes along the three pedestrian bridge links and Angel Road access can safely manage anticipated pedestrian flows. Consideration is also required in terms of the acoustic impacts of the crowds on surrounding residential properties.

70 The applicant has worked to maximise active frontages and key entrances, locating larger portions of public space accordingly, to create potential for an inviting and engaging sequence of

spaces. The proposal demonstrates that a civic square setting would be created at the southern end of the sphere at the lower and upper podium. The North Hub podium opening has the potential to create a community hub accessible to residents of the Angel Lane and Leyton Road area, provided it is suitably accessible. In line with draft London Plan Policy D7, the proposed areas of public realm, routes through the site and external amenity areas must incorporate appropriate acoustic design principles to mitigate impact on surrounding residential occupiers.

71 The proposed landscaping strategy must be designed to ensure the success of the podium and terrace levels as areas of high quality, usable public realm. As part of this work, the strategic requirements of the Mayor's Shaping Neighbourhoods: Play and Informal Recreation SPG should be addressed and the applicant is encouraged to incorporate play space and types of play elements for different age groups. The final provision of play should be secured by condition or S106 agreement.

72 Whilst the proposed routes through the site would be publicly accessible during operational hours and events, in response to feedback from the Metropolitan Police, the applicant seeks to retain the right to close the site during non-event times. In line with draft London Plan Policy D7, whether publicly or privately owned, the public realm and routes through the site should remain open, free to use and offer the highest level of public access while still ensuring public safety. Access restrictions to the site would only be considered acceptable in exceptional circumstances when they are considered essential for safe management of the space. Should the applicant require the closure of the site during specified times (i.e. for maintenance or emergency), these parameters should be agreed with the Corporation and the wording of the relevant draft S106 obligations should be shared with the GLA and TfL.

73 The proposed changes to the eastern footway of Montfichet Road, in particular the section where bridge 2 meets the footway, must improve the public realm in ways that contribute positively to London Plan and Mayor's Transport Strategy objectives. They should encourage walking, cycling and public transport use, as well as being in conformity with London Plan Policies D3 and D7. Space for pedestrian gathering and movement, particularly to and from bus and coach stops and taxi ranks, must not be compromised. The area around the bottom of the Bridge 2 steps is particularly sensitive and the likelihood of people gathering in this area and using the steps as informal seating must be taken into account.

Height, massing and architecture

74 The proposed development includes a sphere-shaped arena, externally clad in LED panels. Given the distinctive, landmark character of the proposed form and scale of the development, the Corporation must secure sufficient information, as part of any permission, to ensure the design quality is carried through to delivery, with focus given to ongoing maintenance practices and building longevity. In terms of the context of surrounding development, the proposal would not be the tallest building in the area. Notwithstanding this, given the width, nature and the external illumination, the proposal would be the most visually prominent development. In addition to this, the site sits within a built-up context and as such, the proposal must carefully consider its relationship with adjacent sensitive uses. Continued public consultation must take place throughout the entire design process.

75 The external LEDs would be used to display content associated with the events and advertisements. Officers have significant concerns regarding the suitability of an illuminated façade, given the form, height and close relationship to surrounding sensitive uses. Whilst this feature of the scheme is recognised as being intrinsic to the primary function of the proposals, the acceptability of a potentially visually intrusive addition to the local area is dependent on the ability sufficiently mitigate adverse impacts. This would include stringent controls on hours of illumination, key details of the façade's structural makeup and cladding, and details of the building's maintenance strategy (as set out elsewhere in this report).

76 A separate application to display advertisements has been submitted to the LLDC which and seeks permission for the display of advertisements on the external surface of Sphere. Whilst this application is not referable to the Mayor, GLA officers express serious concern regarding the intention to display illuminated advertisements at the scale proposed (up to 96 meters in height). An advertisement of this scale within a built-up area would have significant environmental, visual and amenity impacts, potentially contrary to draft London Plan Policy D8 (Tall buildings), which also confirms that local transport and walking and cycling networks must be capable of accommodating the proposed quantum of development.

Historic environment and views

77 London Plan Policy 7.8 states that development should identify, value, conserve, restore, re-use and incorporate heritage assets where appropriate. Draft London Plan Policy HC1 seeks to ensure that development proposals affecting heritage assets, and their settings, should conserve their significance, by being sympathetic to the asset's significance and appreciation within their surroundings. The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the tests for dealing with heritage assets in planning decisions. In relation to listed buildings, all planning decisions should "have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses" and in relation to conservation areas, special attention must be paid to "the desirability of preserving or enhancing the character or appearance of that area".

78 London Plan Policy 7.8 and draft London Plan Policy HC1 also apply to non-designated heritage assets. The NPPF states that the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application, and a balanced judgement is required having regard to the scale of any harm or loss and the significance of the heritage asset. Where a proposed development will lead to 'substantial harm' to or total loss of the significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss. Where a development will lead to 'less than substantial harm', the harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

79 As set out above, the site is not located in a Conservation Areas and contains no listed buildings. The nearest heritage asset is the Grade II* listed Theatre Royal, located approximately 210 metres to the south-east of the site. Stratford Saint John's Conservation Area, which includes the Grade II Listed Saint John's Church, is located beyond the Theatre Royal, approximately 320 metres to the south-east of the site. Accordingly, given the separation distances and built-up nature of the surrounding area, the height and massing of the proposal would have a negligible impact on surrounding heritage assets. However, as discussed elsewhere in this report, the external LED cladding raises concern and the applicant must demonstrate that the illumination would not adversely impact the setting of surrounding heritage assets.

80 The applicant has provided a Townscape, Built Heritage and Visual Impact Assessment (TBHVIA) in support of the application. The development would result in a significant and striking addition in shorter-range views, especially within views from the east, along Angel Lane, on the approach from Maryland Station and at the junction of Penny Brookes Street/Montfichet Road. The Sphere would have the greatest impact on local townscape and sensitive receptors, during periods of illumination. Notwithstanding this, the appearance of the Sphere whilst not illuminated must also be fully considered by LLDC officers.

Residential impact

81 The proposed development would have the greatest impact on the adjacent developments to the north and south. Chobham Farm residential development is located to the north, whilst a residential development, a hotel and student accommodation (Unite Student Accommodation, Moxy Hotel and Stratford Central) sit adjacent to the eastern site boundary, along Angel Lane. The minimum separation distance to these properties is approximately 50 metres.

82 The limited distance between the application site and adjoining sensitive land uses is a challenging interface which must be fully addressed. The applicant must comply with the Agent of Change principles set out in Policy D12 of the draft London Plan, which places the responsibility for mitigating the impact of noise and other nuisances, on the proposed development. Whilst the Agent of Change principle predominantly concerns the impact of noise generating activities, other nuisances should also be considered, including dust, odour, light and vibrations.

83 As discussed elsewhere in this report, the acoustic impact from the proposed uses and noise from the gathering and movement of crowds must be carefully considered. Any impact from vibrations during events must also be robustly scrutinised and necessary mitigation measures or controls secured. The proposal must secure necessary acoustic design measures to ensure that the new development has effective measures in place to mitigate and minimise potential noise impacts on neighbour amenity issues. Ongoing and longer terms management of mitigation, such as a noise and vibrations management plan, should also be secured.

84 GLA officers consider that the amount and orientation of external LED display lighting will create significant light impacts. The applicant has advised that the level of light emitted from the Sphere will be fully controllable and can be regulated in intensity at an LED or panel level. The façade will have differing light intensities applied to the LED lights to control light emissions to surrounding properties. Further discussion is required in this respect and officers note that while not referable, an application for advertisement consent has been submitted alongside this application. Given the close proximity of residential properties to the north and east of the site, the proposal must demonstrate that the external content of the Sphere, including illuminance levels and the hours of display, would not significantly impact surrounding residential amenity, in line with London Plan Policy 7.6 and draft London Plan Policies D4, D7 and D12. GLA officers would therefore welcome further discussions regarding the required controls and parameters of the external LED panels.

85 The submitted Environmental Statement and associated technical reports provide an assessment on the impacts of noise and vibration, wind tunnelling, daylight and overshadowing, light intrusion and upwards sky glow; and solar glare. Mitigation measures outlined within these assessments must be appropriately secured. Wording of conditions and S106 obligations must be shared with the GLA prior to Stage 2 referral.

86 The applicant must address the matters outlined above to demonstrate that the surrounding residential amenity is not compromised.

Inclusive design

87 London Plan Policy 7.2 requires that all new development is accessible and inclusive. This intent is reflected within London Plan Policy 3.16 which specifically relates to the provision of social infrastructure. Similarly, draft London Plan Policy D3 seeks to achieve an inclusive design approach to new development.

88 An Access Strategy has been developed in consultation with the Corporation and the Built Environment Access Panel (BEAP). During full capacity events (21,500) a minimum of 155 wheelchair seats will be provided within the Sphere. A further 155 seats will be suitable for ambulant disabled

guests. In terms of access to the site, lifts are proposed as part of Bridge 1 and 2 along Montfichet Road. Additional lift access is also available at both sides of the town centre bridge. The lifts have the capacity to accommodate two wheelchair users and companions. In line with draft London Plan Policy D11, the applicant should confirm that the proposed lifts could be used for fire evacuation purposes. A protected wheelchair ramp is proposed along Angel Lane.

89 Whilst the proposal would include 37 parking spaces at level 0, visitor blue badge parking would not be provided on-site. Visitors to the venue would be required to utilise existing blue badge spaces within Westfield Stratford City car parks (109 minimum) or additional provision at other car parks. A free of charge mobility assisted shuttle service will operate between the blue badge parking and the Sphere, although the exact form of this service is not set out and will need to resolved. In line with draft London Plan Policy T6.5, the applicant should provide further details to provide on-site parking and to justify the absence of on-site visitor blue badge parking, to ensure ease of access to the site.

Sustainable development

Energy

90 The applicant has followed the London Plan's energy hierarchy and the proposed strategy is generally supported; however, further information is required before the proposals would comply with London Plan Policy 5.9 and draft London Plan Policy S12. In line with the draft London Plan target of 15% improvement on 2013 Building Regulations, the applicant should model energy efficiency measures and commit to a higher carbon savings through energy efficiency alone. Further details of cooling and overheating should be provided in line with the 'be lean' element of the hierarchy. In terms of 'be clean', further information is required in terms of the floor area, internal layout and location of the energy centre. For the 'be green' element of the hierarchy, further detailed information is required for the proposed heat pumps, including SCOP and SEER energy modelling. The applicant is also required to reinvestigate the inclusion of renewable technologies. Whilst the feasibility of a PV array has been discounted, the applicant should review the potential for novel forms of PV on the areas of rood which are not LED screens.

91 The predicted unregulated loads, for instance from audio and LED screens, are expected to be very high, both in absolute terms and as a proportion of the development energy loads. Further detailed consideration of the potential for unregulated energy efficiency measures is encouraged.

92 The applicant should confirm the proposed on-site reduction in CO2 per year. The carbon dioxide savings are expected to fall short of the target within Policy 5.2 of the London Plan. The applicant should consider the scope for additional measures aimed at achieving further carbon reductions.

93 The detailed technical comments have been sent to the applicant and the Corporation.

Flood risk management and sustainable drainage

94 The site is within Flood Zone 1 and greater than 1 hectare in area. A Flood Risk Assessment (FRA) has been submitted as required under the NPPF. Overall, the approach to flood risk management for the proposed development complies with London Plan Policy 5.12 and draft London Plan Policy SI12.

95 The surface water drainage strategy for the proposed development generally complies with London Plan Policy 5.13 and draft London Plan Policy SI.13.

96 The proposed development generally meets the requirements of London Plan Policy 5.15 and drat London Plan Policy S1.5, relating water efficiency.

Urban greening

97 The range of planting typologies is welcomed however, whilst the application recognises the relevance of draft London Plan Policy G5, the Urban Greening Factor (UGF) has not been calculated. The applicant should calculate the development's Urban Greening Factor and seek to achieve the specified target. The calculation of the UGF should be accompanied by a colour coded plan showing the location and extent of each surface cover type proposed.

98 The application should set out the development's likely effect on the urban heat island and set out mitigation measures.

Local planning authority's position

99 The proposal has been the subject of pre-application discussions with the Corporation planning officers. The application is still under consideration.

Legal considerations

100 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 Corporation 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 Corporation under Article 6 of the Order to refuse the application. There is no obligation at this present 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

101 There are no financial considerations at this stage.

Conclusion

102 London Plan and draft London Plan policies on opportunity areas, town centres, entertainment facilities, public safety, visitor economy, culture and creative industries, night time economy, agent of change, urban design, heritage, inclusive design, energy, flood risk and transport are the key strategic issues relevant to this planning application. As presented, the application does not comply with the London Plan and draft London Plan. However, full resolution of the following issues could possibly lead to the application becoming compliant with the London Plan and draft London Plan:

- **Land use principles:** Whilst the proposed land uses are broadly supported and the possible contributions towards London's culture and creative industries and night time economy are welcomed, the issues detailed within this report must be fully resolved before an entertainment venue of this scale and in this location can be supported in strategic planning terms.
- **Public safety, security and event management:** The capacity of the proposed development and number of event days raises significant concern in terms of crowd control, public transport capacity and public safety. The concerns raised by GLA officers must be fully resolved prior to Stage 2 referral.
- **Transport:** The proposals raise a number of very significant transport concerns, in particular in relation to assessment and modelling assumptions at Stratford Regional station, highways and public transport network capacity, pedestrian flows and movements to and from the site, relationships with other major events and, overall, the impact on all users at this crucial multi-

modal strategic interchange. These must be fully resolved before the application is referred to the Mayor at Stage 2.

- **Urban design:** The public realm and routes through the site should remain open, free to use and offer the highest level of public access and restrictions should be limited to exceptional circumstances for example when essential for maintenance and emergency access.

  The impacts of the proposed external LED cladding require further assessment to demonstrate that the scheme's impact on surrounding residential properties, the setting of heritage assets and short and long-range views would be acceptable. Furthermore, the intention to display illuminated advertisements at the scale proposed in this location raises significant concerns and could have extensive environmental, visual and amenity impacts which will need to be fully assessed (paragraphs 89-83).

- **Residential amenity:** In line with draft London Plan Policy D12, the proposal must ensure that surrounding residential amenity is not compromised. Appropriate mitigation measures must be secured to control the impacts of noise, vibrations and light pollution, including solar glare.

- **Inclusive design:** In line with Policy T6.5, the applicant should justify the absence of on-site visitor blue badge parking.

- **Sustainable development:** Further information is required regarding energy efficiency measures, carbon savings, cooling and overheating and renewable technologies.

for further information, contact GLA Planning Unit:

[redacted]

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NW1 2DN
[redacted]

9th July 2019

[redacted]
Principal Planning Development Manager
London Legacy Development Corporation

Sent by email

[redacted]

Madison Square Garden (MSG) Sphere Planning Application – Application References:

19/00097/FUL:	**Planning Application for 'Development of a multi-use entertainment and leisure building with an illuminated external display…'**
19/00098/ADV:	**Advertisement Consent for 'Illuminated display of Sphere building and LED displays located on podium, lift cores and bridges…'**

I write in respect of the above applications that are currently being considered, which concern the Madison Square Garden multi-use entertainment and leisure building and all associated works. Having considered the details of the information submitted with the planning application and application for advertisement consent, I can confirm that Network Rail (NR) objects to the application as it currently stands, for the reasons stated below. Furthermore, NR supports the comments made by Transport for London (TfL) and the Train Operating Companies (TOCs) in their representations to this application, in relation to the assessment of the impact on the station interchange and operation.:

Reasons for Objection

- The information submitted by the applicant in support of the Transport Assessment is not considered suitable, and therefore NR does not agree with the assessment of the impact of the proposed development on the safe and efficient operation of Stratford Station and interchange.

- The Concept of Operations proposed by the applicant is considered a welcome initiative but requires wider consultation with NR, TfL and TOCs, in addition to understanding the practicality of managing major events at both the London Stadium and the proposed development through licensing conditions with the local authority. Moreover, the principles of the proposed event management strategy must also be agreed with the LLDC, the London Borough of Newham, TfL, Network Rail, transport operators and other relevant bodies before the application is referred to the Mayor at Stage 2.

- It is considered that an appropriate significant contribution should be secured from the applicant related to the transport impact arising from the proposed development, and the frequency of events, towards congestion relief schemes, and internal wayfinding and signage at Stratford Station, which would enable the delivery of interventions prior to first occupation of the site or other triggers.

- It is considered that the wider transport impact on adjacent stations at Maryland, London Liverpool Street and Stratford International should be further assessed by the applicant to review whether other interventions are required or changes to existing safety cases and operating strategies as result of the proposed arrival and departure profile.

- It is considered that the proposed event departure profile requires the station to manage 775 entries per minute, which creates an unacceptable flow rate exceeding the current infrastructure capacity of the station.

Transport Assessment and Traffic Modelling

Network Rail has been working closely with TfL and the Train Operating Companies in reviewing the information submitted by the applicant in support of their Transport Assessment, and despite requests made prior to the submission of the planning application, requested comments and changes have not been incorporated into the modelling submitted to date.

These requests have been made again by TfL, and supported by Network Rail, and include the following:

– The previously submitted TfL audit comments have not been taken into account in the submitted TA;

– The model assumed that ticket gates within the NTH were set as open to avoid congestion;

– The arrival profile for MSG spectators has been challenged and requires further validation;

– The outputs presented in the TA are not assessed against a comparable base.

– Outputs presented in the TA do not represent the busiest period in the station.

– Demand on the Overground and Jubilee line appear low compared to the relative demand arriving by the Central and Elizabeth line.

The proposed development requires significant further analysis and discussion between NR, TfL, Crossrail, transport operators, the LLDC, London Borough of Newham and the applicant. There is a range of both strategic and detailed issues that must be fully resolved by the applicant.

It is therefore considered that the assumption and assessment contained in the Transport Assessment cannot be supported, and a more appropriate assessment, using more appropriate information, is required.

Network Rail Assessment

The Network Rail baseline model has been rerun using the MSG demand with the key change that all the gates in the Northern Ticket Hall are assumed closed. This is required for several reasons including fare and revenue protection as well as station management.

The assessment focuses on the MSG weekday ingress scenario without the London Stadium in operation.

Below is a table summarizing the percentage uplift from the MSG development in the different areas of the station.

Modelled Alighting Demand (1600 – 1900)

Location	Without MSG	With MSG	Percentage Uplift
Northern Ticket Hall	11,800	22,700	89%
Western Subway to NTH	*6,000*	*8,500*	*42%*
Central and Eastern Subway to NTH	*5,800*	*10,500*	*81%*
Main Ticket Hall	14,000	14,200	1.4%
Central Line/CR WB	12,000	12,200	1.7%
Central Line/CR EB	17,500	23,000	31%
Platform 1&2	9,500	9,600	1.1%
Jubilee Line	21,000	22,000	4.7%
Platform 9&10	4,000	4,800	20%

This translates into the following diagram, which shows the Fruin Level of Service in key locations within the station assessed under the assumption of the ‘closing’ of the ticket gates.

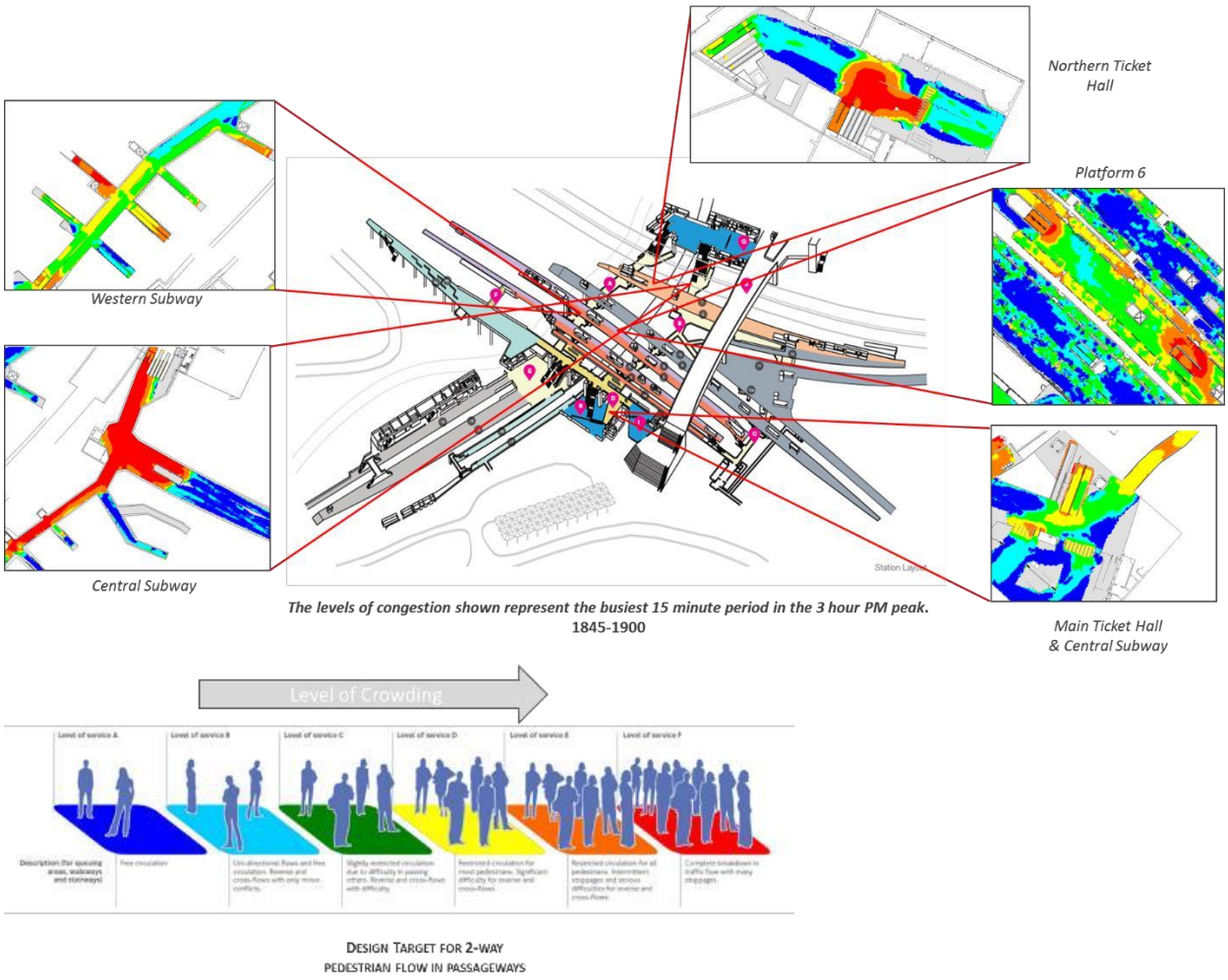


Figure 1 Cumulative Mean Densities at Key Locations within the station (1845-1900)

As you can see from the table above, the proposed development results in a significant uplift in the use of the Northern Ticket Hall and the Central and Eastern subway. This will result in significant queuing on the central subway, stairs/escalators and in the Northern Ticket Hall, which presents significant safety concerns and concerns regarding the operation of the station.

