



# **Environmental Statement Addendum**

New City Court, Southwark

June 2020

## **Waterman Infrastructure & Environment Limited**

Pickfords Wharf, Clink Street, London, SE1 9DG  
[www.watermangroup.com](http://www.watermangroup.com)





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## Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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Issue	Date	Prepared by	Checked by	Approved by
01	June 2020	Various Authors	Ellen Smith Senior Consultant	Steve Brindle Associate Director

## Comments

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## 1. Introduction

### Background to this Document

In December 2018, GPE (St Thomas Street) Limited (the 'Applicant'), submitted a detailed planning application (reference: 18/AP/4039) to the London Borough of Southwark (LBS) for the demolition of the existing 1980s office buildings, part restoration and refurbishment of listed terrace, and redevelopment of Keats House with retention of existing façade, and construction of an office-led, mixed-use scheme (hereafter referred to as the 'Development'). The Development is proposed on a parcel of land along Thomas Street in the London Bridge area (hereafter referred to as the 'Site').

The Development was described on the planning application form as follows:

*'Comprehensive redevelopment of the site to include demolition of existing 1980s office buildings and erection of a 37-storey building (including ground and mezzanine) of a maximum height of 144m (AOD), restoration and refurbishment of existing listed terrace, and redevelopment of Keats House with retention of existing façade to provide a total of 46,374 sqm of Class B1 office floorspace, 765 sqm of Class A1 retail floorspace, 1,139 sqm of Class A3 retail floorspace, 615 sqm of leisure floorspace (Class D2), 719 sqm hub space (Class B1/D2) and a 825 sqm elevated public garden, associated public realm and highways improvements, new station entrance, cycling parking, car parking, servicing, refuse and plant areas, and all ancillary or associated works.'*

An Environmental Impact Assessment (EIA) was undertaken to identify the likely significant environmental effects of the Development, in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations, 2017 (as amended)<sup>1</sup>. The findings of the EIA were presented in an Environmental Statement (ES) (the 'December 2018 ES') prepared by Waterman Infrastructure & Environment Limited (Waterman IE) which was submitted with the detailed planning application (the 'December 2018 Planning Application').

Since submission of the December 2018 ES, the Applicant and their consultant team have provided a number of documents to support and clarify the contents of the application submission, as well as a number of additional and substitute plans. In order to ensure that the ES presents the likely significant environmental effects of the proposals, it has been necessary to review and update the EIA to consider these additional supporting documents, where relevant, the results of which are set out in this ES Addendum. A number of these additional documents are not materially relevant to the EIA and have not been considered further. The additional drawings provided as part of the supporting information are set out in Section 2 of this report.

Engagement and consultation has been ongoing with LBS, their advisors and consultees since the submission of the December 2018 ES. Where further information, assessment or clarifications have been sought, we have provided relevant additional information within the appropriate section of the ES Addendum, replacement Chapters or Technical Appendix. As a result of the passing of time between the December 2018 ES and this Addendum, relevant planning policy has been reviewed, and clarification provided where material changes have been noted.

In addition, the ES Addendum includes clarification of existing findings and corrects typographic or presentational issues within the December 2018 ES as appropriate. A number of additional / revised cumulative schemes are also been considered in Chapter 14: Cumulative Effects as a result of the passing of time between the December 2018 ES and this ES Addendum and as agreed with LBS, as follows:

- Capital House (revised scheme) (ref: 18/AP/0900);

<sup>1</sup> 2017 No. 571 Town and Country Planning 'Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)'.

- Becket House / 60 St Thomas Street (ref: 18/AP/4136);
- Vinegar Yard (ref: 18/AP/4171);
- Bermondsey Street/Snowfields (ref: 19/AP/0404); and
- 2-4 Melior Place (ref: 18/AP/3229).

The ES, including this ES Addendum, is available for public viewing on Southwark Council's website: [www.southwark.gov.uk](http://www.southwark.gov.uk). Copies of the ES are also available for viewing by the public at New City Court, between the hours of 9am and 5pm on weekdays, by prior appointment only. Comments on the planning application should be made on Southwark Council's website: <https://www.southwark.gov.uk/planning-and-building-control>

Additional copies of the ES can be purchased from Waterman on request (contact details below). A CD version of the ES can be purchased at a cost of £25.

Waterman Infrastructure & Environment Ltd

Pickfords Wharf

Clink Street

London

SE1 9DG

Tel: 020 7928 7888

Email: [ie@watermangroup.com](mailto:ie@watermangroup.com)



## 2. Scheme revisions and further information

Since the submission of the planning application in December 2018, additional information in support of the Application has been submitted to Southwark Council. A summary of those documents and drawings considered relevant to the proposals assessed within the EIA is set out in the following paragraphs:

- Urban Greening Factor Note – Responding to Southwark Council to provide further information on the Urban Greening Factor calculations.
- Drawing (00) P401 Rev P01 Ventilation Air Intake Bunch of Grapes Party Wall – Additional detailed party wall section requested by Southwark Council.
- Substituted Drawing (00) P154 Rev P02 GA Plans - Level 34 – Revised drawing, amended to reflect the updated energy strategy.
- Substituted Drawing (00) P155 Rev P02 GA Plans - Level 35 – Revised drawing, amended to reflect the updated energy strategy.
- Substituted Drawing (00) P156 Rev P02 GA Plans - Level 36 – Revised drawing, amended to reflect the updated energy strategy.
- Revised Energy Statement – Updated to allow for amendments including the removal of 1x boiler proposed at roof level.
- Revised Ventilation and Extraction Statement - Amendments to ventilation below the bin store to reflect submitted floor plans.
- Drawing (SK) 0916 Rev P01 Future Tenant Lift Plan Level 34 – Sketch plan not submitted for approval to illustrate potential future tenant lift location
- Revised Servicing Strategy Note - Servicing consolidation strategy addressing stakeholder feedback regarding servicing impacts.
- Drainage Note- Note responding to stakeholder comments regarding drainage.
- Revised Interim Travel Plan – Updated plan to address Port of London comments on the Application.

Collectively these drawings and documents are referred to henceforth as the 'Revisions'. The Revisions do not otherwise change the December 2018 Planning Application, there is no change in accommodation, proposed uses or building height and massing.

In summary the changes to the Development set out in the Revisions are modest, the most significant change being the revision to the Energy Statement, where the specified equipment was revised to deliver further environmental improvements. This required a reorganisation of roof space to enable sufficient accommodation for the proposed equipment and relevant flue terminations which has resulted in changes to the proposed roof level layouts.

### 3. Purpose of this Document

The ES Addendum should be read in conjunction with the December 2018 ES . The December 2018 ES together with this ES Addendum collectively constitutes the Environmental Statement for the Development.

The Revisions have been reviewed by each technical specialist to determine if a revised or updated assessment is required. Where there is a change to the significance of effects or a 'new' impact from those previously identified in the December 2018 ES, it is reported. Where it is determined the significance of effects would remain the same as previously reported and there would be no 'new' significant effects identified, a statement is provided setting out why the findings of the December 2018 ES remain valid. This is supplemented by further clarifications to each ES Chapter, this is referred to as a 'statement of conformity'.

In some instances, a replacement ES Chapter is provided, in this situation the changes to the findings are summarised in the ES Addendum.

This ES Addendum includes the following clarifications, information and updated ES Chapters:

- Chapter 7: Transportation and Access of the December 2018 ES has been revised and a replacement Chapter has been provided (refer to **Appendix E**) to provide further clarification and amend typographical errors.
- Chapter 8: Noise and Vibration of the December 2018 remains valid. Clarification is provided within this ES Addendum.
- Chapter 9: Air Quality of the December 2018 ES has been revised and a replacement Chapter has been provided (**Appendix F**), as a result of the Revisions. The Air Quality Neutral Assessment has also been updated (**Appendix F**).
- Chapter 10: Archaeology of the December 2018 remains valid. Clarification is provided within this ES Addendum.
- Chapter 11: Water Resources and Flood Risk of the December 2018 remains valid. Clarification is provided within this ES Addendum.
- Chapter 12: Wind of the December 2018 remains valid. Clarification is provided within this ES Addendum.
- Chapter 13: Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare of the December 2018 ES and associated ES figures and appendices have been updated and replacements are provided in **Appendix H**. This includes an update in response to LBS' request for a revised sunlight assessment on Shard Place and updated light pollution assessment for 9 St Thomas Street. A further daylight and sunlight assessment on Guys Chapel has been responded to separately from this ES Addendum given the BRE Guidelines do not normally apply for non-residential or transitory use buildings, therefore this additional assessment is outside of the scope of the ES.
- Chapter 14: Cumulative Effects of the December 2018 ES has been revised and presented at **Appendix B**, along with the Townscape, Visual and Built Heritage (TVBHA) Cumulative ES Addendum. This includes an assessment on five additional / revised cumulative schemes as agreed with LBS identified following submission of the December 2018 ES.
- Chapter 15: Residual Effects and Monitoring of the December 2018 ES has been revised and a replacement Chapter has been provided (**Appendix J**), in response to any changes made to identified effects as a result of updates to the above ES Chapters and TVBHA.
- Townscape, Visual and Built Heritage Assessment (TVBHA) Supplement (**Appendix I**) which identifies further heritage assets (locally listed buildings and Scheduled Monuments) not previously