It was further found that under these assumptions, the gateline capacity of the NTH is exceeded from 1830 until at least the end of the peak period at 1900. Queues at the gateline quickly back up to the stairs/escalators and into to the Central subway, reducing the resilience of the station leading to significant safety concerns.

The increase in demand means that Platform 6/8 would regularly fail to clear before the arrival of the next train. This creates a situation where the platform has no recovery time following the current peak period in the station (1745-1800) and congestion would continue on the platform level for up to two hours.

While the station is currently approaching maximum capacity and station enhancements would likely be required to enable the station to accommodate future growth, the MSG development would accelerate this process and make the need for station improvements more urgent. Moreover, the modelling suggests that the key areas of the station affected by the MSG demand (NTH and Central subway) differ from the areas that are currently operating

close to capacity (Main Tickethall and Western subway). This therefore requires mitigation works to create an acceptable operational station and for the application to be considered acceptable.

Stratford Station Capacity Enhancements

Following the 2017 Outcome Definition Study, TfL is working with LLDC, London Borough of Newham, Network Rail and other stakeholders to undertake further work and investigate how station capacity mitigation package can be secured from relevant planning and financial mechanisms, and developer contributions are being sought to provide funding towards the phased delivery of interventions. The emerging Stratford Station Governance Group provides the strategic direction for this ongoing work.

This package of measures is set out below:

- There are proposals for new interventions including a southwestern entrance and the relocation of a lift at the Jubilee line concourse / western subway which would contribute towards a redistribution of passengers entering from the southern side of the station using the southern ticket hall or the mezzanine ticket hall, and redistribution of passenger flows from the central subway to the western subway.

- The existing southern ticket hall provides street level access to the crowded central subway and towards other parts of the station and experiences congestion between the gateline and circulation areas. A new southeastern entrance (for which there is a planning consent to enable conversion of an emergency escape requirement into a station entrance) would enable a redistribution of passengers entering from the south of the station using the southern ticket hall or the mezzanine ticket hall and would link directly into the currently under-used eastern subway and allow redistribution of passenger flows away from the southern ticket hall and central subway.

- There are other emerging proposals for new interventions on the north side of the station, identified in the Outcome Definition Study, for potential event day entrances, although these are at an early stage of development and TfL has concerns that these may not contribute to an integrated congestion relief scheme and may exacerbate other issues, and which would still require significant management inside the station.

- A western overbridge will provide additional internal circulation space which may connect to new entrances, and which would be part of an integrated congestion relief scheme in the medium to long term.

- It will also be necessary to install additional barriers and physical means of control within the station and there will need to be updates to signage and wayfinding inside Stratford station which would need to be agreed at a set trigger point prior to opening of the proposed development to ensure such interventions can be delivered.

- Any interventions at Stratford station for new infrastructure or wayfinding and gateline management will need to be designed based on the appropriate TfL and Network Rail and rail industry standards and safety cases.

- It is considered that an appropriate significant contribution fairly and reasonably related in scale and kind to the transport impact the trips generated from this site and frequency of events would be required towards congestion relief schemes such as new entrances and lift relocation, and internal wayfinding and signage would enable the

delivery of interventions prior to first occupation of the site or other triggers to be agreed.

- Network Rail welcomes further discussion with the applicant, LLDC PPDT, TfL and other stakeholders about the most effective planning and financial mechanism and contributions for mitigating any impact identified from this development and to make it acceptable in planning terms. This matter must be resolved at the time of being reported to LLDC's planning committee and for referral to the GLA at Stage 2.

Recommendations

Given that there are fundamental concerns with the information used in the assessment of the impact of the development in the TA, it is not possible to properly consider the impact of the application. It is therefore difficult to suggest possible mitigation measures without having first agreed the base data, assessment and findings.

Network Rail are of the view that should the arrival profile and demand assumptions be agreed, the gateline capacity would need to be enhanced to accommodate the peak demand. Additional exit capacity in the form of an expansion of the NTH or the proposed additional entrance located in the North East should be tested to assess the extent that these schemes can mitigate the impact on the station.

The relocation of the lift in the Western subway would help mitigate against the impact that MSG demand has on the Western subway given the modelled Jubilee line demand. However, this will not address the capacity issues expected within the Northern Ticket Hall and Central Subway.

It is also recommended that new solutions should be further investigated – such as creating a link from the Eastern subway directly to the development. This, as well as other solutions, should be explored further by the applicant, in conjunction with NR, TfL and the Train Operating Companies.

Asset Protection

Network Rail are engaged in commercial discussions with the applicant over the rights to access over and through our land and the right to support the structure. Nothing in this response should prejudice these ongoing commercial discussions.

We have provided a number of planning conditions at the end of this letter that we would expect to see added to any planning permission.

The applicant must ensure that their proposal, both during construction and after completion of works on site, does not:

- encroach onto Network Rail land
- affect the safety, operation or integrity of the company's railway and its infrastructure
- undermine its support zone
- damage the company's infrastructure
- place additional unmitigated load on the railway
- adversely affect any railway land or structure

- cause to obstruct or interfere with any works or proposed works or Network Rail development both now and in the future

Discussions have taken place with the applicant on matters of asset protection, and progress has been made on agreeing and signing an Asset Protection Agreement. This should be continued and the formal signing of an Asset Protection Agreement is required prior to works commencing on site.

The applicant should comply with the following comments, requirements and conditions attached to this letter for the safe operation of the railway and the protection of Network Rail's adjoining land.

Summary

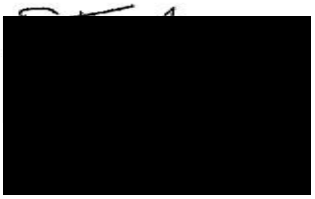
Network Rail objects to the application for the reasons detailed above and would welcome further discussions with your Authority and the applicant, along with TfL and the Train Operating Companies to further assess the impact of the proposal on the station and interchange.

Network Rail has undertaken its own assessment of the impact of the proposed development and concluded that there would be significant impact on the station that is unacceptable and would severely effect the safe and efficient operation of the station.

Mitigation of this impact is imperative and Network Rail would welcome further discussions on the most appropriate way of doing this.

If you require any further information or have any queries on any of the above please do not hesitate to contact me.

Yours sincerely,



Town Planning & Heritage Manager

Requested Conditions and Informatives

1. Asset protection Agreement

Condition: The Applicant shall enter into an Asset Protection Agreement, including Overbridge Agreements, with Network Rail prior to commencing any physical works on site. These legal agreements between the developer and Network Rail will detail the necessary safeguards, processes, responsibilities and cost recovery. The nature and scale of the proposed development is such that it would introduce unacceptable risks to Networks Rails infrastructure which require detailed discussions, agreements and indemnities in respect of the design,

construction and future maintenance of the development in order to allow Network Rail to fulfil its statutory obligation to protect the railway and it's users.

Reason: In the interests of maintaining the safe and efficient operation of the railway, and to manage the risk the proposed development presents to the operational railway and railway assets.

2. Bridge Design

Condition: Prior to the start of construction, details of the design, construction and installation methodology of the railway bridges shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Future maintenance provision shall be provided at design/construction stage.

Reason: No such information has been provided and is required to manage the risk that the construction activity and future maintenance presents to the safety, security and operation of the operational railway.

3. Foundation design

Condition: Prior to the start of construction, details of the design of the foundations and other works proposed below existing ground level shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Construction activity shall then be carried out in compliance with the approved details unless previously agreed in writing by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: To ensure that loads on, and settlement of, railway tunnels, structures, track and other infrastructure do not prejudice the safety or operation of the railway.

4. Drainage design

Condition: Prior to the start of construction, details of the design of the drainage shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Construction activity shall then be carried out in compliance with the approved details unless previously agreed in writing by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: To enable Network Rail to satisfy themselves that there is no increased risk to the operational railway arising from the development.

5. Construction safety

Condition: Construction activity on the site shall not commence until a method statement for the activity has been submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. The method statement shall include but not be limited to:

- onsite vehicle movements and parking. Including control of access and vehicle containment;
- safeguarding of buried services and above ground utilities;
- temporary drainage measures;
- location and height of spoil stockpiles and excavations
- position and operation of cranes and other plant
- methodology for protecting railway and assets during construction of elements closest to the railway;
- control of materials and windblown debris and dust;

Construction activity shall then be carried out only in compliance with the approved method statement unless previously agreed in writing by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: No such information has been provided and is required in order to manage the risk that the construction activity presents to the safety, security and operation of the railway.

6. Site layout

Condition: Prior to the start of construction the developer shall submit a site layout plan showing proximity of the development and its services to railway infrastructure for approval by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: To assess the effect of the development on railway safety, operation, maintenance and security.

7. Demolition

Condition: No demolition activity shall take place until the proposed methodology has been submitted in writing to and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Demolition activity shall then be carried out in accordance with the approved details unless the Local Planning Authority in consultation with Network Rail has previously agreed in writing to any change.

Reason: No such information has been provided and demolition activity could pose a risk to the safety, security and operation of the railway.

8. Buried services

Condition: Prior to the start of construction details of the special measures, to identify and protect Network Rail or UK Power Networks buried services shall be submitted in writing to and approved by the Local Planning Authority in consultation with Network Rail. Construction shall only take place in compliance with approved measures unless the Local Planning Authority in consultation with Network Rail has previously agreed in writing to any change

Reason: No such details have been provided. These services are crucial to the operation of the railway.

9. Excavations

Condition: Prior to the start of construction activity engineering details of the size, depth and proximity to the operational railway of any excavations shall be submitted in writing to and approved by the Local Planning Authority in consultation with Network Rail. Excavations shall then be carried out in accordance with the approved details unless the Local Planning Authority in consultation with Network Rail has previously agreed in writing to any change.

Reason: No such details have been provided. To ensure that the stability railway tunnels, structures, track and other infrastructure is not prejudiced.

10. Imposed loads

Condition: Prior to the start of construction, details of the size, loading and proximity to the railway of additional ground loads such as stockpiles shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail. Works shall be carried out in conformity with the approved details unless the Local Planning Authority in consultation with Network Rail and the Train Operating Companies has previously agreed in writing to any change

Reason: To ensure that the stability of railway tunnels, structures, track and other infrastructure is not prejudiced.

11. Vibration

Condition: Prior to the start of construction details of the plant and equipment proposed which are likely to give rise to vibration (such as pile driving, demolition and vibrocompaction of the ground) together with predicted vibration levels, shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Activities likely to cause vibration in the vicinity of railway infrastructure such that a peak particle velocity (PPV) of 5mm/s may be exceeded at the railway boundary will be subject to agreement in advance.

Where activities could give rise to PPV of 5mm/s or greater, a vibration and settlement monitoring regime shall be submitted in writing to for approval by the Local Planning Authority in consultation with Network Rail. It shall be put in place prior to the start of works.

Reason: No details of vibration have been provided. To ensure that vibration does not prejudice safety, operation and structural integrity of the railway.

12. Storage of hazardous materials

Condition: Details of the materials and arrangements for the storage of combustible gases or hazardous materials within 200m of railway infrastructure shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. No such materials should be introduced to the site without

the prior approval of the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: In the event of fire, combustible gases present an immediate and catastrophic risk to the railway. Exclusion zones which may be required around the gas containers or hazardous materials could prevent the running of trains and incur punitive delay costs.

13. Permanent errant vehicle protection

Condition: Permanent errant vehicle protection measures are required to protect railway infrastructure, fences and parapets. The details of these shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. These errant vehicle protection measures shall be installed prior to the occupation of the site and shall be retained in working condition unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: No such measures exist and none are proposed in the development. Activity associated with the development poses a new risk to the safety, operation and maintenance of the railway as a result of vehicles breaching the railway boundary fence.

14. Permanent fencing, gates and security measures

Condition: Fencing, gates and security measures are required along the access roads and at entry points. The details of this shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. This fencing gates and security measures shall be installed prior to the occupation of the site and shall be retained as an effective barrier unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

Reason: To maintain the security of the railway and comply with security requirements. The existing fencing is inadequate for the change of use of the adjacent area and the development proposed introduces a risk of trespass and vandalism on the railway.

15. Drainage

Condition: No water or effluent shall be to be discharged from the site or from the permanent works onto the railway or its associated drainage system. Details of the drainage associated with development shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies, the drainage scheme shall be installed in accordance with the approved scheme and maintained in proper working order.

Reason: To ensure that the maintenance and operation of the railway is not prejudiced.

16. Public access

Condition: Public access to areas near to the operational railway shall not be permitted until a risk assessment has been prepared and risk treatments, as appropriate, incorporated in the design. The risk assessment and risk treatments shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies, the scheme shall incorporate these risk treatments.

Reason: To manage personal injury and railway disruption risk. These can arise, for example, from the presence of live 25kV overhead equipment where kites are being flown or trains travelling nearby where ball games are played.

17. Electromagnetic compatibility (EMC)

Condition: The developer shall provide an assessment of EMC to show that the design is compatible with EMC regulations. This assessment shall be submitted in writing and accepted by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies, the design shall be implemented in compliance with approved scheme.

Reason: No such details have been provided and the nature of the development is such that it gives rise to concerns about EMC emissions. EMC emissions which are not compliant with the regulations could cause disturbance to railway equipment. Network Rail and the Train Operating Companies must be able to confirm that no such risk exists.

18. Dazzle, glare and distraction from lighting and vehicles

Condition: The permanent lighting scheme shall be so designed to avoid dazzle and glare which could cause hazard or distraction to operators of the railway. Details of the lighting scheme, including any visual screening shall be submitted in writing and approved l by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies, the approved lighting scheme shall be implemented.

Reason: Lighting can interfere with sighting of signals and compromise the safe operation of the railway. No detail of the lighting has been provided.

19. Dazzle, glare and distraction from solar reflection

Condition: The development shall be so designed to avoid dazzle and glare from solar reflection which could cause hazard or distraction to operators of the railway. The reflectivity and the orientation of specular (i.e. polished) reflective surfaces such as glazing or non-matt metal shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies. Unless otherwise agreed in writing with the Local Planning Authority in consultation with Network Rail and the Train Operating Companies, the approved scheme shall be implemented.

Reason: Depending upon the orientation of the façade or component and the position of the sun, specular reflection can interfere with sighting of signals and compromise the safe operation of the railway. No detail of the potential for this has been provided.

20. Control of maintenance risk

Condition: Prior to the start of design, proposals for those elements of maintenance of the development which could prejudice the safety, operation or maintenance of the railway shall be submitted in writing and approved by the Local Planning Authority in consultation with Network Rail and the Train Operating Companies.

The details shall include:
- routine maintenance of the façade facing the railway
- access at height which creates potential collapse radius onto the railway
- use of plant with a collapse radius within 4m of the railway boundary.

The design shall then be carried out only in accordance with the approved details unless the Local Planning Authority in consultation with Network Rail and the Train Operating Companies has previously agreed in writing to any change.

Reason: No such information has been provided and is required to manage the risk to the safety and operation of the railway arising from maintenance of the development.

Informatives

21. Noise
Informative: The developer is reminded of his obligation to ensure appropriate mitigations are adopted to protect the development from noise from the operational railway.

Reason: The developer is responsible for ensuring that the development meets statutory requirements.

22. Covenants

Informative: The applicant is reminded that various restrictive covenant(s) apply to the site covering a range of issues.

Reason: The covenant has been entered into with the owner or previous owner of the land in order to protect the railway.

23. Costs incurred

Informative: The developer shall agree to pay the costs incurred by Network Rail and the Train Operating Companies in reviewing and approving the development.

Reason: Costs to be incurred from a development reside with the developer

MTR Crossrail
63 St Mary Axe
London EC3A 8NH
[redacted]

[redacted]
Principal Planning Development Manager
London Legacy Development Corporation

15 July 2019

Dear [redacted]

Madison Square Garden (MSG) Sphere Planning Application – Application References:

19/0097/FUL: Planning Application for 'Development of a multi-use entertainment and leisure building and an illuminated external display…'

19/000098/ADV: Advertisement Consent for 'Illuminated display of Sphere building and LED displays located on podium, lift cores and bridges…'

I refer to the above applications that are currently being considered as well Networks Rail's letter dated 9th July 2019 (Steven Taylor to Daniel Davies dated 9th July 2019). I confirm that MTR Crossrail fully supports the conclusions reached by Network Rail and that MTR Crossrail itself objects to the above applications.

In its letter Network Rail has set out its conclusion from the Network Rail baseline model of crowding which has highlighted that the new development would cause a significant uplift in demand across the station, particularly in the Northern ticket Hall, in the subways and at platform level (specifically the platform 6 / 8 island is highlighted).

MTR Crossrail is the operator of the 'national rail' section of the station which includes the subways and the high-level platforms. It is MTR Crossrail's responsibility to ensure the safety of all users of the station. Since taking over responsibility for the 'national rail' section of the station from Greater Anglia in 2015, MTR Crossrail has repeatedly raised concerns about the capability of the station, as currently configured, to accommodate current and future demand. In general crowding problems are most acutely felt during the evening peak period (weekdays 16.00 to 19.30) when the subways become heavily congested and certain platforms can become overloaded. The platform 6 / 8 island is a particular risk in this respect. To manage these risks MTR Crossrail has introduced an increasing intrusive evening peak crowd management system that involves over 20 additional members of staff positioned around the station to manage passenger flows and if necessary stop access to the platforms. A further iteration of these crowding management arrangements is likely to be introduced in the autumn involving one-way flows through Northern and Southern ticket halls.

On the basis that MTR Crossrail has found it necessary to introduce increasingly intrusive crowd management arrangements to manage current demand through the station, MTR

Crossrail is of the view that the station does not have the capability to support a significant uplift in demand during the evening peak period. The Network Rail analysis shows that the MSG Sphere would create a sharp increase in footfall at this critical time (+31% on Crossrail / Central Line eastbound services between 1600 and 1900). This increase could not be safely accommodated without substantial physical and operational interventions and therefore MTR Crossrail objects to the planning application.

Yours sincerely

[redacted]

Concession Director

From: [redacted]
To:
Cc:
Subject: 19/00097/FUL
Date: 18 June 2019 15:12:06

Good Afternoon

Thank you for the opportunity to review the proposal.

Southeastern note that it is proposed to develop a multi-use entertainment and leisure building with an illuminated external display (96.5 metres AOD) and external podium and terraces with landscaping (sui generis use including: entertainment, assembly and leisure venue; music venue/nightclub; restaurant / members' lounge/nightclub; bars, restaurants, cafés and retail; storage, vehicle parking, servicing and loading; external podium and terraces for entertainment, assembly and leisure use, café, bar and retail facilities; together with all supporting and complementary uses) and the construction of new pedestrian and vehicular bridges, highway and access works, servicing, open space, hard and soft landscaping, demolition of existing structures, associated infrastructure, plant, utilities and other works incidental to such development

We have the the following comments

Main Report, Chapter 6 (Highways, Transport & Movement)
Para 6.124, figure 6.7. Our projected 2022 background demand in certain key time bands is understated compared with today's reality (also the case with Para 6.251, figure 6.20). For example, the 1715, 1745 & 1815 time bands suggest our demand in the order of 650 (c 800 in 2031) , current figures are in excess of 1150 in each time band. We do not recognise the stated capacity of 666 for Southeastern in the 1900 time band. We do note, however, that you use Rail plan data as is the only dataset acceptable to TfL/LLDC in planning terms and cannot comment on where this baseline data is sourced from.

We note that Para 6.355 states that where there is likely to be a public transport capacity shortfall, they would look to mitigate with event timings, ticket sales and TDM and that MSG have started to attend the QEOP LOPSG meetings, along with us, so we would expect to be party to and have an input to any specific mitigations for any events where transport capacity is likely to be an issue.

Transport Assessment
Page 75. Para 6.2.9 states that during the peaks Southeastern run 12 car trains. We have previous advised (23rd October 18) your transport modellers Momentum that this is not the case. This will mean that some of their capacity assessments (eg figures 6.7 and 6.14 in the Main Report) are overstated.

With regards to their various Scenario testing in the Transport Assessment (various event times, plus 2022 & 2031 projected demand, clashes with Stadium events, etc) , we note that Section 14 (p502 onwards) does show that it is projected that Southeastern have insufficient capacity for certain scenarios and that their guests would need to make other arrangements (car, other modes, staying local). We note that you have correctly assessed our increased levels of service for concerts and football. We do however need it to be noted that our options to enhance capacity are limited (eg Para 14.3.24 suggests they will request we operate an additional 12 car for 1700 – 1745

arrivals midweek clashing with an evening concert).

Southeastern commit to working with event organisers regarding capacity shortfall mitigations (our enhancing the service, guests making alternative arrangements) on an event – by event basis.

Kind Regards

[redacted]
southeasternrailway.co.uk

southeastern
Friars Bridge Court
41-45 Blackfriars Road
London, SE1 8NZ

Please note that I will be on Maternity Leave from Friday 21st June 2019. Please can you ensure that you copy Lucinda Ball into any email to me as she will be covering this post. Lucinda.Ball@southeasternrailway.co.uk

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E20 STADIUM LLP
Level 10, 1 Stratford Place,
Montfichet Road, London, E20 1EJ
T +44 (0) 20 3288 1800

[redacted]
Planning Department
London Legacy Development Corporation
Level 10
Stratford Place
Montfichet Road
London E20 1EJ

15 July 2019

Dear [redacted]

19/00097/FUL - Land lying west of Angel Lane, Stratford, E15 1AA

Thank you for the opportunity to comment on the above application for the MSG Sphere ("the Proposed Development") submitted by Stratford Garden Development Limited ("the Applicant"). E20 is writing in its capacity as owner of LS185, which operates the London Stadium.

We appreciate the engagement with E20 that the Applicant has undertaken to date. However, we believe that there are a number of operational challenges that will need to be addressed for the scheme to be acceptable in planning terms.

In particular, E20 has concerns regarding conflicting spectator flows in an already congregated area around Stratford station. We believe the Proposed Development should be approved only if these issues can be resolved through capital investment and effective planning conditions.

The Stadium has planning permission for 67 events to be held over the course of a year and the assumption should be that all such event days are utilised. Days which are planned to have events both at the London Stadium and the Proposed Development will therefore require careful management and coordination, as well as additional capital investment to secure necessary improvements to transport infrastructure.

The London Stadium has established itself as one of London's leading multi-use venues. As well as Premiership football, the Stadium hosts international sports events (e.g. World Athletics Championships, Rugby World Cup, Major League Baseball). It also stages major concerts with up to 80,000 attendees for global music acts (e.g. Rolling Stones, Beyonce, Guns n 'Roses).

In recent years E20 have worked closely with local stakeholders and transport operators to develop and refine an operations strategy to facilitate the access and egress of major crowds on event days. This has been a significant effort, and required significant investment of time and money. Placing an additional significant regular demand on the local infrastructure, which will inevitably conflict the Stadium events, will pose significant operational challenges that need to be managed and resourced by the Applicant.

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Level 10, 1 Stratford Place,
Montfichet Road, London, E20 1EJ
T +44 (0) 20 3288 1800

It is important that the Proposed Development respects the established status of the Stadium and does not compromise its ability to host football and other events, the purpose for which it was transformed after the 2012 Games. It is also important to note that the timings of some of these events (e.g. Premiership football) are not within the control of E20 or West Ham United.

It is therefore essential that such Stadium events are given primacy where any clash of spectator movement is predicted to occur, and that it is the responsibility of the Applicant to manage and provide any additional mitigation to address such clashes.

Whilst E20 would be willing to work the Applicant to help refine its event management processes we request that an appropriately worded planning condition(s) is imposed on any planning permission that the Applicant:

- Provide a regular forward plan of events to E20 to allow for potential conflicts to be identified;
- Does not host stage events at the Proposed Development on concert dates that the Stadium provides 4 months in advance;
- Adjust the start and end times at the Proposed Development to avoid clashes with Stadium ingress and egress. This includes a requirement to change events start and finish times when Stadium fixtures change to accommodate television coverage (usually 4-6 weeks' notice). In this regard the event timings in 2.1.1, 2.5 and 7.1.4 in the *Concept of Operations* document reflect that there is a high likelihood of clashes for spectator ingress and egress. It is of particular concern that 7.1.7 states that: "For all weekend events, even those which clash with events at the London Stadium, it will not be necessary to change MSG Sphere start times." We do not agree, and would draw your attention to section 7.1.8 where the Applicant commits to changing event times when there are stadium concerts;
- Agrees to a restriction to not stage events during peak days of any future major sporting championships (e.g. World Athletics Championships). The evidence from the London 2017 World Athletics Championships was that an additional venue would not have been able to address ingress and egress during double Championship sessions. E20 will provide two years notice of such major sporting events;
- Ensures all operational plans which address coordination with Stadium events, including any event management plans secured as part of any planning permission granted, should be agreed with the Licensing Authority through the Stadium Safety Advisory Group;
- Is responsible for any additional mitigation which is required to support contingency planning. When Stadium and events at the Proposed Development directly clash (in terms of ingress/egress) we have severe reservations about how a contingency plan will work if this relies on the Northern ticket hall in its current configuration. A 5pm ingress to an event at the Proposed Development, combined with a 4.45pm egress from a Stadium match and an evacuation of shoppers from Westfield will be a significant challenge; and
- Acknowledges (through any future *Construction Transport Management Plan* and *Delivery and Servicing Plan*) the road closures that exist on Stadium event

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days and impact that this is likely to have on proposed routing of both construction and service/delivery vehicles.

In addition to this it is important that appropriate contributions are made towards the enhancement of local infrastructure, in particular Stratford Station and Montfichet Road, as part of any Section 106 agreement. Such contributions should be sought help secure (but not necessarily be limited to):

- Enhanced and/or additional entrances at Stratford Station to manage event crowds;
- Revisions to Montfichet Road design; and
- Permanent Hostile Vehicle Mitigation (if required) on Montfichet Road at the bus station end.

Please let me know if you require any further information.

Your sincerely

[redacted]

[redacted]
E20 Stadium LLP

Cc [redacted] Stadium)
[redacted] (LLDC)
[redacted] (LLDC)

[redacted]
Director of Planning and Development,
Chief Planning Officer

Development Control
1st Floor, West Wing
Newham Dockside
1000 Dockside Road
London
E16 2QU

18th July 2019

[redacted]
Director of Planning Policy & Decisions
London Legacy Development
Corporation
Level 10
1 Stratford Place
Montfichet Road
London
E20 1EJ

Dear [redacted]

Application No: 19/00097/FUL

Location: Land lying to the west of Angel Lane, Stratford, London, E15 1AA

Proposal: Development of a multi-use entertainment and leisure building with an illuminated external display (96.5 metres AOD) and external podium and terraces with landscaping (sui generis use including: entertainment, assembly and leisure venue; music venue/nightclub; restaurant / members' lounge/nightclub; bars, restaurants, cafés and retail; storage, vehicle parking, servicing and loading; external podium and terraces for entertainment, assembly and leisure use, café, bar and retail facilities; together with all supporting and complementary uses) and the construction of new pedestrian and vehicular bridges, highway and access works, servicing, open space, hard and soft landscaping, demolition of existing structures, associated infrastructure, plant, utilities and other works incidental to such development. This application is accompanied by an Environmental Statement (ES) submitted pursuant to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. It is also accompanied by an application for advertisement consent (planning reference: 19/00098/ADV)

Application No: 19/00098/ADV

Location: Land lying to the west of Angel Lane, Stratford, London, E15 1AA

Proposal: Application for advertisement consent comprising the illuminated display of Sphere building and LED displays located on the podium, lift

cores and bridge links This proposal is accompanied by a detailed application seeking full planning permission for a new entertainment and leisure building (planning reference: 19/00097/FUL)

Thank you for consulting the London Borough of Newham. On behalf of the Local Planning Authority (LPA) of the London Borough of Newham (LBN), I write to object to the abovementioned applications until the following comments are taken into account and fully addressed in the determination of the application:

Principle of Development

The application site forms part of a wider Strategic Site SA3.1 (Stratford Town Centre West) pursuant to the LLDC Local Plan. This site is allocated for a range of town centre uses and residential accommodation appropriate to the scale and form of the Metropolitan Centre designation. The delivery of this "eastern parcel" as an extension to the Metropolitan Centre is through the provision of access to the town centre by a link bridge. Further, the "supporting development principles" within this allocation include some key objectives for development on this site including inter alia:

- providing an overall mix of town centre uses which respect the existing character, scale, and massing within the allocation area; and
- key connections to be enhanced, including from existing Stratford town centre to the east; and,
- in terms of connectivity, routes in private ownership should maintain the format and appearance of public space.

The London Plan, through Policy 2.4 (The 2012 games and their legacy) aims to promote and deliver physical, social, economic and environmental regeneration of the Olympic Park and its surrounding area. Policy 2.4 recognises the importance of closing the deprivation gap between the Olympic host boroughs and the rest of London, and identifies the Olympic legacy as London's single most important regeneration project for the next 25 years. Like the LLDC Local Plan, this strategic policy promotes Queen Elizabeth Park and its surrounds for international visitor destinations for sport, recreation and tourism, as well as identifying the need for new development to contribute to transport connections.

London Plan Policies 4.6 (Support for and enhancement of arts, culture, sport and entertainment) and 4.7 (Retail and town centre development) work together to support the continued success of London's diverse range of arts, cultural, professional sporting and entertainment enterprises in town centre sites which are accessible by public transport. Policy 4.6 in particular states that facilities should be accessible to all sections of the community, including disabled and older people, as well address deficiencies in facilities and provide a cultural focus to foster more sustainable local communities.

The Draft London Plan remains consistent with the adopted London Plan in its support for the development of new cultural/ leisure venues in town centres and places with good public transport connectivity (Policy HC5 Supporting London's culture and creative industries & SD6 Town Centres). The Plan also includes the promotion of uses that support the night-time economy.

Although the proposals fall outside of the planning functions of the London Borough of Newham, it is pertinent to consider how the Proposed Development might contribute to delivery of the Strategic Principles of the Newham Local Plan. Particular consideration should be given to the over-arching priority in Policy S1 of the Newham Local Plan, to build communities and places that work to ensure that growth contributes to achieving convergence. Policy S1 of the Newham Local Plan sets out the over-arching strategic

principles, vision based spatial strategy and design and technical criteria that will be supported. As such, LBN would expect any application within Newham to address this material consideration.

With particular reference to Stratford, the Council's adopted and emerging policies are in line with the LLDC's, in terms of promoting a range of town centre uses, and maintaining and sustaining Stratford as a Metropolitan Centre (Policy S2). This includes particular reference to uses in this area that pertain to the cultural and visitor economy, as well as those that serve to promote night-time economy functions. Taking the above into consideration we are supportive of the principle of development for such a use at this location.

However of particular relevance to this scheme, is the potential impact on transport infrastructure, including Stratford Station (Policy INF1), as well as the principles of neighbourliness (Policy INF8) and the contribution of a tall building to promoting regeneration and creating successful places (Policy SP4). These are considered within this letter.

Design and Heritage

The scale and spherical form of the building combined with the flat black surface (when LED's are off) means that this development will have an imposing and dominant impact on the surrounding townscape. When in 'active' mode the building will display adverts at an unprecedented scale, causing visual clutter/pollution and potentially setting an unhelpful precedent in and around Stratford St John's Conservation Area.

In terms of heritage, the townscape and visual impact assessment (TVIA) demonstrates that the proposed building will have an impact on the Stratford St John's Conservation Area. This is most apparent in views 11 (West Ham Lane), 12 (the Grove, opposite Great Eastern Road), 13 (the Grove, corner of Manbey Grove) as identified in the TVIA. The most sensitive of these affected views is view 11 which is identified as a key view in the conservation area appraisal and management plan. The proposed building appears in the backdrop of this view and to the Grade II Listed Stratford Town Hall and Gurney Memorial. The conservation area appraisal and management plan states that new development should pay 'due regard to the setting of the conservation area, impacts on views in and out and on its skyline. Sensitive contemporary contextual design will also provide the opportunity to reinstate the coherence of the conservation area, creating a well-integrated place with a special identity.' The proposed development bears little relationship to the buildings of the conservation area in terms of scale, form, materials or detailing. It will appear a large and incongruous element in the townscape and will have a harmful impact on the setting and significance of the Stratford St Johns Conservation Area, the Grade II Listed Town Hall and the Gurney Memorial.

The Council considers the level of harm to the above mentioned heritage assets to be 'less than substantial' and this will need to be weighed against any public benefits of the scheme in accordance with NPPF policy.

Policy BN1 of the adopted LLDC local plan also requires that proposals will need to benefit from connections for walking and cycling ensuring that new and existing places link to route networks and facilitate movement along direct, permeable, safe and legible pedestrian and cycle routes. These routes should cater for all users and make use of existing physical infrastructure to help overcome barriers to integration and to help create new links and routes, and also in the case of tall buildings (Policy BN10) such as this offer generous areas of public realm for all people, not just for those visiting and using the venue alone. It is noted that the walkable routes around the venue would be open but can be shut down at various points. On site security would also be included. Walking routes that are safe, well-lit and accessible to residents around and across the site are expected as part of this proposal to enhance the connectivity and permeability of the site. It is likely that public realm

improvements will attract residents to the area around the development as a walking route to and from Stratford station and Westfield. Whilst it is noted that elements of the development can be closed off for various “permitted closures”, details are expected and must be included that will set out how residents will be kept informed of closures and available walking routes. LBN would expect such necessary details to be secured via the Section 106 if planning permission were to be granted. In terms of lighting, the walking routes and details of safety measures that will be included to ensure the safe passage of pedestrians should be carefully considered. Details of lighting and Secure by Design are expected to be secured via condition where this is not comprehensively addressed in the submission.

Transportation and Highways

Although discussions with LBN Transportation are expected to continue, a number of matters identified below and in response to recent discussions need careful consideration.

The site is located in Stratford on a piece of land bounded by Montfichet Road to the west, the HS1/Southeastern line to the north, and Angel Lane to the east. The site is surrounded by rail lines to the north, east and west. Beyond the surrounding roads and rail lines are Westfield Stratford City (Westfield) to the west, Stratford Station to the south-west, and Stratford Centre to the south-east. The site lies within the London Borough of Newham with LLDC as the planning authority. The site was intended for coach parking during the 2012 London Olympics and has not been used since. Current vehicle access to the site is via an access road owned by HS1 with a right of way in place for the UKPN substation located on the north west of the site. This access road is currently used for HS1 maintenance vehicles to access the HS1 pumping station and dewatering wells.

Residential Parking Zones (RPZs) are in place across Newham, in force between Mon-Sat 08:30 - 18:30. Only permit holders or those using Pay & Display bays are permitted to park in these periods. Some of these RPZs are also in place on London Stadium event days, of which the nearest to MSG Sphere is the Stratford Central RPZ. This zone covers the residential areas to the east of the site, with Stratford NW, SE and SW also included in the event days RPZs. Event day RPZs are enforced between 08:00 - 21:00.

Highways

Newham Transportation and Highways officers have concerns about the proposed cycle network alignment, where due to its current configuration it would be difficult to contain cyclists within the cycle lane near Angel Lane where the desire line may attract them to cycle off course. Justification for this approach is requested.

In terms of the Angel Lane proposed vehicular access, LBN have concerns regarding the pedestrian/cyclist/driver conflicts at the junction to the development site from Angel Lane. The proposed vehicular access to the development site from Angel Lane will require extensive public realm works which need full safety audits for conflicts during the construction phase and for operational purposes. The vehicles using this route to and from the site at this point will be HGV’s for construction and site operations. There will also always be a reasonable pedestrian and cyclist presence at this point. Given the proposed access is very generous in its width giving priority to vehicles rather than pedestrians and cyclists, LBN have concerns as to the safety of this junction.

The Applicant should be advised of the need to enter into legal agreement(s) with the Highway Authority in respect of any proposed works prior to any work starting on site. The Applicant shall be required to submit detailed design drawings (including cycle and

pedestrian facilities), safety audits and detailed traffic modelling of the proposed access arrangements for the written approval of the Local Highway Authority (LHA).

Designated Blue Badge Car Parking

The proposals indicate 109 designated blue badge car parking spaces are to be provided for the development based on 35% of visitors which equates to 465 visitors. The submitted details note that to support this disabled access to MSG Sphere a free of charge mobility assistance scheme enabling connections between Blue Badge parking, drop-off areas on Montfichet Road, Stratford Station and MSG Sphere will be provided. It is noted that the proposal utilises spaces within the Westfield car park which is more than 50 metres away from the entrance of the MSG and therefore does not conform to London Plan standards. No further details have been provided as to the maximum / minimum distances required from the point of interest to the facilities and the mechanism to secure this. It is also unclear as to the methodology of providing specifically 109 designated blue badge car parking spaces.

Angel Lane, Windmill Lane and Maryland Station

Details are required in relation to the infrastructure that is to be provided to enable safe crossings on Angel Lane and Windmill Lane on route to and from Maryland Station. This is expected to be set and secured via a Section 278 agreement and be paid for by the Applicant. Additionally Officers consider that an adequate assessment has not been carried out in relation to the number of people that are likely to utilise Maryland station in direct relation to this development.

Trip Generation and Impacts

The submitted documentation indicates that car modal shares of 12.2% and 25% are proposed for evening events and overnight events respectively. LBN Transportation have concerns in relation to the high car modal share and its impacts on the LB Newham's local road networks. Whilst it is noted that the surrounding areas around the site do have residential parking restrictions in operation, these restrictions do not go beyond 6:30pm weekday evenings and Sundays.

In considering the above, taking 25% car modal share with the maximum capacity of the venue, the total number of cars expected to the area for this scenario would be around 6250 cars. Whilst there are car parks within the area, they all charge and when given the opportunity to park on street for free, the likelihood of people utilising the on street parking is likely to be increased. The overspill car parking from the development will have significant implication on local road network causing inconvenience to the local residents, causing congestions, safety implication to pedestrians and other road users. No details have been provided of how this is to be mitigated therefore LBN have concerns regarding this overspill car parking from the proposed development.

Further the proposal is likely to generate 2500 vehicles on the local road network and many of the journeys will be coinciding with peak hour movements. Further assessment of the local junctions need to be evidenced considering the impacts and offering mitigation measures.

Two arrivals profiles have been derived for MSG Sphere; a weekday, and a weekend profile with the profiles based on gateline data from Transport for London (TfL) during previous concerts at the London Stadium, with comparisons at other arenas. The table within the submitted document showing the proposed arrivals profiles for MSG Sphere events indicates that approximately 5375 visitors between 5pm to 6:30pm will be attracted to the area in

addition to the existing multi modal trips during peak times. The Transport Assessment acknowledges the public transport services in the area are already congested and such number will only exacerbate the existing situation. LBN have significant concerns regarding the safety of passengers using Stratford Station during this period, especially the congestion in the subways. Mitigation for the above impacts will be required from the Applicant to Transport for London as set out in this letter.

Drop off and Pick-up

Officers consider that the modal share provided does not take into account of different crowds such as events that may attract young people and potentially a higher modal share. The Transport Assessment does not provide comprehensive information in regards to this element.

The location of the drop-off and pick up is on the north east side of Montfichet Road – well away from the access bridge 1 and 2 (located on south side of Montfichet Road) would result in visitors being dropped off on the wrong side of Montfichet Road. LBN have concerns with this arrangement and the impact to the safety of pedestrians, cyclists and other road users. Further details are required which consider the wider scope of drop off and pick ups including an understanding of what mitigation measures are to be utilised.

Construction Management Plan

Concerns remain as to the use of Angel Lane Access for construction, as noted above. The submitted details do not comprehensively assess the cumulative impact for vehicle movements. The construction of the proposed vehicle is likely to produce one vehicle movement every 2 minutes which is considered to be very intense. Given the location of the site, consideration should be given to the other major sites that have started or are soon to start construction which will coincide with the construction phase of the application site. Further details on cumulative impact and impact of Angel Lane are required. LBN Highways will not allocate any road space, pavement or footpath to facilitate the construction of the scheme. The Applicant must demonstrate that they can construct the development from inside the site. The construction transport management plan should be revised to mitigate the above concerns.

Road Traffic Network

Angel Lane connects the Great Eastern Road (A118) to the HS1 access at Leyton Road. It bridges over the rail lines to the east of the site, reaching its peak at a signalised junction that was used during the Olympics, before descending down to Leyton Road. The signalised junction was introduced during the Olympics to link Angel Lane with a previously existing ramp that led to the coach park on the site.

The former Stratford gyratory consists of a two-way carriageway made up of Broadway, Stratford High Street, Great Eastern Road and The Grove.

Montfichet Road is a four lane, two-way carriageway road, connecting Warton Road with Penny Brookes Street. This highway runs between the site and Westfield, providing access to the west of Stratford via Westfield Avenue, which leads to Waterden Road and the A12. Additionally, Stratford City Bus Station, the Engine building (Energy Centre) and Hitchcock Lane (the Westfield service road and Car Park C) can be accessed from Montfichet Road.

There is an aspiration of LLDC and LBN to redesign this road in order to reduce the carriageway down to a single lane in each direction, while introducing a segregated two-way

cycle lane and wider footways. A highways scheme is under consideration, which will require sign off by LBN Highways.

The design of road needs to be in line with TfL's new approach Healthy Streets. The Healthy Streets Approach puts people and their health at the centre of decisions about how we design, manage and use public spaces. It aims to make our streets healthy, safe and welcoming for everyone. The Approach is based on the 10 Healthy Streets Indicators which focus on the experience of people using streets i.e.

1. Everyone feels welcome
2. People to choose to walk and cycle
3. People feel relaxed
4. Easy to cross
5. Clean air
6. Not too noisy
7. Places to stop and rest
8. People feel safe
9. Things to see and do
10. Shade and shelter

Pedestrian Links and bridges

It is noted that the application seeks partial closure of proposed links at certain times relating to "permitted closures" as set out in the draft Heads of Terms. In terms of pedestrians movements there should be no restrictions imposed on routes that would eventually become desired links to and from home, to the shops, to the station etc. to access wider points of interests from the proposed facilities. A mechanism should be in place to inform residents that will be using these new routes of any closures ahead of time where feasible.

Cycle Parking

The proposal makes provision for 150 cycle parking spaces in total; 100 cycle parking spaces for staff are proposed to be located on the podium by Bridge 1. These will be provided as two-tier racks in two secure sheds (one shed with 40 spaces, another with 60 spaces). Additionally 50 Sheffield stands will be provided on Montfichet Road for visitors, located underneath Bridge 2.

The amount of cycle parking provision is considered to be below the requirements of the Draft London Plan and therefore represents a significant shortfall in cycle parking that would discourage visitors from utilising sustainable modes of transport.

The inclusion of the bi-directional cycle lane proposed for Montfichet Road is welcomed and is considered necessary to improve cycle facilities surrounding the site to encourage take up and use.

Stratford Station

Stratford Station serves as the main hub station for the Queen Elizabeth Park. It provides access to a significant amount of line capacity particularly as the Underground, Rail, Overground and DLR services operate from this station. Additionally, the introduction of the Elizabeth Line will increase the line capacities from Stratford Station. The station is a key transport hub for LB Newham and its residents and therefore any impacts must be fully mitigated.

Stratford Station has become congested during peak hours, particularly in the subways. Therefore there is significant concern over the current operation and congestion of the subways of Stratford Station and capacities of services serving this Station.

LBN expects adequate mitigation to be put in place to ensure that the station can remain safe and functional. The station must be adequately future proofed for continued safe operation and to ensure adequate staffing levels for event days when congestion will increase due to the proposed development. LBN expects further engagement with Transport for London (TfL) to be evidenced and will support mitigation measures that TfL proposes for it.

With regard to transport and highways, LBN are unable to support the scheme given the above outstanding matters. The LLDC is advised to engage with the Applicant on the above matters and continue to engage with the relevant LBN departments.

Bus Services

The proposed development would result in an increased footfall in the area coming to and leaving events, especially late at night. It is considered that the current provision of night buses serving Stratford is inadequate to accommodate the additional trips. LBN would support public transport providers in securing investment from the Applicant to improve services to accommodate the increased footfall resultant from the subject development.

S106 and Conditions

In terms of the S106 contributions LBN Transportation recommend the inclusion of the following and are content to engage in further discussions:

- Contributions for improvements to Stratford Station for capacity enhancement and congestion relief in the region of £20 million - £25 million.

- Improvements to Montfichet Road and Public Realm improvement especially fronting Angel Lane to be covered in full within a Section 278 agreement with estimated costs to be agreed once scope of works is agreed.

- Cycle hire docking station as part of travel plan obligation to improve the modal share by cycle. Contributions of £48,000 are required to secure 8 docks for Brompton bike docking station to be payable to LBN.

- A contribution towards Public Transport as per requests made by TfL and transport providers for trains and bus services as noted above for improvements.

- The development is designated car free. An agreement to prevent the occupiers obtaining a RPZ parking permit for all concerned with development is expected to be included.

- Total cost for the implementation of waiting, loading and unloading restriction etc. including their Traffic Management Orders to be borne by the Applicant. This is subject to details and averages £4,000 each time to be payable to LBN.

- Travel Plan monitoring and support contribution of £100,000. The inclusion of a penalty clause resulting in additional payments to be made should the development not adequately meet the targets of the visitor and staff travel plan to LBN.

- Event day parking and traffic management strategy activation cost. To activate event management plan on event days, subject to recommendations through the Safety Advisory Group, in the region of £15,000 to £20,000 per event payable to LBN.

- Agreement for main relevant operators of MSG Sphere venue to be part of and attend the Safety Advisory Group (SAG) for the Park and abide by the recommendations of the group.

- Any other Head of Term that comes out of further discussions with Transport for London, Network Rail and LB Newham.