included in the December 2018 TVIBHA.

- Townscape, Visual and Built Heritage Assessment (TVBHA) ES Addendum (**Appendix I**) which includes three new views to supplement the December 2018 TVIBHA.

Where appropriate the planning policy considered within the technical assessments has been reviewed, and reported in this ES Addendum, if there has been a material change.

In addition a replacement Non-Technical Summary (NTS) is also provided as a separate standalone document, which replaces that submitted alongside the December 2018 ES. A Night Views Supplement is also provided in **Appendix I**.

The figures referred to within these replacement ES chapters are contained within **Appendix A** of this ES Addendum.

## 4. Approach to Assessment

### Project Team

In line with Regulation 18 of the 2017 EIA Regulations, Table 1 below provides a summary of relevant qualifications and experience for the professional team who have prepared and contributed to this ES Addendum.

Table 1: EIA Contributors

Name	Qualifications	Relevant Experience
Steve Brindle (EIA)	BSc (Hons) Biology MSc Environmental Management for Business Full Member of the Institute of Environmental Management and Assessment (MIEMA) Chartered Environmentalist (CEnv)	20 years' experience of coordinating Environmental Impact Assessments and preparing Environmental Statements within urban regeneration, retail, commercial, residential, industrial, transportation and highways sectors, alongside experience in sustainable buildings and homes assessments.
Ellen Smith (EIA and Water Resources ES Chapter)	BSc (Hons) Geography. Msc Environmental Assessment and Management. Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA).	Over 6 years' experience of co-ordinating Environmental Impact Assessments and preparing Environmental Statements (including water resources and flood risk ES chapters) primarily for large, complex residential-led mixed-use projects.
Mark Maclagan (Noise and Vibration)	Corporate Member of the Institute of Acoustics (MIOA).	15 years' experience of preparing Noise and Vibration Environmental Statement Chapters and Planning Assessments under the Town & Country Planning Act EIA Regulations.
Niall Machin (Ecology)	Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).	Over 20 years' experience of ecology surveys and ecological appraisals, 12 years of preparing Sustainability Appraisals, Strategic Environmental Assessments and Habitat Regulation Assessments, 7 years of preparing and assuring ecology chapters for Environmental Statements under the Town & Country Planning Act EIA Regulations and the design of mitigation strategies.
Chris Brownlie (Air Quality)	BSc (Hons) Geography MSc Air Pollution Management & Control Member of Institute of Air Quality Management Member of the Institute of Environmental Science Practitioner Member of Institute of Environmental Management and Assessment	Over 13 years of air quality consultancy experience. Technical expert in the use of a variety of advanced atmospheric dispersion models (including the ADMS and AERMOD suite of models) as well as screening air quality modelling methods (DMRB and WebTAG).

Name	Qualifications	Relevant Experience
Freddie Alcock (Ground Conditions and Contamination)	IEMA Practitioner. BSc (Hons). MSc.	Over 12 years' experience of detailed site investigation, hydrogeological and groundwater characterisation, brownfield redevelopment, waste classification and soil and groundwater remediation. Freddie also has experience of preparing and assuring ground conditions and contamination chapters under the Town and Country Planning Act EIA Regulations.
Russell Vaughan (Transport)	BSc (Hons). BEng (Hons).	Over 20 years' experience in Transport Planning and Highway Engineering. Areas of expertise include the design of highway accesses and parking arrangements associated with major retail and mixed-use developments. Also has considerable experience in the production of highway designs, junction designs and the use of capacity assessment models required for Transport Assessments and master planning studies.
Jon Winchester (Wind)	BSc in Mathematics. MSc in Mechanical Engineering. PhD in Mechanical Engineering.	7 years' experience of CFD for built environment, developed methods for pedestrian comfort analysis, wind loading and natural ventilation. Lead on various architectural CFD projects, including the 22 Bishopsgate pedestrian comfort study.
Gabriella Lessa (Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare)	MA ARB.	Over 6 years' experience of undertaking daylight and sunlight, solar glare, light pollution and overshadowing assessments.
Peter Stewart (Townscape, Visual and Built Heritage)	MA (Cantab). Dip Arch. RIBA.	Former Director of Design Review at the Commission for Architecture and the Built Environment (CABE). 14 years' experience of preparing townscape, visual Impact, and built heritage assessments for major projects under the Town & Country Planning Act EIA Regulations.
Christina Holloway (Archaeology)	BA (Hons); Diploma in Field Archaeology.	19 years' professional archaeology experience, and has specialised in archaeological assessments and EIAs for 12 years.