LBN recommend that conditions be imposed on any grant of planning permission to address the following:

- Submission of a Car Parking Management Plan including Delivery and Servicing Management Plan for whole of the development.
- Full visitor and staff travel plan which includes a penalty clause should development fail to meet targets.
- Full detailed Construction Logistics Plan.
- Highways works to be included within the Section 278 agreement. This includes highways works as noted within this response.
- Construction Transport Management Plan – this includes the travel plan for workers during construction phase of the development.
- Condition to secure the satisfactory arrangement of drop off and pick up of visitors with accessibility requirements.
- Full Event Management Plan with details to be agreed by the Local Planning Authority following approval of the Safety Advisory Group for the Park.
- Transport Management Plan.

The above is not an exhaustive list.

<u>Employment</u>

The development must contribute towards engagement in training opportunities and job related programmes that are managed through Workplace, the Council's job brokerage initiative. The Council expects a portion of jobs at construction phase (where feasible and in line with skills availability) to be offered first to Newham residents via Workplace. Any contributions and agreements will be expected to be secured via the S106 Agreement. The following are expected to be included as per the amendments and discussion with the case officer at the LLDC:

- LBN Economic Regeneration have had discussions with LLDC officers in relation to the draft Section 106 and have requested alterations to the current draft wording (which LLDC are in receipt of) to secure £2,100,000 on commencement.

- LBN notes that the draft Heads of Terms states that 35% of all operational jobs are to be filled by residents of the London Borough of Newham – LBN requirements are 50% of all operational jobs to be filled by Newham residents, this includes the 5% overall of operational workforce to comprise trainees, apprentices or improvers to be from Newham.

- The clauses relating to the Education Commitments Plan within the submitted draft Heads of Terms shall include commitments during construction and operational phases/stages of the development, not just construction phase only.

- The apprenticeship opportunities for young people shall include ages from 16-30 not just 16-19.

- MSG commits to paying London Living Wage but there is no commitment to them requiring their supply chain to offer the same. LBN would seek that the commitment is also adopted by their supply chain.

- Contributions towards a Community Involvement Programme towards cultural initiatives in Newham. (£2,100,000). Covers support to local arts organisations and groups committing to collaborating and delivering artistic programmes, i.e. outdoor arts, outreach, workshops, opportunities for local people to create, capacity building etc. Community grants programme over 5 years at £280,000 per year, including administration costs of £30,000 per year. Small grants of up to £5,000 and larger grants up to £15,000 – participatory budgeting using the Citizens' Assembly model equating to £1,400,000. Support local grassroots musicians and groups by committing to making the small music venue at the Development available for a minimum of 30 days every year rent free with a contribution by the Owner of up to £5,000 per event towards direct operating costs equating to £150,000.

The submitted Employment and Skills Strategy document will need to be updated in line with the amendments requested by LBN Economic Regeneration to the draft Heads of Terms.

Sustainability

Sustainability measures must be incorporated throughout the construction and operational phase of the development. LBN expect the development to be air quality positive. The carbon offset to the LPA is noted however LBN expects a development of this scale to aim to achieve the highest standards which include carbon zero development and BREEAM Excellent.

Sustainable Drainage

The Local Lead Flood Authority have reviewed the submission concerning water resources within the ES under the flood risk and strategy ES Volume 3 appendices A1 and A2. Due to the complexity of the proposal interfacing several features of the development, a more detailed drainage scheme consistent with the outline strategy will be required for approval. The suggested condition wording has been provided to the LLDC.

Impact to Amenity and Environmental Concerns

The luminosity of the outer skin of the sphere is likely to result in a detrimental impact to nearby sensitive receptors. This element of the proposal would need to be carefully managed and further investigation carried out and specific controls agreed to safeguard the amenities of affected residents. LBN have significant concerns in relation to neighbouring amenity, especially in regards to impact on air quality, lighting, noise and vibration from the construction and operational phases. LBN expect the assessment for this development to be overall air quality positive.

Construction Logistics Plan

LBN expect the following points to be addressed fully by the Applicant:

- In terms of the construction logistics plans, the new site entrance proposed on Leyton

Road will pass directly next to the new housing development on Chobham Farm, yet there is no detail about numbers of vehicles and timings of deliveries over the 36 month construction period. Consideration needs to be given as to how these areas will be impacted and how this is expected to be mitigated.

- Vehicles arriving from the north will be passing directly by or adjacent to Chobham Manor, TIQ north and south, N05, N06, Cherry Park, Stratford Waterfront, UCL East and Sweetwater. Vehicles travelling from the south will be passing directly by or adjacent to Newham's Morgan House and Stratford Centre, Sugar House Lane, Three Mills and Pudding Mill Lane. Have potential interactions with these sites been correctly assessed and should these not be mentioned in the construction logistics plan (CLP) as they will have been approved developments around the time MSG construction is proposed. Consideration needs to be given to the above.

- The impacts of night time works and deliveries must be specifically addressed prior to any grant of planning permission.

- The CLP outlines site hours as 08:00 to 18:00 Monday to Friday and 08:00 to 13:00 and there seems to be a reliance on these hours for deliveries. A peak daytime HGV movement of 210 vehicles is expected, meaning an average of 21 vehicles per hour (42 movements) if these hours are adhered to. Is this realistic given the constraints on access and potential interactions with other large construction sites in the area? The conclusion at 10.1.5 is disputed. This should be addressed prior to any grant of planning permission.

- Further clarification is required on whether 42 vehicle movements per hour during the daytime is possible given the constraints of the site and entrances. The submission does not make clear what the cumulative impact of vehicles servicing this development and other construction sites in the area. Details of all night time deliveries should be included in the Construction Logistics Plan.

Environmental Statement non-technical summary:

- Paragraph 1.75 of the ES states that construction is due to last 43 months, in contradiction to the 36 months proposed in the CLP. Clarity on this is required.

- Paragraph 1.80 highlights the need for night time working due to the impact on rail lines and specifically mentions the removal of materials from site, which isn't mentioned in the CLP.

Volume 1 of the ES:

- The Council would expect the Applicant to engage with its Licensing Team given the late night finishes and a desire to have a certain number of later finishes or all night events. Regard must be given to the proximity of the residential dwellings and the impact on their amenity.

Volume 1, Chapter 4 (enabling and construction):

Paragraph 4.2 – The Council require confirmation about the proposed timings and methods to minimise impact on our residents.

- Paragraph 4.6 – The Council is not satisfied that all conflicts and eventualities of this

complex construction project have been realised and whether this can be built without an unacceptable impact being put on our residents, so assuming it can be covered by condition would appear premature. We need to know the outcome of the discussion with all transport stakeholders in the area to understand what level and duration of night-working for each construction phase, is required.

- Figure 4.1 - This is useful as an indicative construction programme but time has slipped and the dates are unrealistic. An up-to-date version should be provided in light of new information regarding planning procedure and site access. This is needed to demonstrate that the cumulative impact of all construction work in the area has been considered. As noted previously above, additional new local construction sites will be coming on-line before or during this development and careful consideration of the cumulative impacts must be demonstrated.

- Paragraph 4.14 - The Council is opposed to the Applicant's reliance on using conditions to mitigate construction impacts once permission has been granted, as noted above. There appears to be an underestimation of the level of impact the construction works will have on our local residents which must be fully addressed. It remains unclear whether the development can be built without an extensive level of night time works. The submission does not demonstrate how this has been assessed.

- Possessions are required for bridge foundation/lifts. Details of this matter have not been provided in the submission.

- Paragraph 4.23 states that vehicles will need to wait, the Construction Logistics Plan should ensure there are no vehicles waiting for access off-site. As the Chapter states the Chobham Farm development will be built and occupied by the time this project begins so any vehicle waiting may generate air quality and noise impacts.

- The Council would like to know where and how much sheet piling is required across the site and whether this will all be done during the day using non-percussive and vibratory means? In terms of the fit-out and commissioning – is it envisaged that round-the-clock working will be expected when working internally to the structure. If so, what level of vehicle movement(s) into and around the site will be likely outside of normal site hours? The LLDC should satisfy itself that this has been properly assessed.

- Is there no site accommodation required during the construction of Bridges 1, 2, 3 and 4 as there are none shown on Figures 4.3 and 4.4? The programme also shows the batching plant as being on-site – will this be in the same place as in the later phases of work? The LLDC should satisfy itself that this has been properly assessed.

- Paragraphs 4.79 - 4.81 – Details of how much night time working in total and at what frequency are required. This is especially important given the proximity to Chobham Farm and other sensitive receptors in the area. The LLDC should satisfy itself that this has been properly assessed.

Construction Environmental Management Plan (*CEMP)*

The following needs to be addressed during the course of application:

- Section 3 - It is important that the hotline is manned through all operational hours, including night time and possession hours and a direct link to site is maintained so complaints are processed and passed on in real-time to ensure any offending piece

of plant or activity is dealt with at the earliest opportunity and not left until the following day when the activity has ceased, making investigation far more difficult.

- With regard to section 5.0 Pre-Construction Planning, only baseline environmental monitoring is mentioned here. The Council would like to know how much baseline monitoring is to be undertaken and what would be the purpose of such monitoring?

- It is important that long-term construction environmental monitoring positions are established. These should be positioned to take into consideration the most affected receptors and should not be subject to relocation through the course of the project, although this should be possible if unforeseen noise or other such complaint issues arise.

- Section 6.0 - It is important that the contractor understands the requirements and time constraints placed on the application process for Section 61s and plans accordingly.

- Wheel wash facilities and ideally monitoring positions should be clearly identified on all drawings provided in the CEMP. Further, based on the predicted noise levels for construction the CEMP must include a noise mitigation and rehousing scheme to mitigate against adverse noise impacts on local residents.

A non-road mobile machinery emissions (NRMM) condition is required for construction that could be incorporated into the CoCP for site specific non-road mobile vehicles relating to air quality to protect the amenity of neighbours. The wording can be provided to LLDC.

Noise and Vibration

Under paragraph 7.7 Volume, Chapter 7 (noise and vibration);

- The LLDC should ensure that it is completely satisfied with the transport modelling used in the ES. This has been used within the noise assessment. The Council queries whether there are enough car-park spaces provided and associated number of vehicle movements to justify the statement that noise levels will increase due to the increased road traffic associated with the emerging mixed-use and residential schemes.

- Paragraph 7.12 states that the BS-5228-1 ABC method has been used in the assessment without any justification provided for the use of this method.

- With regard to paragraph 7.16, the Council would prefer to see one hour L_{Aeq} assessment carried out, or 15 minute assessment at night, to ensure a worst-case assessment is being carried out. The Council requests that these figures be provided as well as the 8 hour.

- Paragraphs 7.109 - 7.110 – The Council seeks clarification of what background measurements have been used to assess the Unite building, Moxy Hotel and Telford Tower. Measurements were taken in front of these buildings (attended monitoring locations 1 and 2) and are high due to the presence of road traffic along Great Eastern Road, however it will be the rear of the buildings that are most affected by the development and these facades will be shielded from road traffic noise and will experience likely background levels more akin to Unattended Monitoring Location B. Can this be clarified to ensure a worst-case noise assessment is being carried out at

these locations. The Council would like to know whether CadnaA modelling been used to model baseline daytime and night time background levels?

- Figures 7.5-7.11 identify only noise levels at 1.5m above ground level where a 2.4m high barrier has been provided for in the modelling, however there are receptors at nearly all identified receptor locations that are at a height above 2.4m, therefore not shielded by the barrier. The Council would like to receive the CadnaA modelling for the different receptor heights in the buildings.

- It is also noted that bridge construction is due to take 10 months. The Council consider that this is not a conservative assessment and so this could not be called a short-term for a major adverse effect in this context.

- Paragraph 7.118 – The Council seeks justification for the use of the 'haul road' method given the proximity to sensitive receptors. The Council would like to know its advantages and shortcomings. Concerns are particularly for noise levels at Chobham Farm and the Railway Tavern.

- In relation to figures 7.14-7.17 the Council would like to know what height are these noise levels predicted and will height of receptors make a difference to these contours?

Music Club Operations

- Paragraph 7.48 notes that the predicted noise levels are assessed with respect to the likely increase in the 2018 baseline ambient noise level between 2300-0100. Whilst it is noted that this will cover the closure time of the club and the dispersion of crowds at this time, the Council would like to know what the likely increase in the baseline will be for music club operations for the hours after 01:00 when most train operations in the local area will have ceased and other services reduced.

- Officers expect the hours of closure to be strictly controlled and enforced, however should in future the music club wish to extend hours or overrun hours it is necessary to understand the impact that would have as noted above. If the music club is open later it is expected that this would detrimentally affect the amenity of sensitive receptors Newham residents. Failure to strictly control these matters would be wholly unacceptable to the Council due to the negative impact upon residents.

Construction Traffic – noise (and vibration)

- Paragraph 7.119 indicates that the total daily number of vehicles that currently use Leyton Road/Angel Lane is 5,407. During the busiest days of the enabling and construction programme the total number of construction HGVs are predicted to be 426. On this basis, the A-weighted 16-hour noise level is not expected to increase by more than 0.3 dB as the increase in traffic is negligible. The Council notes that this does not adequately address the increase in noise levels in front of the Chobham Farm residents who look onto HS1 and will have 426 new vehicle movements a day passing in front of their properties, as opposed to none at present. The Council would like to know what noise levels are attributable to construction traffic for the above residents.

- In terms of clarification the Council requires further information in terms of what background measurements have been used to assess the Unite building, Moxy Hotel and Telford Tower.

Sandy Brown Construction Noise Assessment

- With regard to Volume 3, 03. Noise and Vibration A3, a night-time construction assessment has been carried out for work on Bridge 4 only. Although this may be the noisiest activity it does not mean that any other works taking place at night won't contribute to an increase in local noise levels at night. It would appear that this cannot therefore be justified as a worst-case assessment. The amount of night-time work that is likely to be required seems to be underestimated, so a more robust night-time construction noise assessment is needed.

- Although Bridge 4 may be the noisiest activity, Bridge 3 may be the noisiest activity for Telford Tower, the Moxy Hotel and the Unite Student Housing. Further consideration needs to be given to the impact(s) of works to other bridges as it is considered that Bridge 4 may not be the largest noise impact to all sensitive receptors. A greater impact could be expected to be felt at different receptors at different periods during construction. This will need assessment to ensure a robust worst-case assessment is being carried out.

Further consideration should be given to which sheet piling method is to be used and how this has been chosen against other methods.

Lighting and illuminance

The Council has significant concerns over the lighting and illuminance of the sphere development and the resultant impact it would have on sensitive receptors that face the site. Temple have acknowledged the requirement to prevent nuisance and have requested further information (attached to this letter). This is in line with what the Council is requiring. The Council acknowledges the commitment from the Applicant to record the levels of lighting and imagery throughout the time it is switched on. The Council would expect this to be secured as an obligation within any S106 associated with the grant of planning permission and that all information be shared with LB Newham relevant departments for the purposes of environmental management.

The LLDC should secure funding for the monitoring of noise, vibration and air quality (environmental monitoring) associated with the development in any S106 associated with the grant of planning permission.

The following costs are recommended for inclusion within the Section 106 Head of Terms:

- Construction phase – Build length 4 years - 1 full time dedicated Environmental Health / Control Officer (£280,000 including on costs). To:
    - carry out compliance inspections against the Construction Environmental Management Plan;
    - provide advice on noise assessments, technical standards for mechanical fixed plants for this bespoke project;
    - investigate noise and nuisance complaints from the local community including residents, offices and schools;
    - act as Community EH complaints interface with Construction Community liaison officer on dust and noise report interpretations;
    - attend regular weekly meetings to update and advise on environmental impact issues;
    - provide fast response to S.61 construction out of hours applications; and
    - carry out checks on non-road mobile machinery compliance standards.

- Air Quality monitoring of the local Stratford area - purchasing, setting up, calibration and maintenance costs of specialist AQ equipment to check on the longer term impact against the AQ assessment requirements and mitigation strategy for particulates (PM2.5 and PM10) and Nitrogen dioxide emissions and against the Air Quality Action Plan objectives (2019-2024). Equating to £25,000 per year.

- Operational phase - O.5 FTE post dedicated Environmental Health/ Control Officer for 5 years to liaise and offer advice on the below equating to £175,000 to service:

    - Light pollution complaints from specialist LED external screens
    - LA liaison on Food Hygiene and H&S advice
    - Noise and antisocial behaviour complaints linked to the patrons attending events
    - Monitoring of Licensing conditions for large events at the MSG and liaison with the premises licensing manager
    - Attendance at regular safety advisory technical groups for large events at MSG
    - Noise monitoring in local streets pre and post build to assess for creeping background

The environmental monitoring for the above Heads of Terms for would equate to £580,000.

The Council wishes to continue to engage with the LLDC to discuss the above concerns in detail before any decision is made on the applications.

Environmental Statement Review

The Council commissioned Temple to review the submitted Environmental Statement and the findings were shared with the LLDC to inform a Regulation 25 request. The Regulation 25 requests and requests for clarity are summarised below under the relevant chapter headings.

Review of Scheme

Section 2.76 refers to wind effects between the podiums, with the concluding line that “on windy days they may not be comfortable to walk across without adequate wind mitigation”. Further clarity could be provided as to whether the design has evolved to avoid this, or that mitigation has been specified. This section needs to be clarified with respect to mitigation.

The information presented in Chapter 1 suffers from a lack of clarity over the process of scoping out topics. The rationale for including certain topics for specific mention (e.g. Geo-environmental, Archaeology, Ecology, Telecommunications/Electronic Interference) in this section is unclear, since some of these topics have been scoped in and others out. The section would benefit from a more judicious use of headings/sub-headings to make this process far clearer.

Similarly, the rationale for the Impact Assessment scenarios (section 1.89 -1.94) is hard to follow and rather vague. Scenario 2(b) is at first listed, then removed in the following text. For avoidance of confusions, a clear statement on the scenarios assessed and the validity of the evolved baselines used should be provided.

Temple have noted the following clarifications for this section;

- Provide clarification as to the validity of the scenarios/baselines considered.

- Review of drawings/figures at appropriate scale; re-issue figures with relevant keys.
- Cumulative schemes considered in technical assessments should be clarified, where appropriate.

Regulation 25 request for this section;

- Provide an updated Non-Technical summary with revised description of scope consistent with that described in the ES.

Chapter 5: Socio-Economics and Health

Temple have noted the following clarification for this section;

- Has an assessment of impact of visitors on local open spaces been undertaken and if not why not. Linked to this, what is the size of proposed publicly accessible open space to be provided within the development, when will this be accessible and how has it been determined that this is sufficient/appropriate.

Chapter 6: Highways, Transport and Movement

Temple have noted the following clarification for this section;

- Justification for the baseline demand to capacity ratio for public transport network and provide reasonable worst case.
- The receptors for the effects of severance and pedestrian and cyclist amenity in Section 6.180 to Section 6.187 should be clarified.
- The receptors for the effects of pedestrian and cyclist delay in Section 6.197 to Section 6.201 should be clarified.
- Clarify the use of 2031 as a future baseline should be provided.
- Clarification should be provided why the cumulative effects assessment in this chapter is done on a different basis from other chapters.

Chapter 7:Noise and Vibration

Regulation 25 request for this section;

- In paragraph 7.130, additional traffic associated with event servicing and management is included in the operational traffic assessment and a figure showing the results is presented in 7.16. However, more information regarding the servicing is required to fully understand the potential impact, i.e. if this is happening during the early morning/night-time and involves reversing alarm and/or loading/unloading this may cause an effect at Chobham Farm and will require a small assessment similar to that of the public address system.

The review by Temple further recommends that working practices should be reviewed as part of the section 61 consent to ensure substantial effects are reduced.

Chapter 8: Air Quality

Temple have noted the following clarification for this section;

- The Applicant should indicate whether there are any ecological receptors within the study area that should have been considered in accordance with IAQM guidance.
- The Applicant should clarify whether there are any industrial installations regulated by the London Borough of Newham or the Environment Agency that may affect air quality at the Proposed Development.
- The Applicant should clarify why model verification was based on one automatic monitoring site only.
- The Applicant should clarify why time varying emission factors were not used for the 'With Scheme' assessments rather than using two different AADT flow data and demonstrate that the approach adopted provides the most conservative estimate of short-term impacts.
- The Applicant should clarify whether they are committed to liaise with the Local Authority to determine dust monitoring requirements.
- The Applicant should confirm the 12 developments sites identified as having potential cumulative construction effects.

Regulation 25 request for this section;

- The Applicant should provide calculations associated with calibration of Defra background maps with monitoring data and details of monitoring sites used.
- 20. The impact assessment of generator emissions on annual mean NO2, PM10 and PM2.5 concentrations should be based on process contributions plus background concentrations in accordance with IAQM guidance. The Applicant should update Table 8.18 with these results and amend explanatory text in section 8.117.
- 21. Section 8.117 states that predicted process contributions associated with Generator Emissions were compared with EPUK/IAQM screening criteria. However, the 10% screening criteria is not applicable to the 24 hour mean PM10 objective. The daily mean PM10 concentration should be derived from the Annual Mean (process contribution plus background concentration) in accordance with section 6.34 of IAQM Guidance. The explanatory text in section 8.117 should be updated accordingly.
- 22. Energy for the Proposed Development is to be supplied the Engie Energy Centre and emissions from this source should be included in the Air Quality Neutral Assessment.

The review by Temple further recommends additional measures during construction that the;

- The Applicant should include a commitment in the DMP to liaise with the Local Planning Authority to determine monitoring requirements.
- It is recommended that the Local Planning Authority require the appointed Principal Construction Contractor to become a member of the LLDC Construction Management Group to manage and coordinate the cumulative impacts of the proposed development with those of the 12 identified developments.

Chapter 9: Wind Microclimate

Temple have noted the following clarification for this section;

- Clarify whether the UKCP18 data that predict more frequent winter storms will lead to occurrences of strong winds, and whether additional mitigation could be applied in the future if necessary.

The review by Temple further recommends additional measures as per below;

- Consider how further mitigation could be incorporated at a time in the future to account for more frequent strong windows, resulting from climate change.

Chapter 10: Daylight, Sunlight and Overshadowing

No further requests have come from Temple for this chapter.

Chapter 11: Light Intrusion and Upward Sky Glow

Temple have noted the following clarification for this section;

- Construction phase lighting will be different to operational phase lighting. Please clarify how significant effects from this will be avoided.
- Clarify how upward skyglow levels would change if the top 10% of LEDs (towards vertical) were reduced to a maximum of 30 Nits.

Regulation 25 request for this section;

- (i and ii) The residents of the Angel Lane student accommodation will be live at this location for almost a year and therefore have an expectation to not be subject to significant levels of light intrusion. The assessment should be revised with these residents considered as high sensitivity receptors.
- Provide more information regarding the likely nature of the displays to be shown on the sphere, how these will be controlled, and why they are appropriate in the context of the assessment presented. Particular issues to be addressed are: colour palette, image duration, flicker, luminescence, and operating limits to be applied.

The review by Temple further recommends additional measures as per below;

- Produce a set of operating principles for approval, to set both lux levels (including directly upwards), but also frequency of colour and intensity changes, and avoidance of health (sleep deprivation and epilepsy) and risks (road and rail accidents). Subject to the outcome of the potential Regulation 25 request (ESRR No.27), specific and detailed planning conditions may need to be implemented.