## **5. December 2018 ES Part 1: Main Text – Chapters 1 & 5**

### **Chapter 1 – Introduction**

The introductory paragraphs of this ES Addendum (Sections 1-4) update and supplement Chapter 1 of the December 2018 ES.

### **Chapter 2 – Methodology**

The methodology as set out in Chapter 2 of the December 2018 ES remains significantly unchanged, other than where set out in the introductory paragraphs of this ES Addendum (Sections 1-4), and where alterations have been made to technical assessments, as set out later in this ES Addendum.

As a point of clarification, consultation responses from relevant statutory and non-statutory consultees were provided in the following appendices of the December 2018 ES to correspond with the relevant technical ES Chapters of the December 2018 ES:

- December 2018 ES Part 4 – Appendix 2.1 (EIA Scoping Report): Appendix B – Preliminary Environmental Risk Assessment (PERA) – Consultation information provided in Appendix C of the Appendix B PERA includes Landmark technical report, response from LBS Environmental Health Department and response from the London Fire and Emergency Planning Authority (LFEPA);
- December 2018 ES Part 4 – Appendix 2.2 (LBS' EIA Scoping Opinion) – Statutory consultee responses from Transport for London, Natural England and the Environment Agency (EA) are available online (refer to planning ref: 18/AP/2633), which informed LBS' EIA Scoping Opinion;
- December 2018 ES Part 4 - Appendix 2.3: EA response to the EIA Scoping Opinion regarding land contamination and flood risk;
- December 2018 ES Part 4 - Appendix 8.4: Correspondence with LBS Environmental Health Department regarding noise & vibration EIA methodology;
- December 2018 ES Part 4 - Appendix 9.1: Correspondence with LBS regarding air quality EIA methodology;
- December 2018 ES Part 4 - Appendix 10.2: MOLA letter to LBS regarding future archaeological investigation;
- December 2018 ES Part 4 - Appendix 11.1 (Drainage Strategy): Appendix 3 – Thames Water response to pre-planning enquiry, confirming sufficient sewer capacity; and
- December 2018 ES Part 4 - Appendix 11.2 (Flood Risk Assessment): Appendix C - Thames Water correspondence and Appendix D – EA Flood Data.

Correspondence with LBS on the agreed viewpoints in regards to the December 2018 TVIBHA is provided in **Appendix I** of this ES Addendum.

### **Chapter 3 – Existing Land Use & Activities**

This Chapter of the December 2018 ES remains accurate and is unchanged by the Revisions.

### **Chapter 4 – Alternatives and Design Evolution**

Whilst a limited number of application drawings have been substituted for Levels 34-36, the minor changes are not considered to comprise a significant change or substantive alternative to the scheme as submitted. Therefore, as a result of the Revisions there is no change to the alternatives set out in the December 2018 ES.

## **Chapter 5 – The Development**

The Revisions to the Energy Strategy, and resultant changes to the roof levels, as set out in Section 2 of this ES Addendum, are the only changes proposed to the Development. This description should be read together with Chapter 5 of the December 2018 ES, to provide a full description of the Development.

## 6. Chapter 6: Development Programme, Demolition, Deconstruction, Refurbishment and Construction

As a result of the Revisions there are no material changes to:

- the overall construction activities of the EIA Development; and
- to the overall construction programme with the overall duration of the construction works remaining as previously reported.

In light of such modest changes made as a result of the Revisions, and the start and end dates of the overall construction programme remaining the same, it is considered Chapter 6: Development Programme, Demolition, Deconstruction, Refurbishment and Construction of the December 2018 ES, would remain materially unchanged and valid. Resultantly, no further assessments with regard to the effects of the construction programme are considered necessary.

### Clarifications

#### Site Waste Management Plan

In the December 2018 ES the route for implementing the mitigating Site Waste Management Plan (SWMP) was not specified. It is anticipated, as is standard practice for any large construction project in the Borough, that the SWMP would be secured by planning condition.

#### Potential Impact on Surrounding Occupied Buildings

In order to enable LBS to review the potential construction effects on surrounding occupied buildings more effectively, a Gantt chart has been prepared (as **Appendix C**) to visually represent Table 6.1 of the December 2018 ES (which is replicated below as Table 2):

Table 2: Table 6.1 of the December 2018 ES: Indicative Programme of the Works

Activities	Anticipated Start Date	Anticipated Completion Date	Approximate Duration (Weeks)
Site set up and enabling works	Week 1	Week 37	38
Demolition and Site clearance	Week 1	Week 31	32
Piling	Week 29	Week 47	19
Basement construction	Week 46	Week 78	34
Construction of the superstructures	Week 76	Week 160	85
Service installation and fit-out	Week 75	Week 205	131
Keats House	Week 134	Week 179	40
Landscaping and external works	Week 171	Week 196	26

#### Assessment of Worst Case

In accordance with best practice, the EIA considered the reasonably likely significant effects. To ensure a robust assessment, and to establish appropriate mitigation, a worst case assessment of the Development was undertaken by identifying the closest distance of the sensitive receptors to the location of proposed plant and when the most intense periods of works would occur, and reviewing the resultant vehicle



movements, both importing materials and exporting waste materials. These vehicle movements were assessed in the relevant technical topics.

### Construction Management Plan and Site Environment Management Plan

An outline Construction Management Plan (CMP) has been submitted to support the December 2018 Planning Application that commits the Main Contractor to dust mitigation measures.

A Site Environmental Management Plan (SEMP), amongst other relevant documents, will be issued to all demolition or construction contractors, this would ensure that in line with best practice a range of environmental management controls would be implemented during the construction and site preparation works.

The outline CMP submitted to LBS with the December 2018 Planning Application identifies the proposed phasing and construction methodology. This seeks to highlight and addresses any potential issues during construction that the Main Contractor should consider when developing their specific SEMP.

### London City Airport – Aviation Effects

Since the submission of the December 2018 ES, the National Air Traffic Safeguarding Office has provided a consultation response to the December 2018 Planning Application (refer to **Appendix D**). It is confirmed that no impact on aviation is anticipated as a result of construction (including crane heights) of the Development, and accordingly no objections are raised.

### Waste / Muck Away Vehicles

Table 6.2 of the December 2018 ES presents vehicles movements, including muck away lorries, however, this may not have been clear to readers. Therefore, Table 6.2 is re-provided within this ES Addendum, edited to aid understanding. This table, Table 2, contains no new information, and should be read alongside the Table 6.2 within the December 2018 ES.

Table 3: Anticipated Demolition, Deconstruction, Refurbishment, and Construction Plant of Chapter 6 of the December 2018 ES

Plant and Equipment	Demolition	Excavation / Piling	Substructure	Superstructure and Envelope	Fitting out
1.5 tonne Skid Steer Loader Shovels	3				
Luffing jib tower crane	1		2	2	
30 tonne excavator with hydraulic muncher attachment	1				
30 tonne excavator with muncher attachment	1				
30 tonne excavator with bucket attachment	1				
5 tonne minis with hydraulic pulveriser/impact hammer attachments	3				
Brokk		2			
Excavator		2	4		
Concrete Pump		2	2	2	
Piling Rig		2			
Crawler crane		2			
Temporary Substation		1	1	1	
Mobile access Platforms			5	4	8
Single hoist			1	1	
Twin hoist				2	2
Common Tower				1	1
Scaffolding					✓
Concrete lorry (6m <sup>3</sup> )*					
Muck away lorry (standard 16 tonne)*	Peak 30 Average 20	Peak 44 Average 26	Peak 24 Average 22	Peak 43 Average 16	Peak 24 Average 8
Articulated lorry*					
Low Loader*					
Lorry*					

\* all of these peak and average numbers are two-way movements e.g. Peak 44 is 22 vehicles into the Site and 22 vehicles out of the Site. These peak figures have been revised downwards by around 25% by the construction advisor, but the environmental assessments are based on the higher numbers as presented in the table to ensure assessments consider the worst-case scenario.