Chapter 12: Solar Glare

No further requests have come from Temple for this chapter.

The review by Temple further recommends additional measures as per the below;

- Further detailed façade material and solar glare analysis should be done by planning condition pre-commencement to demonstrate there will be no unsafe conditions caused.

Chapter 13: Geo-Environmental

No further requests have come from Temple for this chapter.

Chapter 14: Archaeology

No further requests have come from Temple for this chapter.

Volume II: Built Heritage

No further requests have come from Temple for this chapter.

The review by Temple further recommends additional measures as per the below;

- Construction Environmental Management Plan (CEMP) to be implemented by appropriately worded planning condition.

Volume II: Townscape Visual Impact Assessment (TVIA)

Temple have noted the following clarifications for this section;

- Provide justification as to why demolition and construction effects are not included in the conclusions section.
- Provide justification as to why demolition and construction effects are not included in the NTS.

The full review by Temple is included within the appendix to this letter.

Summary of ES review

The Council urges the LLDC to take the above requests for clarification and Regulation 25 requests into consideration and include them when considering their own Regulation 25 request.

S106

The LLDC should ensure that the drafting of any S106 legal agreement is enforceable such that in future LBN, as successor LPA, will be able to continue to monitor and manage the impacts that result from the proposed development. LBN expects to continue to engage with LLDC in the drafting of the Heads of Terms and notes that comments have already been raised, and shared with the LLDC, in relation to the Heads of Terms as submitted.

Any S106 should ensure that all necessary development management fees and reasonable costs associated with the appointment of external consultants by the LPA are absorbed in full by the Applicant. This could include items such as the monitoring of the Deed, review or investigation of any impacts arising from the development (whether during the construction or operational phase(s) of the development), viability analysis and scrutiny of compliance with the ES.

Conclusion

This letter represents the Council's Local Planning Authority response to the LLDC's consultation on the subject planning applications. It combines the response of Highways and Transportation Officers, Environmental Health Officers, Design, Economic Regeneration Officers and the Local Lead Flood Authority.

Whilst the London Borough of Newham is not the relevant planning authority on these proposals, the Council expects the LLDC to take the above into consideration in the assessment of the applications and invites the LLDC to continue to engage with the relevant departments within the Council. Absent mitigation, appropriate conditions and obligations to

address the impacts of the proposals Newham Local Planning Authority objects to the above applications.

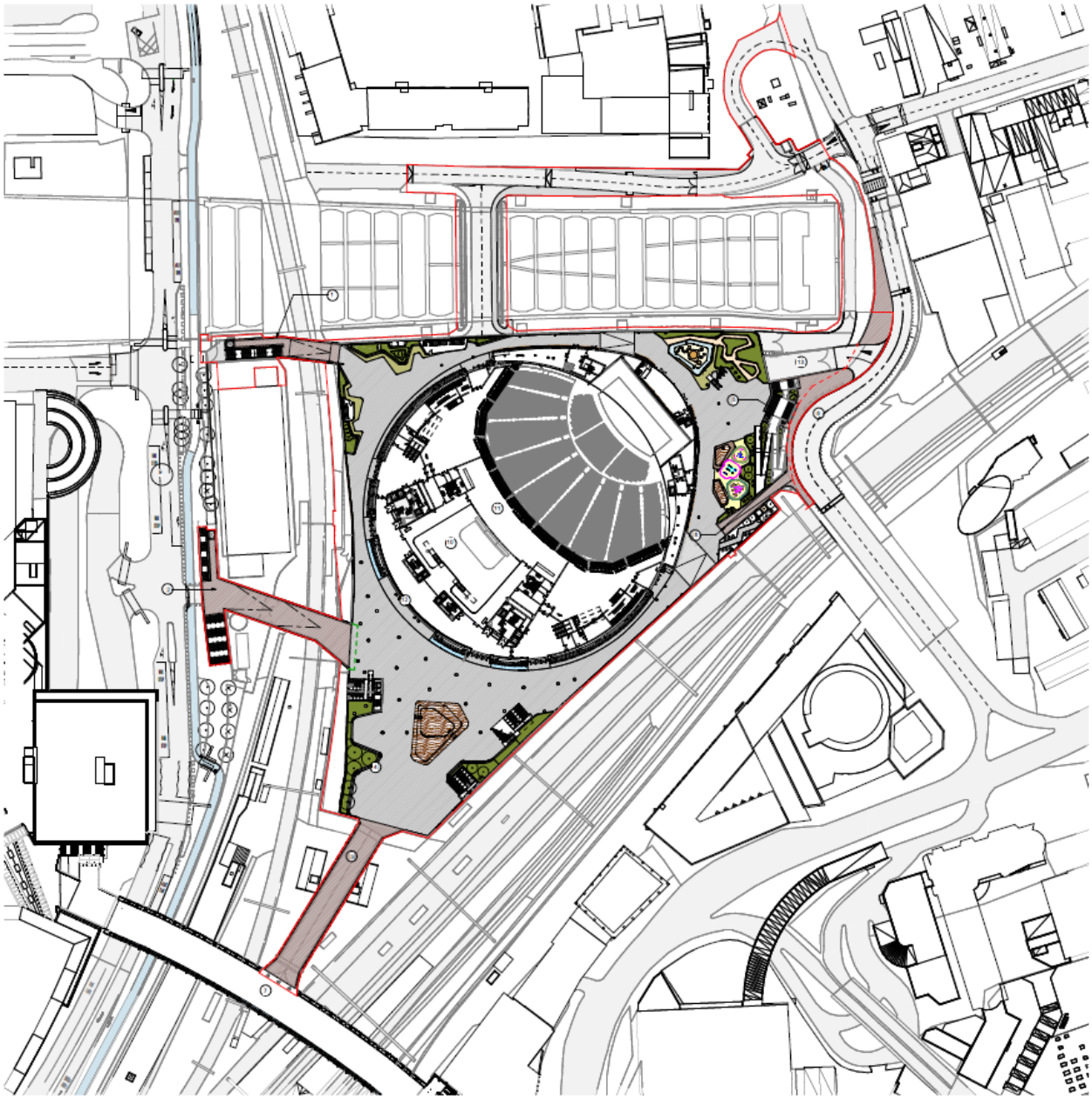
Should you have any questions on the above please do not hesitate to contact me.

Yours sincerely,

Ms Rajvinder Kaur
For and on Behalf of Amanda Reid, Director of Planning and Development, Chielf Planning Officer

1.0 Appendix 1: ES Review Report, prepared by Temple, dated 15th May 2019

Report for – London Borough of Newham
Madison Square Garden Sphere ES Review
ES Review Report
LBN-010-IRR-001-1.0
Final



Document Version Control

Version	Date	Author	Reviewed by	Reviewed and Approved by
1.0	15/05/19	Spencer McGawley	Katharine Carson	Mark Skelton

Report for: **London Borough of Newham**

Main Contributors: **Spencer McGawley**

1.0 INTRODUCTION TO THE REVIEW

1.1 Introduction

1.1.1 The Temple Team have been commissioned by the London Borough of Newham (LBN) to carry out on independent review of the Environmental Statement (ES) submitted in support of the planning application for Madison Square Garden (MSG) Sphere (19/00097/FUL). This is to inform the LBN consultation response to submit to the London Legacy Development Corporation (LLDC), who are acting as the Local Planning Authority in this instance. This ES Review Report (ESRR) supports a review of the ES prepared by Trium Environmental Consulting, on behalf of Stratford Garden Development Limited, hereafter referred to as 'the Applicant'.

1.1.2 The review identifies whether the ES meets the requirements set out in Schedule 4, (at least the information referred to in Part 2, and information referred to in Part 1 as is reasonably required) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (hereafter referred to as the EIA Regulations), including:

- a description of the Proposed Development comprising information on the site, design, size and other relevant features of the development;
- a description of the likely significant effects of the Proposed Development on the environment;
- a description of any features of the Proposed Development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
- a description of the reasonable alternatives studied by the developer, which are relevant to the Proposed Development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;
- a non-technical summary (NTS) of the information referred to above; and
- any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

1.1.3 The Institute of Environmental Management's (IEMA's) Quality Mark ES Review Criteria have formed the basis of review. The review has also taken account of the Planning Practice Guidance in relation to EIAs.

1.2 The ES Review Process

1.2.1 This report constitutes the ESRR, which collates the findings of the review of the ES. Each section of the report provides a list of clarifications and potential Regulation 25 information requests. It is recommended that LBN use this to inform their consultation.

2.0 REVIEW OF SCHEME AND SITE INFORMATION

2.1 Description of the Development and Site

2.1.1 The site is located within the LBN, within the administrative area of the LLDC. An area of 2.98 hectares, the site lies immediately to the east of Westfield Stratford City Shopping Centre. Currently vacant, the ground cover comprises hardstanding and scrub vegetation, along with an existing sub-station.

2.1.2 The site forms a triangular shape and is bounded by railways lines on all sides. Access is via the A112 Leyton Road/Angel Lane. The context of the site is one of redevelopment, with recently completed student accommodation, office/commercial, hotel and retail uses within the immediate area. The description of the development and site is detailed and considered acceptable.

2.2 Description of the Proposed Development

2.2.1 The Proposed Development consists of a 21,500 capacity multi-use entertainment and leisure complex in a spherical shape, set within a podium and a plaza. Four pedestrian bridges and a further vehicle bridge will be constructed to provide access to the site across the railway lines. The sphere will be covered in an illuminated surface to enable advertising and promotional media to be displayed. The site will be completed with associated landscaping/planting and creation of new open space.

Construction

2.2.2 The description of the enabling and construction phases of the project is comprehensive.

Operation

2.2.3 The description of the operational phase of the development is acceptable, subject to comments made in section 3.4, below.

2.3 Consideration of Alternatives

2.3.1 The ES provides detailed descriptions of alternatives; however, these are not particularly clearly presented. The nature of the proposals and the multi-variate elements contained do make this a challenge, and ideally this section would have been simplified, providing clearer “sign posting” within the text to assist interpretation by the reader. However, no action is required.

2.3.2 Section 2.76 refers to wind effects between the podiums, with the concluding line that *“on windy days they may not be comfortable to walk across without adequate wind mitigation”*. Further clarity could be provided as to whether the design has evolved to avoid this, or

that mitigation has indeed been specified. **This has been included as a clarification in the summary box below.**

Summary of Clarifications Required
1. Clarify section 2.76 with respect to mitigation.
Summary of Potential Regulation 25 Information Requests
None

3.0 REVIEW OF ES FORMAT, PRESENTATION AND SCOPE

3.1 Scope of the EIA

3.1.1 The scope of the Environmental Statement conforms to that established in the Scoping response made by LLDC (18/00390/SCOES).

3.1.2 However, the information presented in Chapter 1 suffers from a lack of clarity over the process of scoping out topics. The rationale for including certain topics for specific mention (e.g. Geoenvironmental, Archaeology, Ecology, Telecommunications/Electronic Interference) in this section is unclear, since some of these topics have been scoped in and others out. The section would benefit from a more judicious use of headings/sub-headings to make this process far clearer. No action is required, however.

3.1.3 Similarly, the rationale for the Impact Assessment scenarios (section 1.89 -1.94) is hard to follow and rather vague. Scenario 2(b) is at first listed, then removed in the following text. For avoidance of confusions, a clear statement on the scenarios assessed and the validity of the evolved baselines used should be provided. **This is included as a clarification in the summary box below.**

3.2 Consultation

3.2.1 Consultation is mentioned in section 1.8, which itself cross-references to Chapter 2, (implicitly section 2.99-2.101). This section refers to consultation, statutory and public being undertaken and provides a summary of design evolutions as a result of this consultation. Whilst this summary is welcomed due to its brevity and clarity, it is appropriate that the ES includes more detail as to nature of the consultations, and the specific responses of the bodies concerned. Section 1.8 references the Planning Statement, Statement of Community Involvement, and Design and Access Statement as "*summaris(ing) the wider consultation that has been undertaken with various consultees throughout the pre-application process*". Ideally, this information should be provided in a summarised form within the ES proper. No action is required however.

3.3 Non-Technical Summary

3.3.1 The Non-Technical Summary provides a summarised version of the ES, however, section 1.13 "Technical topics included in the Environmental Impact Assessment" is not consistent with section 1.118 of the ES. There is confusion between topics that are part of the scope of the ES, and those that are not part of the ES, but seem to have been included as Appendices.

3.3.2 The scope of the ES should be presented in a clear, concise and consistent manner in the NTS, and as such the NTS is considered potentially deficient and misleading. **This is included as a potential Regulation 25 request in the summary box below.**

3.4 Overall Presentation

3.4.1 The ES has clearly been the subject of a large amount of work and contains a lot of information. However, this volume of information is provided at the expense of clarity.

Sections are overly complex and difficult to interpret and would benefit from a clearer use of headings/sub-headings to help the reader navigate the information.

3.4.2 Chapter 3 "The Proposed Development" is overly lengthy and reads more like a design statement, containing details beyond those required for the ES.

3.4.3 The text throughout the ES makes ample use of cross-references to other chapters and appendices. This run contrary to best practice which would have key information reproduced in the relevant chapter.

3.4.4 The figures within the ES are often difficult to read at the standard print scale (A4) with notes and labelling often too small to read. Figures 3.15 – 3.17 (Landscaping General Arrangement Drawings) are provided without a suitable key and a scale at which they can be interpreted, as a result the type and nature of planting is not clear. **This is included as a clarification in the summary box below.**

3.5 Cumulative Effects

3.5.1 The scoping report identifies 10 relevant cumulative schemes, reproduced in section 1.171, with reference made in section 1.161 to *"each technical assessment…is clear on the cumulative schemes that have been considered".* A review of technical chapters shows that this has not been clearly and consistently undertaken. The consideration of cumulative schemes should be clarified. **This is included as a clarification in the summary box below.**

3.5.2 Section 1.172 refers the reader to a location plan contained within an Appendix. This figure should be reproduced in the main ES.

3.5.3 Chapter 15: In-Combination Effects / Effect Interactions presents a specific summary of this issue and provides a well-reasoned conclusion as to the nature of these effects.

Summary of Clarifications Required
2. Provide clarification as to the validity of the scenarios/baselines considered. 3. Review of drawings/figures at appropriate scale; re-issue figures with relevant keys. 4. Cumulative schemes considered in technical assessments should be clarified, where appropriate.
Summary of Potential Regulation 25 Information Requests
5. Provide an updated Non-Technical Summary with revised description of scope consistent with that described in the ES.

4.0 CHAPTER 5: SOCIO-ECONOMICS AND HEALTH

4.1 Scope of Technical Chapter

4.1.1 The scope is appropriate and proportionate to the type, location and scale of development proposed. The health scope is based around an assessment of the determinants of health, namely factors that have an influence of health including lifestyle, environmental and socio-economic factors. This is considered to be a best practice approach as recommended by the World Health Organisation (WHO) and by industry standards, due to the difficulties in predicting actual certain socio-economic and health outcomes which have complex causal pathways.

4.1.2 In general, the methodology and approach used for assessing socio-economic and health effects are industry standard and clear, which are referenced throughout the chapter. In addition, different spatial areas are used for different effects, it should be noted that the geographical levels are provided within the assessment methodology section of the chapter.

4.2 Baseline Conditions

4.2.1 The baseline conditions section is relatively thorough at a London Legacy Development Corporation (LLDC) and local authority levels making use of the most up to date information including 2011 Census, other ONS sources and GLA London Datastore.

4.3 Prediction of Impact Magnitude and Significance

4.3.1 The assessment is necessarily qualitative, based on professional judgement as would be expected, backed by quantitative data which is set out clearly (including how the figures have been calculated and reference to relevant source documents).

4.3.2 The assessors have provided a summary box which outlines both the magnitude and sensitivity of the receptors to changes based on the baseline assessment which is helpful.

4.3.3 The level of visitors to the venue may have effects on facilities such as open spaces in the area (especially since there is a deficiency of open spaces in the area). This does not seem to have been considered as part of the assessment. The quantum of open space provided as part of the development has also not been provided. **This is included as a clarification in the summary box below.**

4.4 Mitigation and Monitoring

4.4.1 Developer contributions (through the Section 106 obligations and contribution towards employment and training initiatives) will be required to mitigate the effects on the following receptors:

- Local jobs (construction and operational phases);
- Air quality (construction and operational phase);
- Noise and vibration (construction and operational phase);
- Access to work and training (operational phase); and,

- Light pollution (operational phase).

4.4.2 Much of the mitigation outlined is embedded or monitored mitigation including increased employment access for local residents and health receptors. There are also measures to reduce pedestrian severance and mitigate environmental effects such as visual, air quality and noise during construction and operation. These are covered more fully in these respective chapters.

4.4.3 It would be useful if the embedded and additional mitigations were summarised in a table to make it clearer for the reader.

4.5 Cumulative Effects

4.5.1 The cumulative assessment considers a reasonably comprehensive set of socio-economic and health impacts. However, it is important to note that the cumulative section focuses solely on A&E and primary healthcare provision and does not provide any high-level information on other impacts such as open space or air quality.

4.6 Commentary on the Conclusions of the ES

4.6.1 For the majority of the chapter, the analysis of the data is clearly presented and appears to be robust. With the exception of the cumulative assessment for certain other health receptors, the conclusions of the assessment seem to be justified based on the data provided.

4.7 Commentary on the Adequacy of NTS

4.7.1 The NTS is, in general, an adequate summary of what is concluded in the chapter. The NTS provides information on the construction and operational phases.

Summary of Clarifications Required
6. Has an assessment of impact of visitors on local open spaces been undertaken and if not why not. Linked to this, what is the size of proposed publicly accessible open space to be provided within the development, when will this be accessible and how has it been determined that this is sufficient/appropriate..
Summary of Potential Regulation 25 Information Requests
None.

5.0 CHAPTER 6: HIGHWAYS, TRANSPORT AND MOVEMENT

5.1 Scope of Technical Chapter

5.1.1 The scope of the technical chapter is considered adequate.

5.2 Baseline Conditions

5.2.1 The description of the baseline conditions is considered adequate with the exception of the below.

5.2.2 The baseline conditions for public transport indicate that in 2022, the public transport system is well below capacity. For example, trains away from London during the evening peak will only be at half capacity. This seems low; however, the ES is supported by a Transport Assessment which has modelled the baseline as such. Further justification for the derivation and uses of these baseline conditions should be provided. In addition, clarification needs to be provided from the Applicant as to whether there is commitment to only operate the venue when there is space capacity during the evening peak and when no other local events may change the average. If this is not the case, an understanding of the reasonable worst case should be provided i.e. stadium in use, weekends, bank holidays, events in Elizabeth Park, multiple nearby stadiums in use for football and concert events. **This has been included as a clarification in the summary box below.**

5.3 Prediction of Impact Magnitude and Significance

5.3.1 The effects of severance and pedestrian and cyclist amenity in Section 6.180 to Section 6.187 are somewhat difficult to understand because the receptors have not been stated. For example, it is not clear if the effects identified in Section 6.185 related just to cyclists or also to pedestrians. In Section 6.187 it is also unclear. Both paragraphs discuss the A112 Angel Lane but have different effect significance and neither mention receptor. It should be clarified which effects are related to pedestrians, which are related to cyclists and which are related to both. **This is included as a clarification in the summary box below.**

5.3.2 The same difficulty in understanding applies to Sections 6.197 to Section 6.201, which describes pedestrian and cyclist delay. **This is included as a clarification in the summary box below.**

5.4 Mitigation and Monitoring

5.4.1 The mitigation and monitoring proposed is considered adequate.

5.5 Cumulative Effects

5.5.1 The use of 2031 as a future baseline year for the cumulative scenario has not been justified. A rationale similar to that in section 6.15 of the ES (justification of 2022 baseline scenario) should be provided. **This is included as a clarification in the summary box below.**

5.5.2 Furthermore, there is no explanation why an assessment of the Proposed Development and committed developments has not been undertaken against the 2022 baseline

scenario. The reason for the differing approach for the assessment of cumulative effects in this chapter should be justified. The assessment of cumulative effects in other chapters rightly compares the Proposed Development and commitment developments against the baseline scenario to determine how the total development in the area will cumulatively affect existing receptors. **This is included as a potential clarification in the summary box below.**

5.6 Commentary on the Conclusions of the ES

5.6.1 From an assessment of environmental effects, the ES is adequate. The sensitivity testing of different scenarios is welcomed.

5.6.2 The ES is supported by a Transport Assessment which has modelled the capacity and demand of the public transport network. The baseline demand to capacity ratio seems low, as for example, during the evening peak, the trains away from London are predicted to be operating at half capacity. Justification for these figures is required.

5.7 Commentary on the Adequacy of NTS

The NTS is considered adequate although Section 1.98 of the NTS does not mention the 2031 assessment. No action is required.

Summary of Clarifications Required
7. Justification for the baseline demand to capacity ratio for public transport network and provide reasonable worst case. 8. The receptors for the effects of severance and pedestrian and cyclist amenity in Section 6.180 to Section 6.187 should be clarified. 9. The receptors for the effects of pedestrian and cyclist delay in Section 6.197 to Section 6.201 should be clarified. 10. Clarify the use of 2031 as a future baseline should be provided. 11. Clarification should be provided why the cumulative effects assessment in this chapter is done on a different basis from other chapters.
Summary of Potential Regulation 25 Information Requests
None

6.0 CHAPTER 7: NOISE AND VIBRATION

6.1 Scope of Technical Chapter

6.1.1 The overall scope of the ES includes all required assessments. Legislation, standards and guidance used for the assessments is included in Annex 2 of the Noise and Vibration Technical Appendices, these are considered appropriate.

6.2 Baseline Conditions

6.2.1 The survey methodology and results are considered appropriate, the survey was undertaken in 2018 and comprised of both unattended and attended monitoring. A robust number of noise measurement locations at key receptor locations have been used, covering relevant time periods. Vibration measurements have been undertaken at the site boundaries to capture PPV levels from the nearby railway line.

6.2.2 Additional measurements were also undertaken in 2018 during the summer event programme at the London Stadium to establish typical levels associated with crowd movements to and from events. The capacity of the London Stadium is three times that of the Proposed Development therefore this measurement is a worst-case scenario and is appropriate.

6.2.3 Future baseline (2022) has been considered, taking into account increases in road traffic on the surrounding road network.

6.3 Prediction of Impact Magnitude and Significance

6.3.1 The predictions of construction noise follow the method set out in BS5228. The applicant has taken into account the significant activities for both daytime and night-time. Non-noisy works such as fitout and external landscaping have been scoped out. Three phases of construction were assessed, site enabling works, piling and substructure and superstructure. Plant lists for all three phases have been included and are reasonably worst-case.

6.3.2 The applicant has predicted the combined noise level from the main activities to each of the identified sensitive receptors. The assessment of noise from the construction phases has produced effects of substantial adverse significance, which given the close proximity of some receptors and requirement for night-time working, is appropriate.

6.3.3 For construction traffic, the existing baseline movements on the surrounding road network are already sufficiently high therefore the relatively small number of HGVs associated with the scheme will only make a negligible difference.

6.3.4 The construction vibration assessment has used a screening distance based on historic data available within BS5228 to predict effects. Given the proximity of receptors, it's unlikely piling will cause any adverse impact, however, this will depend on the type of piling and ground conditions which are not currently known. The applicant suggests monitoring of vibration at nearby residential receptors during construction and assesses the resultant effect as minor adverse, which is appropriate.

6.3.5 Operational road traffic has been assessed using CadnaA modelling software and predicted using combined 2022 road traffic, on-site traffic and rail. Minor adverse effects have been identified due to the already existing high volume of traffic on the surrounding road network.

6.3.6 Whilst on-site traffic has been assessed as part of the operational traffic assessment, noise from on-site servicing and loading/unloading has not been assessed. This could potentially cause impacts if occurring in the early morning or late at night, depending on where the loading bay is and whether it is screened or not. **This is included as a potential Regulation 25 information request in the summary box below.**

6.3.7 The assessment of night-time operation of the music club queue, bar/restaurant and retail space has been undertaken in two stages, a maximum occupancy and a more 'realistic' occupancy. The worst-case assessment results in moderate adverse effects at the closest receptors and the more realistic occupancy reduces these to minor adverse effects. Given the nature of these assessments and the estimations involved, the worst-case effects should be taken forward to the residual effect stage. The methodology for these calculations is detailed in this noise and vibration technical appendix and deemed appropriate.

6.3.8 The crowd dispersion assessment uses noise levels obtained during the crowd noise survey undertaken at the London Stadium in 2018. Levels have been predicted for the worst-case 15 minute L_{Aeq} and for L_{Amax} levels. Predicted levels have been assessed using criteria in the IoA / IEMA 'Guidelines for Noise Impact Assessments'. The assessment results in minor adverse effects for the worst-case 15-minute L_{Aeq} and moderate effects for the L_{Amax}. The methodology and results are deemed appropriate.

6.3.9 Music noise emissions have been calculated using the buildings current façade/envelope design. The assessment is appropriate and results in negligible daytime effects and minor adverse effects during the night-time.

6.3.10 As the public address / alarm system will likely be above the existing ambient conditions but only for 15 minutes at a time when testing, this has been deemed a minor adverse effect at receptors closest to the podium which is appropriate.

6.3.11 The assessment of building services noise emissions is appropriate and has been assessed in accordance with LA guidance and BS4142. Noise limits have been provided to ensure compliance.

6.4 Mitigation and Monitoring

6.4.1 Noise from construction (including construction traffic) will be mitigated by adoption of best practicable means as defined in Section 72 of the COPA. The applicant has suggested additional mitigation measures, including those set out in BS 5228. During detailed construction programme stage and preparation of the Construction Environmental Management Plan, measures to mitigate potential noise and vibration effects will be defined and agreed with the LLDC. Therefore, no change to the residual effects post-mitigation can be assumed for construction noise until these mitigation measures have been confirmed.

6.4.2 Vibration will be monitored, controlled and assessed using limits set-out in BS5228 part 2, effects are expected to remain as minor.

6.4.3 Noise generated by operational traffic (road, on-site and rail) indicated that no mitigation is required, residual effects are minor adverse for nearby residential receptors and negligible for others.

6.4.4 Noise from queuing at the music club has been assessed and found to be negligible, however, these are based on a number of assumptions and noise monitoring will be undertaken to determine whether additional mitigation is required.

6.4.5 Night time noise emissions from people on the podium, plaza and upper terraces has been assessed to be moderate adverse at the closest receptors for worst-case. More realistic assumptions have also been assessed which results in minor adverse effects at the closest receptors, however, given the nature of the predictions, assumptions and assessment, the worst-case effects should be used. A management plan will be implemented, and noise monitoring undertaken at the venue to evaluate and identify any requirement for additional mitigation.

6.4.6 Mitigation of crowd dispersion noise is not quantifiable and therefore effects cannot be reduced at this stage. Implementation of a noise management plan and monitoring will be required during operation to identify any mitigation requirements such as alternative routes.

6.4.7 Noise from amplified music has been assessed and indicated that the lowest limits will be achieved with the worst-case assumptions. No further mitigation is required as daytime effects are negligible and night-time are minor.

6.4.8 No further mitigation is required for the public address system.

6.4.9 Building services plant will be designed to the limits required by the LA and those in BS4142. No further mitigation measures are required.

6.4.10 The mitigation measures listed in the ES are considered appropriate.

6.5 Cumulative Effects

6.5.1 The assessment of construction cumulative effects has assumed that noise and vibration will be controlled for all schemes to achieve suitable noise limits. Most cumulative effects are expected to be unchanged from what was identified in isolation. However, noise levels at Morgan House and Telford Tower may cause an increase in effect levels during construction.

6.5.2 The operational cumulative assessment is considered appropriate, noting the assumption that for building service noise for all cumulative schemes plant will be designed to achieve suitable noise limits and will therefore remain negligible.

6.5.3 Traffic data used in the assessment has already considered traffic from cumulative schemes and will remain minor / negligible.

6.6 Commentary on the Conclusions of the ES

6.6.1 The conclusions of the ES are considered appropriate.

6.7 Commentary on the Adequacy of NTS

The NTS adequately summarises the assessment and allows the reader to understand the effects of the Proposed Development.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
12. In paragraph 7.130, additional traffic associated with event servicing and management is included in the operational traffic assessment and a figure showing the results is presented in 7.16. However, more information regarding the servicing is required to fully understand the potential impact, i.e. if this is happening during the early morning/night-time and involves reversing alarm and/or loading/unloading this may cause an effect at Chobham Farm and will require a small assessment similar to that of the public address system.

7.0 CHAPTER 8: AIR QUALITY

7.1 Scope of Technical Chapter

7.1.1 Ecological receptors have not been considered in the assessment. The Applicant should indicate whether there are any ecological receptors within the study area that should have been considered in accordance with IAQM guidance[1]. **This is included as a clarification in the summary box below.**

7.2 Baseline Conditions

7.2.1 The baseline assessment includes consideration of emissions from industrial sources that may affect the Proposed Development, however only waste management sources are discussed. The Applicant should clarify whether there are any industrial installations regulated by the London Borough of Newham or the Environment Agency that may affect air quality at the Proposed Development. **This is included as a clarification in the summary box below**.

7.2.2 The Proposed Development is located within the Stratford Town Centre and Romford Road air quality focus area, however modelled pollution levels from the London Atmospheric Emission Inventory pollution maps are not presented. The LAEI provides the highest resolution predictions of air quality across London. However, this is a minor issue and no action is required.

7.2.3 Estimated annual mean background pollutant concentrations in 2017, 2022 and 2031 are provided in Table 8.7. These are derived from Defra background maps calibrated against national monitoring sites as described in Volume 3: Appendix Air Quality – Annex 2 section A2.10. However, calculations and details of national monitoring sites used are not provided in the Appendix. The Applicant should provide calculations associated with calibration of Defra background maps with monitoring data and details of monitoring sites used. **This is included as a potential Regulation 25 information request in the summary box below**.

7.3 Prediction of Impact Magnitude and Significance

Effects During Construction

7.3.1 Ecological receptors have not been considered in the assessment as outlined in paragraph 7.1.1.

7.3.2 The dust risk assessment of earthworks, construction, and trackout activities during the construction phase is acceptable pending clarification regarding ecological receptors.

7.3.3 The assessment of emissions associated with road traffic during construction is acceptable pending clarification regarding ecological receptors.

[1] IAQM (2016) Guidance on the Assessment of Dust from Demolition and Construction v1.1.

Moorcroft and Barrowcliffe et al (2017) Land-Use Planning & Development Control: Planning For Air Quality v1.2, IAQM, London

Operational Impacts

Generator Emissions

7.3.4 The impact assessment of generator emissions on annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations should be based on process contributions plus background concentrations in accordance with IAQM guidance. The Applicant should update Table 8.18 with these results and amend explanatory text in section 8.117. **This is included as a potential Regulation 25 information request in the summary box below**.

7.3.5 Section 8.117 states that predicted process contributions associated with Generator Emissions were compared with EPUK/IAQM screening criteria. However, the 10% screening criteria is not applicable to the 24 hour mean PM_{10} objective. The daily mean PM_{10} concentration should be derived from the Annual Mean (process contribution plus background concentration) in accordance with section 6.34 of IAQM Guidance. The explanatory text in section 8.117 should be updated accordingly. **This is included as a potential Regulation 25 information request in the summary box below.**

7.3.6 Further information is required in line with the comments above to determine whether the assessment of significance for Generator Emissions is correct.

Road Traffic

7.3.7 In accordance with Defra guidance (LAQM. TG(16)) a combination of continuous monitoring and diffusion tubes is recommended for use in verification. The use of one continuous monitor alone to derive the adjustment factor for a model is not recommended. For this assessment model verification was undertaken using one automatic monitoring site (NM2). An adjustment factor using local monitoring data from multiple monitoring sites may result in different total adjusted modelled NO_2 concentrations, however this is unlikely to alter the conclusions of the assessment. However, the Applicant should provide clarification on why other monitoring sites such were not used for model verification. **This is included as a clarification in the summary box below.**

7.3.8 Two different sets of AADT flow data were used for the 'With Scheme' assessments. One set of AADT values for prediction of long-term impacts and a different set of values to predict short term impacts (AADT values uplifted by a factor of 1.1086). The Applicant should clarify why time varying emission factors were not used for the 'With Scheme' assessments rather than using two different AADT flow data and demonstrate that the approach adopted provides the most conservative estimate of short-term impacts. **This is included as a clarification in the summary box below.**

7.3.9 Clarifications are required in line with the comments above to determine whether the assessment of significance for Road Traffic emissions is correct.

Air Quality Neutral

7.3.10 Energy for the Proposed Development is to be supplied the Engie Energy Centre and emissions from this source should be included in the Air Quality Neutral Assessment. **This is included as a potential Regulation 25 information request in the summary box below.**

7.4 Mitigation and Monitoring

7.4.1 Dust Management Plan (DMP) mitigation measures proposed in Annex 9 are considered adequate for the predicted dust risk from construction activities. However, dust monitoring is not included. The Applicant should include a commitment in the DMP to liaise with the Local Authority to determine monitoring requirements. **This is included as a clarification in the summary box below.**

7.4.2 It is recommended that the Local Planning Authority agree appropriate monitoring requirements by condition.

7.5 Cumulative Effects

7.5.1 Traffic data used in the assessment included traffic associated with other committed developments within the study area.

7.5.2 The assessment of cumulative effects during construction is considered adequate. However, the Applicant should identify the 12 developments stated as having potential cumulative construction effects. **This is included as a clarification in the summary box below**.

7.5.3 It is recommended that the Local Planning Authority require the appointed Principal Construction Contractor to become a member of London Legacy Development Corporation Construction Management Group to manage and coordinate the cumulative impacts of the Proposed Development with those of the 12 identified developments.

7.6 Commentary on the Conclusions of the ES

7.6.1 Clarifications are required in line with the comments above to determine whether the conclusions of the ES are appropriate.

7.7 Commentary on the Adequacy of NTS

The NTS provides a reasonable summary of the air quality chapter but is subject to the same limitations as identified above.

Summary of Clarifications Required
13. The Applicant should indicate whether there are any ecological receptors within the study area that should have been considered in accordance with IAQM guidance. 14. The Applicant should clarify whether there are any industrial installations regulated by the London Borough of Newham or the Environment Agency that may affect air quality at the Proposed Development. 15. The Applicant should clarify why model verification was based on one automatic monitoring site only. 16. The Applicant should clarify why time varying emission factors were not used for the 'With Scheme' assessments rather than using two different AADT flow data and demonstrate that the approach adopted provides the most conservative estimate of short-term impacts. 17. The Applicant should clarify whether they are committed to liaise with the Local Authority to determine dust monitoring requirements. 18. The Applicant should confirm the 12 developments sites identified as having potential cumulative construction effects.
Summary of Potential Regulation 25 Information Requests

19. The Applicant should provide calculations associated with calibration of Defra background maps with monitoring data and details of monitoring sites used.
20. The impact assessment of generator emissions on annual mean NO_2, PM_{10} and $PM_{2.5}$ concentrations should be based on process contributions plus background concentrations in accordance with IAQM guidance. The Applicant should update Table 8.18 with these results and amend explanatory text in section 8.117.
21. Section 8.117 states that predicted process contributions associated with Generator Emissions were compared with EPUK/IAQM screening criteria. However, the 10% screening criteria is not applicable to the 24 hour mean PM_{10} objective. The daily mean PM_{10} concentration should be derived from the Annual Mean (process contribution plus background concentration) in accordance with section 6.34 of IAQM Guidance. The explanatory text in section 8.117 should be updated accordingly.
22. Energy for the Proposed Development is to be supplied the Engie Energy Centre and emissions from this source should be included in the Air Quality Neutral Assessment.

8.0 CHAPTER 9: WIND MICROCLIMATE

8.1 Scope of Technical Chapter

8.1.1 The chapter considers both construction and operational phases.

8.1.2 It includes a section to explain how the comments from the EIA Scoping Opinion have been incorporated, and it is welcomed that wind tunnel tests have been undertaken. It uses the well-established Lawson Comfort Criteria as a means of assessing the desirability of wind conditions in Summer and Winter periods, as well as safety exceedances associated with strong winds.

8.1.3 It assesses ground level as well as podium level wind conditions and includes scenarios with and without cumulative schemes and landscaping.

8.1.4 Overall the assessment scope is considered appropriate.

8.2 Baseline Conditions

8.2.1 Figures 9.4 and 9.5 show the wind tunnel results for the baseline conditions in the windiest and summer seasons, respectively. The majority of areas are relatively calm, with standing and strolling conditions. Walking conditions, and occasional strong winds, are experienced at locations 16, 17 and 18.

8.2.2 Future baseline conditions for the year 2022 includes the massing of cumulative buildings which has the effect of sheltering some parts of the site from winds. This includes all parts being sheltered from strong winds.

8.2.3 Paragraphs 9.103 and 9.104 considers the effect of climate change (effectively a future baseline), and notes that the *"annual and seasonal changes in median wind speeds from baseline to 2080s are not predicted to exceed 0.07m/s"*, based on UKCP09 projections. Please note that UKCP18 data is superseding that from UKCP09, and although not fully available, the fact sheet for wind states that *"an increase in near surface wind speeds over the UK for the second half of the 21st century for the winter season [is predicted] when more significant impacts of wind are experienced. This is accompanied by an increase in frequency of winter storms over the UK"*. It however acknowledges that the increase in wind speeds is modest compared to interannual variability.

8.2.4 It is therefore not considered appropriate to refer to the modest increase in median wind speeds, when there is a risk of more incidences of strong winds which may result in a significant effect at a future time during the lifespan of the proposed development. Clarification is required as to how the most recent climate change predictions will affect the assessment of strong winds. **This is included as a clarification in the summary box below.**

8.3 Prediction of Impact Magnitude and Significance

8.3.1 The chapter provided a useful set of images (Figure 9.1 and 9.2) that identified receptor locations and their targeted future use, to allow the effects to be assessed.

8.3.2 Negligible effects are expected for the majority of thoroughfares, entrances, waiting areas, amenity spaces (podium and terraces) and strong winds. Location 127 (entrance), 18 &

56 (waiting), 158, 160, 162, 169 & 172 (amenity space, terrace) and 159 (stairs to South Terrace) required mitigation.

8.4 Mitigation and Monitoring

8.4.1 A wind tunnel workshop was carried out on 9th November 2018 to test various measures to mitigate any adverse effects. Paragraph 9.91 describes that shrubs, porous screens and a recessed entrance were incorporated, and that these were effective in reducing the effects to negligible in all cases.

8.5 Cumulative Effects

8.5.1 A wind tunnel test was undertaken with the massing of surrounding cumulative schemes, assessed for a future 2022 baseline. This is acceptable.

8.6 Commentary on the Conclusions of the ES

8.6.1 Overall, the conclusions of the ES are acceptable.

8.7 Commentary on the Adequacy of NTS

The NTS provides an acceptable summary of the chapter.

Summary of Clarifications Required
23. Clarify whether the UKCP18 data that predict more frequent winter storms will lead to occurrences of strong winds, and whether additional mitigation could be applied in the future if necessary.
Summary of Potential Regulation 25 Information Requests
None.

9.0 CHAPTER 10: DAYLIGHT, SUNLIGHT AND OVERSHADOWING

9.1 Scope of Technical Chapter

9.1.1 The assessment uses the BRE guidance and BS8206:2008 which are referenced in the London Plan and relevant for this assessment.

9.1.2 Calculations for both existing and proposed scenarios have been carried out. The approach is considered appropriate for this assessment.

9.2 Baseline Conditions

9.2.1 Calculations have been carried out for neighbouring properties. Vertical Sky Component (VSC), No Sky Line (NSL), Annual Probable Sunlight Hours (APSH), Winter Sunlight Hours (APSH) and overshadowing have all been considered. The extent of the calculations is considered appropriate for the assessment. Additional calculations have been carried out for identified receptors using a mirrored baseline in accordance with BRE guidance.

9.3 Prediction of Impact Magnitude and Significance

9.3.1 The assessment demonstrates that the Proposed Development will have minor adverse effect on neighbouring properties regarding VSC and NSL. Of the 26 identified receptor groups / properties, 21 will not experience a noticeable change to daylight availability. The remaining 5 receptors assessed will experience a minor adverse effect on daylight amenity. The mirrored baseline has been used in accordance with BRE guidance.

9.3.2 The assessment demonstrates that the Proposed Development will have minor adverse effect on neighbouring properties regarding APSH and WPSH. Of the 20 identified receptor groups / properties, 17 will not experience a noticeable change to sunlight availability. The remaining 3 receptors assessed will experience a minor adverse effect on daylight amenity.

9.3.3 The assessment demonstrates that the Proposed Development will have no effect on the 28 assessed surrounding amenity spaces for Overshadowing.

9.3.4 Calculations show that the majority of amenity areas provided within the Proposed Development will comply with the BRE criteria for overshadowing.

9.4 Mitigation and Monitoring

9.4.1 No mitigation is proposed for the development. This is considered appropriate as the calculations are based on building size and shape. The table has been completed accordingly.

9.5 Cumulative Effects

9.5.1 The report states that no other developments are in the immediate area and so no cumulative impacts have been assessed.

9.6 Commentary on the Conclusions of the ES

9.6.1 The conclusions contained within the ES chapter are accurate. There will be a reduction in daylight and sunlight availability to some existing properties but all amenity space will not be affected by the proposals. The results and conclusion are consistent with expectations as the development proposal is located in an area dominated by residential use. The Proposed Development will achieve levels of daylight and sunlight availability as expected for a scheme of this type.

9.7 Commentary on the Adequacy of NTS

9.7.1 The NTS is considered to be an accurate representation of the ES chapter.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
None.

10.0 CHAPTER 11: LIGHT INTRUSION AND UPWARD SKY GLOW

10.1 Scope of Technical Chapter

10.1.1 The chapter considers both construction and operational phases. It includes analysis of light intrusion and upward skyglow. The scope of the assessment was agreed with Arup as part of the Scoping Opinion, and this excluded an assessment of building luminance and luminaire intensity.

10.1.2 The scope of the chapter is considered acceptable, but notwithstanding this, there are a number of comments provided below on the approach, methodology and assessment of impacts which are designed to ensure effects on the environment are acceptable, and therefore may supersede response provided in the scoping opinion.

10.2 Baseline Conditions

10.2.1 For the assessment of light intrusion and upward skyglow, there is no guidance with respect to acceptable levels of change, instead it considers the overall predicted levels against those recommended in guidance.

10.2.2 The baseline assessment modelled all neighbouring buildings that could be affected and analysed all windows with a direct or peripheral view of the site. It categorises properties into high sensitivity if they are a permanent residential home, and medium/low sensitivity if they are 'more periodic or occasional occupation'. Whilst it is accepted that hotel users can be considered as lower sensitivity, it is not accepted that student accommodation should be any less sensitive than permanent residences. Students will tend to live in the accommodation for a large proportion of the year (usually through the darker autumn/winter months) and whilst they will not be affected by aspects such as property values, they do have an expectation of uninterrupted sleep and accommodation that does not have large amounts of light intrusion. Therefore, it is considered that they should be assessed as high sensitivity. **This is included as a potential Regulation 25 information request below.**

10.3 Prediction of Impact Magnitude and Significance

10.3.1 Paragraphs 11.12-11.13 describes the construction phase assessment. With reference to light intrusion and upward skyglow the chapter states that any effects would not occur until the proposed development is operational and therefore any effects would be less during construction.

10.3.2 This point disregards the fact that construction site lighting will be completely different to the type of lighting expected during operation. Clarification is required with respect to how construction lighting will be managed and significant effects avoided. **This is included as a clarification point in the box below.**

10.3.3 The assessment of light intrusion from the completed development considered two scenarios, a still white light (stated to be the worst case) and a moving image of divers swimming in the ocean (stated to be a more realistic assessment). Whilst it is appreciated that the ILP Guidance on assessing light intrusion effects identifies limits for light levels falling onto affected windows to be ideally no more than 25 lux and 5 lux, pre- and post-curfew (11pm), the assessment has arguably not identified the key potential impact of

intrusion. This could be its consideration as a statutory nuisance under the Environmental Protection Act 1990, whereby for artificial light to count *"it must do one of the following:*

- *unreasonably and substantially interfere with the use or enjoyment of a home or other premises*
- *injure health or be likely to injure health"*[2]*.*

10.3.4 Given that the proposed development's dome will be used for advertising, it seems fair to assume that the adverts will be eye-catching, and potentially display flashing coloured images. A realistic worst-case scenario could potentially therefore be an alternating sequence of unilluminated, white and red light (for example) that would arguably have a more intrusive and nuisance effect than a simple white light that occupants could become accustomed to. Likewise a moving image of divers is not considered to be a realistic assessment, as firstly, blue is a naturally calming colour and during diving, the primary colour will largely remain consistent. The image provided in Figure 11.21 shows a relatively dark palette of colours, which may be at variance with that actually to be displayed.

10.3.5 The assessment does not consider what could be termed the "Piccadilly Circus" effect, of bright lights in vibrant colours in a changing series of displays. Mitigation measures of limiting lux levels are suggested, but it is not clear if the screen will be able to operate at a reduced output to satisfactorily serve its purpose, and thus be an effective disincentive to operate a reduced lighting profile.

10.3.6 More detail needs to be provided within the mitigation measures regarding restrictions on screen use/type of displays (colour palette, image duration, etc), and how these will be effectively delivered.