## 7. Chapter 7: Transport

As a result of the Revisions there are no material changes that would alter the assessment of Transport effects resulting from the Development. Therefore, no further assessments are considered necessary, and the findings remain unchanged as valid.

### Clarifications

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified in the Chapter. Whilst these do not change the assessment or results presented for clarity, this ES Addendum includes a replacement Chapter 7: Transport (see **Appendix E**), which supersedes that included in the December 2018 ES. This is considered to be the clearest way to address these issues, due to changes to a number of tables. For brevity we have not replicated this information in the main text of this ES Addendum, however, to aid the reader we have provided a summary of changes in the following paragraphs.

### Typographic Error

Table 7.2 in replacement ES Chapter 7: Transport has been updated to correct a typographic error where < and > symbols were transposed.

### Receptor Sensitivity

Review of sensitivity of receptors was undertaken as part of the December 2018 ES Chapter 7. Table 7.3 in replacement ES Chapter 7: Transport identified the type and sensitivity in line with the methodology set out. The sensitive receptors require no further assessment of construction effects, as these receptors will not be subject to any construction traffic.

### Pedestrian and Cycle Baseline

Baseline data for pedestrians and cyclists is now included in the Chapter text, as Tables 7.5 to 7.7, this data is derived from classified counts and the source is referenced. Table 7.6 includes Pedestrian Comfort Levels, this is supported by text in paragraphs 7.52-7.56 of replacement ES Chapter 7: Transport.

### Bus Usage – Capacity Information

Table 7.5 and supporting text in replacement ES Chapter 7: Transport has been updated to provide greater clarity with respect to bus capacities within the baseline information.

### London Underground – Load Information

Table 7.8 and supporting text in replacement ES Chapter 7: Transport has been updated to provide greater clarity with respect to loading capacities within the baseline information.

### Assessment Scenarios

In order to aid the reader's understanding of the scenarios assessed within the Chapter, paragraphs 7.9 to 7.11 have been revised.

### Effects on pedestrian delay, amenity, fear and intimidation and severance

Table 7.22 in replacement ES Chapter 7: Transport shows how the pedestrian comfort levels are forecast



to change significantly, as a result of the proposed Development. This is described in paragraphs 7.141 to 7.142 in replacement ES Chapter 7: Transport.

## 8. Chapter 8: Noise and Vibration

As a result of the Revisions there are no material changes that would alter the assessment of Noise and Vibration effects resulting from the Development. The changes to the Energy Strategy, proposed plant and roof level layouts require no further assessment as the assessment is based on absolute noise levels that must be achieved, which remain unchanged. As set out in the December 2018 ES, it is anticipated that there will be a planning condition which states the plant noise limits and requires monitoring to ensure these limits are adhered to.

Therefore, no further assessments are considered necessary, and the findings remain unchanged as valid.

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified in the Chapter, these are set out in the following paragraphs.

### Clarifications

#### Noise and Vibration Impact on the Completed Development

The December 2018 ES, as outlined within the EIA Scoping Report, addresses the impact of the proposed Development on surrounding land-uses. Suitability of the Site for office use and amenity is not a direct impact of the Development and therefore does not form part of the December 2018 ES. However, in line with LBS requirements the potential impact of LUL vibration on the Development was included.

#### Significance of Construction Noise Impact

As stated in Chapter 8: Noise and Vibration of the December 2018 ES, to assess the likely significant effects of the Works on existing and future Sensitive Receptors (SRs) surrounding the Site, the 'ABC Method' provided in British Standard (BS) 5228-1:2009+A1:2014<sup>2</sup>, has been used. The Construction Threshold Level stated in BS 5228-1:2009 Annex E ABC method does not provide comment on the level of significance of exceeding the Construction Threshold Level, although it is accepted that it does state '*a significant effect is deemed to occur if the predicted construction noise level exceeds the threshold level*'. In the absence of guidance on the level of significance based on the magnitude of exceedance of the Construction Threshold Level, an exceedance of <3dB is regarded as insignificant on the basis that an increase in a noise source of less than 3dB in an environmental setting is unlikely to be discernible. Exceedance of the Construction Threshold Level above this are assigned significance levels depending on the magnitude above the Threshold Level, as detailed in Table 8.4 of the December 2018 ES. The lowest daytime Construction Threshold Level is 65dB LAeq,T, where T is typically 10 hours per day during the weekday period and 5 hours on a Saturday. A construction level of 67.5dB LAeq,T is therefore regarded as insignificant or 'negligible', whereas a construction level of 78dB LAeq,T when assessed against a Construction Threshold Level of 65dB LAeq,T is regarded to be of major adverse significance.

#### Site Environment Management Plan (SEMP)

The purpose of the SEMP referred to within Chapter 8 of the December 2018 ES is to reduce the noise and vibration effects from the Works to acceptable levels when assessed against guidance and standards. The SEMP will essentially form one element of the CMP, the latter including general construction details such as the construction programme, method of working, etc.

<sup>2</sup> British Standard (2009); 'BS 5228 -1:2009 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise, Annex E 'significance of noise effects''.

## 9. Chapter 9: Air Quality

As a result of the Revisions to the Energy Strategy and the resultant upper level floor layouts, there are material changes that have the potential to alter the assessment of Air Quality effects resulting from the Development. Therefore, further assessment has been undertaken to review the plant related emissions and consider air quality at accessible roof terrace locations.

This ES Addendum includes a replacement Chapter 9: Air Quality (see **Appendix F**), which supersedes that included in the December 2018 ES.

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified and addressed in the replacement Chapter, and to aid the reader these are summarised in the following paragraphs.

### Clarifications

#### PM2.5 Emissions

The assessment has been undertaken for the proposed heating plant which is gas fired. For gas-fired plant, emission factors are not provided for PM10 because gas-fired plants do not emit any significant level of particulates and would, therefore, not impact on the Mayor of London's ambition to meet the World Health Organisation (WHO) PM2.5 target.

As shown in Table 9.15 of Chapter 9 Air Quality (**Appendix F**), the Development would not increase concentrations of PM10 and PM2.5. Therefore, the Development would not impact on the Mayor of London's ambition to meet WHO targets for PM<sub>10</sub> and PM<sub>2.5</sub>.

#### Trackout Dust

When using the IAQM criteria in Table 9 of the guidance document<sup>3</sup> (Table 4 below), a medium sensitivity area and a medium dust emission magnitude results in a low risk of dust impact from trackout in respect of human health and medium risk in respect of dust soiling as presented in the updated ES Chapter 9: Air Quality (**Appendix F**).

Correspondingly the mitigation measures in the updated ES Chapter (**Appendix F**) are consistent with those presented in Section 8.2 of the IAQMs guidance for Medium risk sites.

Table 4: IAQM guidance document on dust effects

**Table 9: Risk of Dust Impacts - Trackout**

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

#### Construction HDV Movement

Based on the review of the Works programme, the most intensive period for construction vehicle activity is predicted to be during the excavation and piling works. The Applicant's construction advisors have stated that the peak daily number of HGVs trips during construction are likely to be 28 but could be 44

<sup>3</sup> Institute of Air Quality Management (2014); 'Guidance on the assessment of dust from demolition and construction.'

during excavation and piling, as outlined in Table 6.2 of the December 2018 ES. It is considered that as the piling operations would only occur for a period of 19 weeks it represents a short-term situation and the average number is appropriate to use. As such, the assessment remains as set out within ES Chapter 9: Air Quality (**Appendix F**), i.e. the indicative criteria set out in the EPUK/IAQM assessment would not be met and no further assessment on construction vehicle exhaust emissions would be required.

## DEFRA Background Mapping

For clarity it can be confirmed that the 2017-based background maps for years 2017 to 2030 were used within the air quality assessment.

## Scheme Changes

There are no significant changes to receptors at the roof levels as a result of the scheme changes. AQ impacts for these areas are addressed in our response to AQ17.

## Roof Level Exposure

There is no relevant exposure at roof level as it is not assessable to users of the Development. The concentrations have been modelled at the façade of the proposed Development, therefore changes to relevant exposure associated with the revised Development have been captured.

## Mitigation Measures

It is confirmed that all measures for medium risk sites have been included.

## Receptors representative of annual mean exposure

There are no receptors representative of annual mean exposure at the proposed development.

## Further Assessment

### Updated Air Quality Modelling

A detailed assessment has been undertaken and a replacement Air Quality ES Chapter is appended to this document (**Appendix F**) ( to reflect the Revisions and provide more detailed modelling of vehicle derived emissions.