10.3.7 Furthermore, the frequency of the lighting flicker has not been considered with respect to health or risk of health (both from aspects such as epilepsy and for the potential to distract road and rail users). Further detail is required to ensure that potentially significant nuisance and safety effects will not occur. **These issues are included as potential Regulation 25 information requests in the summary box below (i).**

10.3.8 With respect to upward skyglow, it is noted that the sphere element is not a luminaire and so no formal limits can be applied. Given the issues around light pollution, it is considered that despite the site being within Environmental Zone 4, the sky should be considered as a sensitive receptor. Table 11.8 describes how the worst case assessment would result in lux levels of 0.54 being experienced at almost 1km above (990m), but 18.49 lux at 100m above. This increases under the moving image scenario. The assessment has not derived an effect on this, given the lack of guidance, however, care should be taken to not exacerbate urban light pollution, and reasonable limits should be applied to prevent this. Clarification is required as to how much reducing the LEDs toward the top of the dome (i.e. the top 10%, pointing almost directly upwards) to 30 Nits would affect this result, to allow a sensible limit to be applied. **This is included as a clarification in the box below.**

10.3.9 Please note in paragraph 11.40 that these effects will not be irreversible, as all that needs to be done is to switch off the illuminations and the effects will cease.

[2] https://www.gov.uk/guidance/artificial-light-nuisances-how-councils-deal-with-complaints

10.3.10 Post-curfew, results at Chobham Farm, Stratford Central and Stratford Eye are considered negligible (i.e. cause less than 25 lux at windows). However, some rooms with in the Moxy Hotel, Angel Lane and Railway Tavern will have minor-major adverse effects (up to 44 lux). The assessment states that little weight should be placed on these results, however, without consideration of the real potential for nuisance and flashing images it is difficult to find reason to disregard this.

10.3.11 When applying the moving blue diver image, it is stated that almost all windows will meet the 25 lux level, and result in a negligible effect. There will be minor adverse effects to windows in Stratford Central, Moxy Hotel, Angel Lane (although considering this as a residential receptor would increase this to moderate adverse) and Railway Tavern.

10.3.12 Related to 10.2.2, above, the large proportion of student accommodation showing increases in impact is undervalued by assessing these (incorrectly) as having a lower significance. Student occupation is generally during the darker autumn/winter months so impact here is an important factor. **This is included as a potential Regulation 25 information request in the summary box below (ii).**

10.4 Mitigation and Monitoring

10.4.1 Paragraphs 11.122-11.125 describes the need for mitigation, and states that mitigation will be applied to reduce impacts to non-significant levels. However, the assessment does not consider minor adverse effects to be significant, which means that the scheme would be designed to exceed the ILE Guidance levels.

10.4.2 It is understood that each LED can be controlled individually, and that the lighting design team can calibrate the lighting to not exceed certain intensities in certain directions. This will be subject to a planning condition, although this should consider the sky as a sensitive receptor, student accommodation as a more sensitive receptor and how statutory nuisance can be avoided.

10.5 Cumulative Effects

10.5.1 The surrounding cumulative schemes were included both as sources of light and also as sensitive receptors. This is considered acceptable.

10.6 Commentary on the Conclusions of the ES

10.6.1 Overall, the conclusions of the ES are acceptable.

10.7 Commentary on the Adequacy of NTS

The NTS provides an acceptable summary of the chapter.

Summary of Clarifications Required
24. Construction phase lighting will be different to operational phase lighting. Please clarify how significant effects from this will be avoided. 25. Clarify how upward skyglow levels would change if the top 10% of LEDs (towards vertical) were reduced to a maximum of 30 Nits.
Summary of Potential Regulation 25 Information Requests
26. (i and ii) The residents of the Angel Lane student accommodation will be live at this location for almost a year and therefore have an expectation to not be subject to significant levels of light intrusion. The assessment should be revised with these residents considered as high sensitivity receptors. 27. Provide more information regarding the likely nature of the displays to be shown on the sphere, how these will be controlled, and why they are appropriate in the context of the assessment presented. Particular issues to be addressed are: colour palette, image duration, flicker, luminescence, and operating limits to be applied.

11.0 CHAPTER 12: SOLAR GLARE

11.1 Scope of Technical Chapter

11.1.1 The chapter considers the operational phase only and was agreed through the scoping process. This is considered acceptable.

11.2 Baseline Conditions

11.2.1 Baseline solar glare measurements were not required. However, this section identified the receptors sensitive to solar glare, by way of 20 viewpoints representing road and rail signals, and those from nearby buildings. These receptors are considered acceptable.

11.3 Prediction of Impact Magnitude and Significance

11.3.1 The magnitude of impact is described with reference to where on the fovea (part of the eye's retina) light will fall. Although many receptors will experience negligible effects, a number of minor adverse effects are predicted at 13 view locations. Moderate adverse effects are predicted to four view locations, and major adverse effects are predicted at one view location ('TVP6 – Heading Northeast along Railway Line'). Clearly, there could be serious safety risks in an unmitigated scenario, and it is acknowledged that "further detailed façade material and glare studies are required in parallel with ongoing discussions with key stakeholders, principally Network Rail". The Applicant commits to achieving no significant residual (post mitigation) solar glare effects. However, until these are understood, a significant residual effect must remain in place.

11.3.2 Please note in paragraph 12.47 that these effects will not be irreversible; effects could be removed during building lifespan by applying a suitable covering/glazing finish if required at a future point.

11.4 Mitigation and Monitoring

11.4.1 Paragraphs 12.109-12.116 describe the approach to mitigation, acknowledging that further detailed façade material and glare studies are required. The Applicant has committed to developing this mitigation to achieve no more than insignificant effects.

11.4.2 As stated, a planning condition should be applied to this to define the specifics of the mitigation strategy. It is considered that this should be a pre-commencement condition, to avoid the case that the Proposed Development is approved with potentially dangerous glare impacts.

11.5 Cumulative Effects

11.5.1 The surrounding cumulative schemes were included as appropriately reflective massing and as sensitive receptors. This is considered acceptable.

11.6 Commentary on the Conclusions of the ES

11.6.1 Overall, the conclusions of the ES are acceptable.

11.7 Commentary on the Adequacy of NTS

The NTS provides an acceptable summary of the chapter.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
None.

12.0 CHAPTER 13: GEO-ENVIRONMENTAL

12.1 Scope of Technical Chapter

12.1.1 The Chapter focuses principally on potential contamination related impacts and effects to human health, soil and controlled waters, ecological receptors (flora and fauna) and buildings and structures. The key effects of the Proposed Development which could be significant without mitigation measures in place are considered appropriate.

12.1.2 The scope of the Geo-Environmental chapter is appropriate for the assessment of the effects from potential land contamination. The framework adopted has been set out in accordance with current guidance documents and best practice and these are adequately addressed. The study has also been carried out in accordance with local London Borough of Newham (LBN) planning policy, comprising: Core Strategy (2012) and the Detailed Sites and Policies DPD (2016).

12.1.3 The scope of the baseline study methodology and the source–pathway–target analysis of the Development Site is appropriate and adequate.

12.2 Baseline Conditions

12.2.1 The Current Baseline Conditions represent the environmental condition of the site and the surrounding area in 2018. Baseline conditions for the site have been established through the completion of a site walkover survey (April 2018) to establish the current land use and a Phase 1 Geoenvironmental and Geotechnical Desk Study. The current baseline conditions encompass the site and the surrounding area for up to 250-500m beyond the site boundary. This study area around the site boundary is considered to assess the potential for off-site contamination sources and receptors. It is noted that potential sources beyond this buffer are unlikely to impact the site.

12.2.2 Future baseline conditions consider the environmental condition of the site and the surrounding area in 2022.

12.3 Prediction of Impact Magnitude and Significance

12.3.1 The magnitude of impacts pre-mitigation for the *Enabling and Construction works* is predicted to range from Low (construction workers, surrounding site users, controlled waters) to Negligible (flora).

12.3.2 Significant effects pre-mitigation are predicted to be for construction workers only with the effect scale being Moderate Adverse. For the remaining receptors the effect scale is predicted to range from Minor Adverse (surrounding site users, controlled waters) to Negligible Neutral (flora).

12.3.3 Upon *Completion and Operation* of the Proposed Development and in the absence of any mitigation (remediation), there is a potential for ground gas migration into confined spaces which could result in the build-up of hazardous gases within the site. Future site users are High sensitivity receptors. The magnitude is High, resulting in an effect that is Major Adverse and significant (without mitigation).

12.3.4 The sensitivity of the built environment is considered Medium; the magnitude of the potential impact is Low, resulting in an effect scale of Minor Adverse effect without mitigation. The effect is not significant.

12.4 Mitigation and Monitoring

12.4.1 During the *Enabling and Construction* works activities to implement and comply with the approved Remediation Strategy are to be followed. These include further Site investigation works based on the risks identified within the Phase 1 Desk Study.

12.4.2 The Applicant proposes that LLDC secure the necessary Site Investigation work and preparation and implementation of the Remediation Strategy by appropriately worded planning conditions. The reviewer considers this to be acceptable.

12.4.3 The reviewer notes that Phase 1 Desk Study reports that there are records of drift filled hollows located within the Lea Valley area. The report notes that the formation process of a drift-filled hollow (aka. Periglacial feature) is still widely unknown along with the age of these features. But, essentially it results in the top of the London Clay or Lambeth Group being eroded away and depressed to form a hollow, which is filled in with a mix of various materials which can include: London Clay, Terrace Gravels, Lambeth Group, and in some cases, Chalk.

12.4.4 The borehole data presented in the technical appendices suggests that the risk of drift-filled hollow within the site is low; however, there is a potential for a small localised feature to be present within the site that should be investigated. If a drift-filled hollow is found, this will have an impact on the foundation design capacities and performance. The reviewer stresses the importance of undertaking a suitable investigation programme to determine whether this feature is present.

12.4.5 It is noted that the Applicant proposes that a Verification Plan will then be prepared, addressing the requirements presented within the Remediation Strategy. This Plan (and associated Verification Report is to be secured through an appropriately worded planning condition. This approach is considered appropriate

12.4.6 The scope of any future long-term monitoring work recommended in the Verification Report is to be conditioned by and agreed with the LLDC as required via the pre-commencement planning conditions.

12.4.7 A Construction Environmental Management Plan (CEMP) will be also prepared, which includes various mitigation measures. These are adequately described within Volume 1: Chapter 17 Mitigation and Monitoring Schedule.

12.4.8 The Applicant notes that the Site Investigation, Remediation Strategy, Verification Plan and Report and CEMP coupled with imported soils for landscaping and appropriate material selection for below ground structures and services will mitigate all effects identified such that there are no residual completed development/operational geoenvironmental related effects.

12.4.9 The reviewer agrees that with these mitigation measures in place, all residual effects associated with geoenvironmental considerations would be Negligible Neutral and not significant during enabling and construction.

12.4.10 No significant geoenvironmental effects associated with the Proposed Development once complete and operational are anticipated following the implementation of an appropriate Remediation Strategy.

12.5 Cumulative Effects

Enabling and Construction

12.5.1.1 The development on site and in the surrounding area will be in accordance with the relevant planning permissions.

12.5.1.2 All such enabling works and construction activity associated with surrounding cumulative development under construction at the same time as the Proposed Development will take place in accordance with good standard practice and site-specific CEMPs. Impacts associated with the ground and construction (e.g. traffic, dust etc. related to excavation and disposal spoil from excavations) are all assessed appropriately in the relevant chapters. Based on the above, the reviewer agrees that no cumulative effects are anticipated related to ground conditions.

Completed Development

12.5.1.3 As above, and considering the development and surrounding land uses, no cumulative effects are anticipated relating to ground conditions after mitigation measures are implemented.

12.5.1.4 The ES notes that the cumulative impact of site-specific remediation will improve general ground conditions at a local scale, leading to a Negligible to Minor Beneficial effect in both the Enabling and Construction phase and during the operation of the Proposed Development.

12.6 Commentary on the Conclusions of the ES

12.6.1 The information provided/reviewed is considered sufficiently appropriate for the data collated to date. We therefore agree with the conclusions of this technical chapter assessment.

12.6.2 It is noted that the Mitigation Measures during Construction will be implemented by the main contractor predominantly via a CEMP), and remediation strategy secured via standard planning conditions.

12.6.3 For the Completed Development and Operation phase it is noted that any potential adverse effects will have been mitigated by the remedial strategy and it is agreed that no significant residual effects will remain.

12.7 Commentary on the Adequacy of NTS

12.7.1 The NTS provides an accurate summary of the topic chapter contained within the ES.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
None.

13.0 CHAPTER 14: ARCHAEOLOGY

13.1 Scope of Technical Chapter

13.1.1 Chapter 14 assesses the potential effects of the Proposed Development upon below-ground archaeological heritage assets within the site, and the settings of any below-ground archaeological assets in close proximity. The chapter sets out the assessment methodology and baseline conditions, examines potential impacts and resultant effects, and presents mitigation measures to prevent, reduce or offset (where possible) any potentially significant adverse effects. The likely residual effects once these mitigation measures have been implemented are presented and their scale, nature and significance assessed. The assessment concludes by highlighting any likely significant effects on archaeological heritage assets.

13.1.2 The EIA methodology follows the approach for assessing effects as outlined in DMRB Vol 11, Section 3 and the Chartered Institute for Archaeologists' (CIfA) 2014 guidance for Archaeological Desk-based Assessments. This approach has been agreed through consultation and is considered appropriate.

13.1.3 Advertising across the Proposed Development is proposed. A separate application for consent to display advertisements is submitted alongside the planning application. Advertising is not mentioned in the ES Chapter 14.

13.2 Baseline Conditions

13.2.1 ES Chapter 14 is supported by a detailed desk-based Historic Environment Assessment (HEA) (MOLA, Feb 2019) (ES Vol 3 Appendix 'Archaeology') which is of suitable quality and produced by experienced historic environment professionals.

13.2.2 The assessment uses a 350m study area which, for a development of this scale in an urban environment, is considered appropriate by this reviewer. The sources consulted are sufficient.

13.2.3 ES Chapter 14 summarises from the HEA the site location and topography, archaeological and historical context, palaeoenvironmental survival, and archaeological survival.

13.2.4 The site is within the Tier 2 Stratford Works Area of Special Archaeological Priority (ASAP), as designated by the London Borough of Newham. The site is considered to have a generally low potential for any archaeological remains prior to the mid-19th century; a moderate potential for occasional pottery fragments of the later medieval period; and a high potential for remains associated with the Stratford Works.

13.2.5 A geoarchaeological deposit model (ES Vol 3 Appendix 'Archaeology') has also been produced by a MOLA Geoarchaeologist in conjunction with the archaeological assessment, which is welcomed and complies with the Greater London Archaeological Advisory Service (GLAAS) comments in the Scoping Opinion to consider potential groundwater drainage and preservation of in situ deposits / building subsidence in the study area.

13.3 Prediction of Impact Magnitude and Significance

13.3.1 ES Chapter 14 considers the likely significant effects which have the potential to arise during the enabling and construction phases of the Proposed Development.

13.3.2 The primary source of potential impact on shallow archaeological remains is identified as the breaking out of existing structures, while sources of impact on more deeply-buried palaeoenvironmental deposits are identified as piling activities.

13.3.3 The assessment states that the unmitigated effects of the Proposed Development on the archaeological and palaeoenvironmental resource would be significant (in EIA terms) as follows:

- Palaeoenvironmental remains - Major/moderate Adverse
- Stratford Works remains - Major/moderate Adverse
- Residual later medieval pottery - Moderate Adverse

13.4 Mitigation and Monitoring

13.4.1 A desk-based historic environment assessment and deposit modelling exercise have already been completed (ES Vol 3 Appendix Archaeology – Annex 1). The results of these will inform a phased programme of archaeological mitigation comprising archaeological investigation and preservation by record in areas of archaeological potential where considered necessary. The programme of archaeological mitigation will be undertaken pursuant to a pre-commencement planning condition, under the terms of a Written Scheme of Investigation (WSI) approved by the LLDC.

13.4.2 In accordance with the requirements of LBTH's response in the Scoping Opinion, a draft WSI (ES Vol 3 Appendix Archaeology – Annex 2) has been provided. This describes the strategy and methodology for a programme of mitigation to offset enabling and construction phase effects of the Proposed Development, in order to safeguard the archaeological and palaeoenvironmental interest of the site appropriately through 'preservation by record'.

13.4.3 Following the programme of archaeological mitigation, it is assessed that any residual effects of the Proposed Development will be negligible and not significant. This is agreed.

13.4.4 The programme of archaeological mitigation will need to be approved by the planning authority's archaeological advisor and carried out under a pre-commencement planning condition.

13.5 Cumulative Effects

13.5.1 Buried heritage assets are generally site-specific, and following the successful implementation of an agreed programme of archaeological mitigation for all proposed schemes (reviewed and agreed by the local planning authority and its archaeological advisors), it is considered that there would be a negligible cumulative impact with regard to buried heritage assets. This is agreed.

13.6 Commentary on the Conclusions of the ES

13.6.1 ES Chapter 14 concludes that construction groundworks for the Proposed Development have the potential to bring about significant effects on buried archaeological remains in terms of the EIA Regulations. These effects can be mitigated through the implementation of the programme of investigation and recording ('preservation by record'), reducing the residual effect to negligible (not significant) on below ground archaeological and palaeoenvironmental remains.

13.6.2 No significant effects upon archaeology are therefore anticipated following appropriate archaeological mitigation. This is agreed.

13.7 Commentary on the Adequacy of NTS

13.7.1 The NTS provides a detailed and accurate summary of the ES Chapter 14.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
None.

14.0 VOLUME II: BUILT HERITAGE

14.1.1 Likely significant effects in relation to heritage assets and their settings are assessed as part of the combined Townscape, Built Heritage, and Visual Impact Assessment (TBHVIA), presented in the ES Vol 2 (Tavernor Consultancy, Feb 2019). In accordance with comments in the Scoping Opinion (November 2018) (ES Vol 3 Annex 4, p.67) the volume is presented with clear division between the topics in terms of methodologies and assessments.

14.2 Scope of Technical Chapter

14.2.1 The ES Vol 2 assesses the likely environmental effects of the Proposed Development with respect to heritage.

14.2.2 The assessment begins with an overview of legislation and policy context. All relevant heritage documents are referenced throughout, including in particular GPA3*: The Setting of Heritage Asset*s, and Local Authority Conservation Area Appraisals (where relevant).

14.2.3 The volume describes the methods used to assess the effects, including the interrelationship between townscape, heritage and visual amenity; the baseline conditions currently existing at the site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted. The general approach is matrix-led in order to define and identify significant effects in the terms of the EIA Regulations. This is an appropriate approach.

14.2.4 In accordance with comments made by the Greater London Archaeological Advisory Service (GLAAS) in the Scoping Opinion, a zone of theoretical visibility (ZTV) model has been defined and tested, and viewpoints used in the chapter are based on the ZTV. In accordance with the comments in the Scoping Opinion, a viewpoints map has been included. Forty one viewpoints were considered in order to assess the range of ways the development may affect the existing character and quality of the surrounding townscape. Effects upon built heritage assets have been assessed from 7 different viewpoints.

14.2.5 The study area for heritage assets is approximately 250m for locally listed buildings, 500m for listed buildings and 1km for conservation areas. These areas have been defined in accordance with the National Policy Planning Framework (NPPF) (Ref 1–2) and the requirement for the assessment to be proportionate to the likely degree of effect on heritage significance. It is not immediately clear whether the study area was agreed with consultees, but it is assumed that the viewpoints were agreed, and as such no further clarification is needed.

14.2.6 The assessment considers effects upon designated and non-designated (including locally-listed buildings) heritage assets' heritage significance through indirect effects on their settings. Heritage assets which are not affected by the Proposed Development are scoped out of the assessment. This is considered appropriate.

14.2.7 Advertising across the Proposed Development is proposed. A separate application for consent to display advertisements is submitted alongside the planning application. The details of the advertising proposals have been considered within the TBHVIA where relevant.

14.3 Baseline Conditions

14.3.1 The baseline assessment includes an account of the history of the Site and surrounding area and also identifies the heritage significance and settings of relevant heritage assets, which is necessary in terms of following the methodology outlined in GPA3.

14.3.2 There are two conservation areas identified within the study area: 'Stratford St Johns Conservation Area', and 'University Conservation Area'. The 'University Conservation Area' was been scoped out of the assessment with agreement at scoping stage.

14.3.3 There are three built heritage assets considered for detailed assessment within the study area: The Theatre Royal (grade II* listed), Church of St John the Evangelist and Railings (grade II listed), and Former Urinals, Angel Lane (locally-listed building).

14.4 Prediction of Impact Magnitude and Significance

14.4.1 The assessment considers likely significant effects during the enabling and construction phases of the Proposed Development as well as effects once the Proposed Development is completed.

14.4.2 During construction the magnitude of impact on conservation areas and listed buildings is assessed as negligible due to the limited visibility of the part-constructed development and construction equipment (primarily cranes) in the setting of heritage assets. The heritage significance of all designated heritage assets would be preserved and the negligible effects on their settings would be temporary in duration. This is agreed.

14.4.3 In order to assess effects during operation, viewpoints are presented including cumulative development outlines for the years 2022 and 2031, and visuals of the development have been created for the daytime view and night time (dusk) view with the sphere in 'architectural' mode and in 'active mode'. 'Architectural mode' is referred to when the scheme is not operational, while 'active mode' refers to the operational building when images are being displayed across its surface. In addition, the assessment has considered the potential visual impacts as a result of advertising displayed on the entertainment venue's external surface. This has been considered for three of the viewpoints and is welcomed.

14.4.4 In terms of the three designated heritage assets assessed in detail, the magnitude of impact (to special interest), and the scale and nature of effect is presented in all cases as negligible (not significant). This is agreed.

14.4.5 The brick wall to Angel Lane, including the urinals, will be removed as part of the enabling works, to form a new access point to the service road from Angel Lane / Leyton Road. The magnitude of impact (to special interest) is assessed as large, and the scale and nature of effect is assessed as moderate / minor/adverse (significant). This is agreed.

14.5 Mitigation and Monitoring

14.5.1 Mitigation of potential townscape and visual effects and effects on the settings of above-ground built heritage assets would be achieved through the use of appropriate hoarding and following industry best practice construction standards. No mitigation of the visibility of large plant and equipment above roofs and trees is proposed; it is stated that mitigation measures to hide the visibility of such activities and equipment, for example high level

screening, would be more visually obtrusive than the process or equipment itself. This is agreed.

14.5.2 It is anticipated by the assessor in the ES volume that the Applicant would develop and implement a Construction Environmental Management Plan (CEMP), which would be secured through an appropriately worded planning condition. The CEMP would set out the standards and procedures to which the Applicant would adhere while enabling and construction takes place; this would manage the short-term environmental effects.

14.6 Cumulative Effects

14.6.1 Cumulative effects are included in the visualisations and summarised within the above conclusions. These are agreed.

14.7 Commentary on the Conclusions of the ES

14.7.1 The potential long-term significant effects of the completed and occupied Proposed Development on above ground built heritage have been assessed in the Built Heritage Assessment using seven different viewing positions.

14.7.2 The potential effects of the Proposed Development on the special interest of conservation areas and those elements of setting that contribute to the significance or appreciation of the significance of the listed or locally listed structures assessed would be negligible.

14.7.3 The potential effect on the former urinals, a non-designated heritage asset, would be Moderate / Minor Adverse; this will be mitigated by removing the urinal stalls prior to demolition of the wall.

14.7.4 There would be no significant effects on designated built heritage assets. In NPPF terms the Proposed Development would sustain the historic environment and would not cause harm. This conclusion is agreed.

14.8 Commentary on the Adequacy of NTS

14.8.1 The NTS provides a suitable summary of the ES Vol 2 in terms of heritage.

Summary of Clarifications Required
None.
Summary of Potential Regulation 25 Information Requests
None.

15.0 VOLUME II: TVIA

15.1 Scope of Technical Chapter

15.1.1 The submission is based on the principles contained within the following documents:

- The 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA) (IEMA & The Landscape Institute, 2013);
- London View Management Framework Supplementary Planning Guidance (LVMF SPG) (GLA, 2012);
- Shaping Neighbourhoods: Character and Context SPG (GLA, 2014);
- An Approach to Landscape Character Assessment (Natural England, 2014).

15.1.2 Reference was also made to the national, regional and local planning guidance. It is agreed that this methodology is sufficient to assess the submission.

15.1.3 Viewpoints that have been assessed are included within Volume 2: Townscape, Built Heritage and Visual Impact Assessment Parts 1 & 2, together with computer generated views in Parts 2 & 3. The assessment includes a figure identifying viewpoint locations, and the direction of the viewpoint camera location.

15.1.4 The scope of the TVIA, including the overall approach to assessment, extents of the study area, sources of information, level of baseline detail and number and location of views and cumulative schemes has been agreed with the planning authority and appears appropriate for the scale of the proposed development.

15.2 Baseline Conditions

15.2.1 The TVIA provides a detailed description of the baseline conditions including a review of townscape character areas within the study area. These include discussion of the scale and layout of the existing townscape context, where there may be significant townscape effects. This approach enables an understanding of the effect of the development on built form and existing townscape context within the study area and provides a summary box level of detail for the assessment of townscape effects. Reference to documents includes:

- Newham Character Study 2017.
- London Plan (March 2016) including Policy 7.4 Local Character;
- LLDC Local Plan (2015) policies BN 1, (Responding to Place), BN 9 (Views) and BN 10 (Proposals for Tall Buildings).
- Olympic Legacy Supplementary Planning Guidance (OLSPG) (GLA, 2012);
- Sustainable Design and Construction SPG (2014);
- Shaping Neighbourhoods: Character and Context (2014).

15.2.2 The TVIA methodology states that viewing positions were selected in consultation with relevant statutory consultees. The assessment contains 41 views, listed in the Summary

box of Views in Section 6 of the THVIA. 20 views were visually assessed and include a narrative description and visualisations that give an indication of the possible appearance of the proposed development. The methodology describes how the assessment will address the unusual nature of the development in order to capture a range of likely effects on townscape character and visual amenity. The visualisations, together with the commentary, provide sufficient information to discuss the range of likely effects on townscape character and visual amenity.

15.2.3 The level of description with regard to baseline conditions is sufficient.

15.3 Prediction of Impact Magnitude and Significance

15.3.1 The assessment is described as being based on the framework contained within the 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA 3). Reference is also made to the London View Management Framework SPG (LVMF SPG). A detailed description of the AVR production methodology is provided within Section 3 of the report. Visualisations provide the viewer with a fair representation of the proposed development.

15.3.2 The methodology for assessment of townscape and visual effects has been clearly separated. Overall levels of significance have been assessed in terms of the sensitivity of the resource affected and the magnitude of the effect, which complies with GLVIA 3.

15.3.3 GLVIA 3 defines the sensitivity of townscape and visual receptors as dependent on the importance / value of the receptor and its susceptibility to change. The methodology of the TVIA describes how judgements are made with regard to the sensitivity of a receptor based on the recognition of the importance/value of the receptor and susceptibility to change of the receptor (townscape/visual) taking into account the quality of the receptor. For views it also includes the nature and expectation of the viewer. This approach is considered appropriate and based on guidance within GLVIA 3.

15.3.4 The assessment of magnitude of effects is described in terms of the level of change experienced by the townscape or view. Sufficient explanation is provided in terms of the assessment of magnitude within the body of the assessment and an explanation of the factors that enable the levels of magnitude to be judged is provided within the methodology. Sensitivity and magnitude are then combined to provide an overall level of townscape and visual effects in the form of Summary box 3.3. This approach is consistent with GLVIA 3.

15.3.5 The methodology states that the rationale for the judgement of overall significance of effect is summarised in a series of broad categories of significance based on professional judgement including 'sequential combination' expressed in a text narrative to combine the judgements. Assessment of nature of effect relies on what distinguishes visual effects as beneficial (positive), or adverse (negative) in nature. The use of the term 'neutral' within the report is used to describe an effect where there is no noticeable beneficial or adverse effect as within GLVIA3 (para 5.37).

15.3.6 The combination of existing, proposed (evolved baseline at 2022) and proposed cumulative (evolved baseline at 2031) views together with their written descriptor and assessment of effects provides good clarity.

15.3.7 It is stated that the GLVIA does not require the assessment of the change (impact) on a view from inside a residential property or from a private residential amenity space (i.e. a balcony or roof terrace for example). However, a number of view locations have been selected to represent views from within a residential area or amenity space or from views where there is a significant amount of residential development. The potential in-combination amenity effects (including visual amenity) are considered in ES Volume 1 Chapter 15. This provides a reasonable selection of views to consider how the townscape setting maybe perceived by local residents.

15.3.8 No adverse effects have been identified. The residual effects range from minor neutral to moderate beneficial for views and minor neutral to minor beneficial for townscape effects. Some of the beneficial effects are therefore significant effects. The effects are considered more beneficially significant at dusk and when the sphere is in 'active mode'. It is clear that, as stated within the report, "*visual experience will be as much dependent on the personal preferences of the viewers, as the content itself*." However, the assessment of effects clearly follows the methodology set out within the proceeding sections and therefore evaluations are considered logical and transparent.

15.4 Mitigation and Monitoring

15.4.1 Section 5 of the THVIA sets out the embedded mitigation measures in relation to townscape, visual and heritage. These measures have been 'designed in' during the design development phase of the proposed development. A detailed description of the design is set out in the Design and Access Statement (DAS) prepared by Populous. All mitigation measures are therefore embedded in terms of the building design and there are no residual adverse effects identified. It is agreed that the design responds to the townscape and views surrounding the application site. This is considered appropriate.

15.4.2 All enabling and construction related mitigation measures are set out in the ES Volume 1, Chapter 17 (not Chapter 15 as stated within the THVIA): Mitigation and Monitoring Schedule. The Construction Management and Construction Logistics Plan describe the measures proposed to mitigate impacts arising from the demolition and construction stage.

15.5 Cumulative Effects

15.5.1 The cumulative assessment considers the Proposed Development in combination with a number of potentially relevant schemes which have been agreed with the planning authority. A plan indicating the location of these schemes is set out in Appendix 3 of the report and is useful in understanding their spatial relationship with the Proposed Development.

15.5.2 The updated baseline provides a useful addition to understanding the nature of cumulative effects and ensures that the effects of committed and proposed development are assessed against an appropriate baseline. The AVRs include a cumulative image for each view that would contain views of the Proposed Development. Where appropriate views also include active as well as architectural mode with views at dusk for agreed views. This provides a good indication of the possible appearance of the proposed development.

15.5.3 The assessment concludes that the Proposed Development would integrate successfully with the cumulative built environment. The combination of commentary alongside the

visualisations is considered appropriate and sufficient to discuss the relevant effects. The description of the cumulative effects on viewpoint assessments and the conclusions are reasonable.

15.6 Commentary on the Conclusions of the ES

15.6.1 The conclusion to the TVIA reiterates the beneficial nature the Proposed Development will have on enhancing the local townscape character.

15.6.2 A summary box of the cumulative effects is included within the conclusion of the TVIA to provide a clear picture of the overall effects of the scheme during each phase. Demolition and construction effects are not included. **This is included as a clarification in the summary box below.**

15.6.3 Townscape and visual effects are assessed as ranging from no effect to moderate beneficial. No effects, other than temporary construction and demolition effects, are assessed as adverse. Taking into account the scale, massing, architectural treatment and design quality of the Proposed Development along with the sensitivity to change of the surrounding townscape and demonstrated wireline and rendered views, the assessment of effects appears reasonable overall and no additional mitigation is required.

15.7 Commentary on the Adequacy of NTS

The NTS provides a reasonable level of description of the assessment of townscape and visual effects throughout the construction and completed phases of the Proposed Development, and cumulative impacts. Summary box 8 provides a useful summary of the significant effects. Demolition and construction effects are not included. **This is included as a clarification in the summary box below.**

Summary of Clarifications Required
28. Provide justification as to why demolition and construction effects are not included in the conclusions section. 29. Provide justification as to why demolition and construction effects are not included in the NTS
Summary of Potential Regulation 25 Information Requests
None.

16.0 SUMMARY OF MITIGATION MEASURES

16.1.1 The table below provides a comprehensive summary of all mitigation measures proposed by the Applicant across all topics, both embedded and additional.

Table 14.1 Summary of Mitigation Measures

Topic	Phase of Implementation	Embedded Mitigation Measure	Additional Mitigation Measure
Socio-economics and Health	Pre-Construction	None	None
	Construction	None	• Code of Construction Practice, including mitigation measures detailed in the IAQM construction dust guidance. • Construction Environmental Management Plan (CEMP) to include mitigation for significant adverse effects. • Co-ordinated Employment and Skills Strategy. • Noise and Vibration measures.
	Operation	• New 21,000-person capacity multi-use entertainment and leisure complex	• Co-ordinated Employment and Skills Strategy. • Community Liaison Officer will work with LBN Workplace to enhance the community initiatives and engagement to promote the Proposed Development's employment, training and skills. • Provision of a Delivery and Servicing Plan to minimise the environmental and road traffic related impacts of deliveries to and from the site and general development servicing. • Provision of pedestrian and cycle access to the new development, including cycle parking • A management plan will be implemented, and noise monitoring undertaken during the operation of the venue to evaluate the noise emissions associated with the podium plaza and terrace. • Mitigation measures are required to reduce the potential impact expected at the Windmill Lane receptor. • Lighting related controls that have been identified to protect human health.
Highways, Transport and Movement	Pre-Construction	None	None
	Construction	None	• Construction Logistics Plan. • Construction Environmental Management Plan.

Topic	Phase of Implementation	Embedded Mitigation Measure	Additional Mitigation Measure
			• Participation in the Construction Transport Management Group.
	Operation	None	• Staff and Visitor Travel Plans.
Noise and Vibration	Pre-Construction	None	None
	Construction	None	• BPM, BS5228 recommendations, monitoring, alerts & triggers, S61 agreement. • Noise and vibration monitoring, triggers, CMS.
	Operation	• Existing building envelope, acoustic doors, acoustically treated areas • Noise limits	• Management plan, monitoring. • Alternative routes, monitoring, management plan. • Building services to meet limits required by BS4142
Air Quality	Pre-Construction	None	None
	Construction	• Dust Management Plan (DMP) mitigation measures proposed.	None
	Operation	None	None
Wind Microclimate	Pre-Construction	None	None
	Construction	None	None
	Operation	None	• Shrubs, porous screens and a recessed entrance.
Daylight, Sunlight, Overshadowing	Pre-Construction	None	None
	Construction	None	None
	Operation	None	None
Light Intrusion and Upward Sky Glow	Pre-Construction	None	None
	Construction	None	None
	Operation	None	• Programme each LED to not exceed certain intensities in certain directions. • Produce a monitoring strategy to measure lux levels at sensitive receptors to check the effectiveness of this.
Solar Glare	Pre-Construction	None	None
	Construction	None	None
	Operation	None	• Undertake further detailed façade material and solar glare analysis.
Geo-environmental	Pre-Construction	• Further site investigation (SI) for soil and groundwater is proposed to supplement any existing SI data, to inform and determine the scope of the remedial strategy. • This further SI should include assessment of the potential presence of a Drift filled Hollow on the Site.	• Remedial strategy for development.

Topic	Phase of Implementation	Embedded Mitigation Measure	Additional Mitigation Measure
	Construction	• Construction Environmental Management Plan (CEMP) will be implemented for the protection (predominantly) of human health, controlled waters.	None
	Operation	• The Remediation Strategy is proposed to mitigate land quality risks including ensuring suitable materials are used in the development design (both below and above ground) to protect controlled waters and human health.	None
Archaeology	Pre-Construction	• Geoarchaeological monitoring of further geotechnical investigations. • Archaeological direction and monitoring of initial development groundworks brief in the areas of the site not previously recorded during the previous strip and map investigation in 2011–12, with sufficient time for the Archaeologists to make records appropriate to the significance of the remains. • Where necessary as agreed by the Site Supervisor and the local planning authority's archaeological advisor, appropriate targeted excavation and recording ('controlled excavation') of archaeological remains.	None
	Construction	None	None
	Operation	None	None
Volume II: Built Heritage	Pre-Construction	None	• For the demolition of the wall, the former urinals will be carefully removed prior to the demolition of the wall and stored for a year, whilst their adaptive reuse is considered.
	Construction	• Appropriate hoarding and following industry best practice construction standards.	None
	Operation	None	None
Volume II: TVIA	Pre-Construction	Hoarding	• Construction Management and Construction Logistics Plan.
	Construction	Hoarding	• Construction Management and Construction Logistics Plan.
	Operation	Embedded within the design	None

Topic	Phase of Implementation	Embedded Mitigation Measure	Additional Mitigation Measure
Additional Recommended Measures			
Noise and Vibration Working practices should be reviewed as part of the section 61 consent to ensure substantial effects are reduced. Air Quality *Construction* • The Applicant should include a commitment in the DMP to liaise with the Local Authority to determine monitoring requirements. • It is recommended that the Local Planning Authority agree appropriate monitoring requirements by condition. • It is recommended that the Local Planning Authority require the appointed Principal Construction Contractor to become a member of London Legacy Development Corporation Construction Management Group to manage and coordinate the cumulative impacts of the Proposed Development with those of the 12 identified developments. Wind Microclimate Consider how further mitigation could be incorporated at a time in the future to account for more frequent strong winds, resulting from climate change. Light Intrusion Produce a set of operating principles for approval, to set both lux levels (including directly upwards), but also frequency of colour and intensity changes, and avoidance of health (sleep deprivation and epilepsy) and risks (road and rail accidents). Subject to the outcome of the potential Regulation 25 request (ESRR No.27), specific and detailed planning conditions may need to be implemented. Solar Glare Further detailed façade material and solar glare analysis should be done by planning condition pre-commencement to demonstrate there will be no unsafe conditions caused. Built Heritage Construction Environmental Management Plan (CEMP) to be implemented by appropriately worded planning condition.			

Planning Policy and Decisions Team
London Legacy Development Corporation
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E20 1EJ

Dear Sir/Madam,

MADISON SQUARE GARDEN (MSG) SPHERE PLANNING APPLICATIONS REFERENCES: 19/00097/FUL AND 19/00098/ADV

On behalf of Stratford City Business District Limited (SCBD Ltd), please treat this letter as a "**holding response**" in relation to the above planning applications.

SCBD Ltd is a joint venture between development partners Lendlease and London and Continental Railways (LCR) who own the International Quarter London (IQL). IQL comprises two sites within the Stratford Metropolitan Centre. IQL North is located to the north west of the Madison Square Garden (MSG) Sphere site along International Way; whilst IQL South is located to the south west along Westfield Avenue.

IQL South will provide at least 280,000m² of Grade A commercial office floorspace when fully developed together with residential, retail, leisure, community uses. To date, two residential buildings at S7/S8, along with commercial buildings S5 and S6 have been constructed and occupied, with building S9 due to reach practical completion in summer 2019. Construction has also started for the commercial building S4 and the Pavilion building providing a range of retail uses in Endeavour Square.

IQL North is closest to the MSG Sphere site located approximately 150m to the north west. A reserved matters application was approved in 2017 (ref: 17/00050/REM) pursuant to the Stratford City Outline Planning Permission (ref: 10/90641/EXTODA) for a building comprising 37,058sqm of commercial floorspace on Plot N22, and landscaping on Plot N23, which has yet to start construction. As currently proposed, IQL North will provide commercial office floorspace and a variety of other complementary uses. In pursuit of our strategy to create the best places, the potential for a mix of uses could be considered in the future.

The scale and nature of the MSG Sphere proposals means that they could have a significant impact on the operation of IQL and the amenity of its residents and occupiers in both IQL North and South. In particular we note the following primary concerns, which SCBD Ltd and its consultants will need to review in full detail:

- Impacts on highways infrastructure and Stratford Station are assessed against a range of scenarios, some showing capacities being exceeded and only made acceptable by various proposed mitigations across the Metropolitan Centre; and
- Suggested mitigations for crowd and event management, which could involve the closure of Westfield Avenue adjacent to IQL South for shuttle bus services at night, with associated bus stops located outside the residential buildings of S7 and S8 in IQL South.

Consequently, SCBD Ltd and its consultants are reviewing the application proposals in detail and notwithstanding the indicated consultation deadline of 28 June 2019, we reserve the right to comment

on the application beyond this date. We trust that the London Legacy Development Corporation (LLDC) will not determine the proposals until any comments from SCBD Ltd have been received.

Furthermore, SCBD Ltd intend to meet with the Applicant to discuss the MSG Sphere proposals and the areas of primary concern in more detail.

Given the strategic nature of the proposals, we also request that the LLDC keep SCBD Ltd fully updated on the progress made on the applications and SCBD Ltd are notified when/if the applications are to be reported to the LLDC's planning committee.

Yours faithfully,

[redacted]

Development Director

Cc [redacted] - Quod
- LCR

Drivers Jonas Deloitte.

This report, figures and analysis for the benefit of London & Continental Railways Ltd only and should not be relied upon by any third party. Consequently, no responsibility is accepted to any third party for the contents of this report.

Chobham Farm South
Property Advice

London & Continental Railways - September 2012

Contents

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Appendices

04 Preferred options

In discussion with LCR two options were chosen to be developed further; one option with a number of buildings over a common three storey parking structure and one option with individual buildings around a landscaped central space that deals with the level difference.

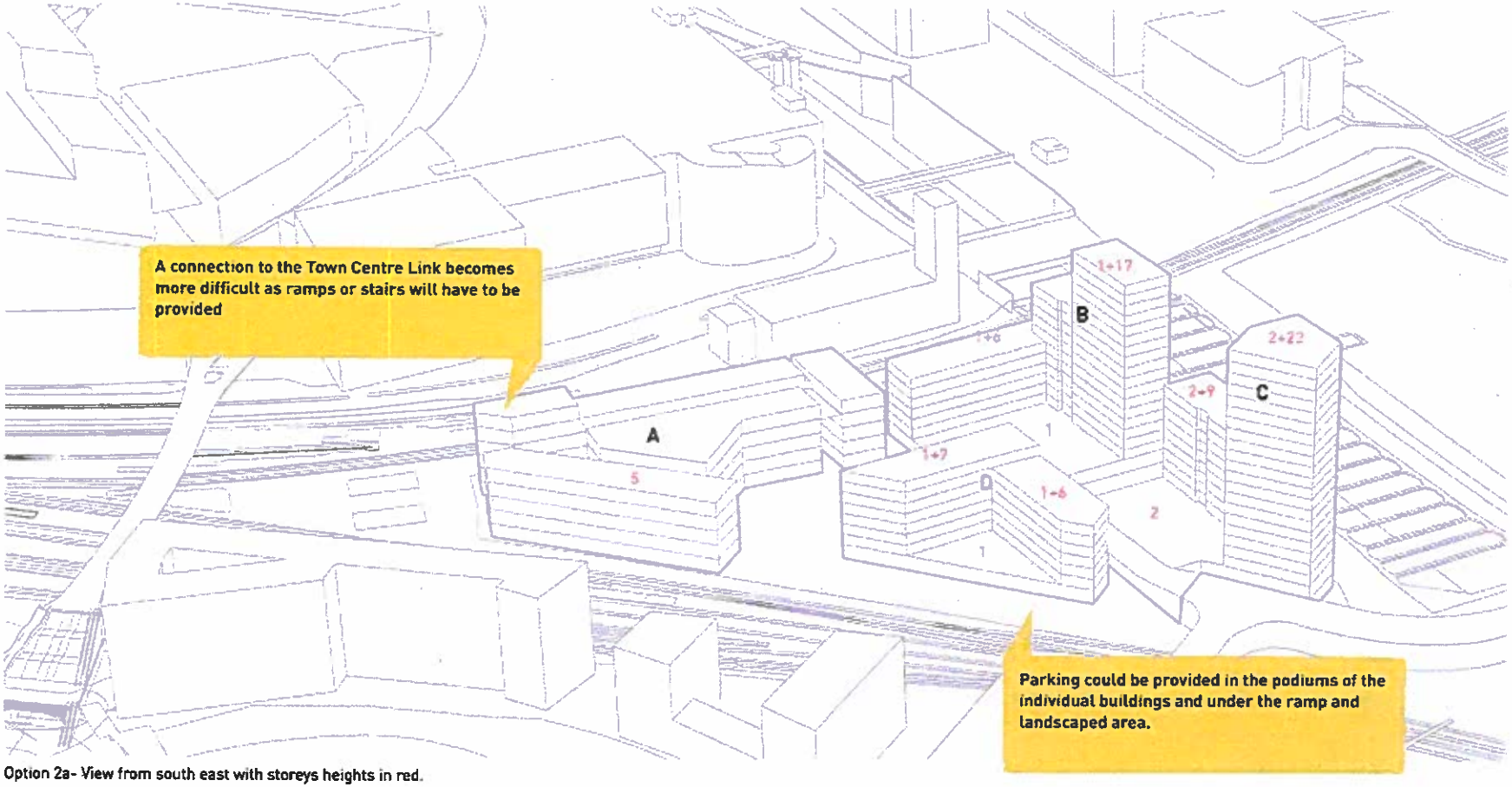
The base position is that there are no built elements over the Thames Water sewer. However, as a variation of option 2 an option was developed with buildings are across the sewer.

The three options supports the same land use types; a mix of college, student housing, residential and hotel uses with public realm and leisure uses to support these functions. The central open space is of a similar size in all three options; approximately 0.23 hectare.

Option 1 also provides a multi storey car park with c. 1,270 car parking spaces. In option 2a and 2b parking is provided within individual building podiums (approximately 150 car parking spaces in one or two levels of podium).

The residential and student housing part of the uses mix is located along the northern edge of the site, where tall buildings could be located with minimal overshadowing of the central open space and the adjoining buildings on the site. A hotel building is proposed at the triangular site at the entrance of the site.

The educational element of the development has been located to the south western part of the site where it can make use of an awkwardly shaped plot, allowing for more efficient and regular building plots to be created at the rest of the site. This part of the site also provides opportunity to create a wider building footprint - allowing for a central atrium and amenity space - that is not restricted by the necessity to provide access to the site from Angel Lane Bridge.



Option 2a- View from south east with storeys heights in red.