### Assessment of Short Term NO<sub>2</sub> Air Quality Objectives

Dispersion modelling has been undertaken to predict estimated concentrations at existing and proposed receptors averaged over a 1-hour period. The predicted concentrations have been assessed against IAQM's significance criteria.

The assessment methodology and significance criteria used is the same as presented in Chapter 9: Air Quality of the 2018 ES Air Quality and updated 2019 Chapter 9: Air Quality (**Appendix F**). The NO<sub>2</sub> short-term objective level is set at no more than 18 hourly exceedences of 200µg/m<sup>3</sup> per annum.

For the determination of the short-term impact, the IAQM guidance criteria in **Table 5** was used to describe the impact on the short-term concentrations.

Table 5: Impact Descriptors for Individual Receptors of the Short-Term Objective

% Change in concentration relative to Air Quality Assessment Level (AQAL)			
≤10	11-20	21-50	≥51
Insignificant	Minor	Moderate	Major

The NO<sub>2</sub> short-term objective level is set at no more than 18 hourly exceedences of 200µg/m<sup>3</sup> per annum. The results in **Tables 6 and 7** show the 99.8<sup>th</sup> percentile of hourly mean NO<sub>2</sub> concentrations. If the 99.8<sup>th</sup> percentile of 1-hour mean concentrations is less than 200µg/m<sup>3</sup> then the 1 hour mean objective is not exceeded.

The results from the dispersion modelling of traffic and heating plant emissions are presented in **Table 6 and Table 7**. The short-term NO<sub>2</sub> concentrations were considered to account for 35% of the total NO<sub>x</sub> concentrations, which is considered a worse-case scenario in the Environment Agency's Conversion Ratios for NO<sub>x</sub> and NO<sub>2</sub> Guidance<sup>4</sup>.

**Table 6** presents the predicted 99.8<sup>th</sup> percentile 1-hour mean NO<sub>2</sub> concentrations at relevant existing receptors and receptors introduced as part of the Development, assuming a progressive reduction in forecast emission rates and background concentrations from 2017 to 2026.

Table 6: Results of the Detailed Air Quality Modelling at Sensitive Receptors- 1-Hour Mean

ID	Address	Without Development (µg/m <sup>3</sup> )	With Development (µg/m <sup>3</sup> )	Change (µg/m <sup>3</sup> )	% Change in Hourly Mean Concentration relative to Air Quality Assessment Level	Impact Descriptor
R1	Orchard Lisle House	76.4	76.4	0.0	0%	Insignificant
R2	Orchard Lisle House	81.9	82.0	0.1	0%	Insignificant
R3	Boland House	71.0	71.1	0.1	0%	Insignificant
R4	Guy's Hospital	68.2	68.2	0.0	0%	Insignificant
R5	The Shard	75.8	76.0	0.2	0%	Insignificant
R6	Nuffield House	58.5	58.5	0.0	0%	Insignificant
R7	26 Park Street	65.5	65.5	0.0	0%	Insignificant
R8	21 Park Street	65.8	65.8	0.0	0%	Insignificant
R9	31-41 Park Street	64.8	64.9	0.1	0%	Insignificant
R10	St. Thomas Church	100.9	101.2	0.3	0%	Insignificant
R11	2 St. Thomas Street	105.4	105.6	0.2	0%	Insignificant
R12	70 Southwark Bridge Road	88.7	88.9	0.2	0%	Insignificant
R13	Ilfracombe Flats	74.8	75.0	0.2	0%	Insignificant
R14	Maple Building	77.3	77.3	0.0	0%	Insignificant

<sup>4</sup> Environment Agency. Conversion Ratios for NO<sub>x</sub> and NO<sub>2</sub>. Air Quality Modelling and Assessment Unit. Cardiff



ID	Address	Without Development (µg/m <sup>3</sup> )	With Development (µg/m <sup>3</sup> )	Change (µg/m <sup>3</sup> )	% Change in Hourly Mean Concentration relative to Air Quality Assessment Level	Impact Descriptor
R15	57 Borough High Street	158.7	158.8	0.1	0%	Insignificant
P1	Proposed: West Tower	-	97.2	-	-	-
P2	Proposed: Georgian Terrace	-	122.7	-	-	-
P3	Proposed: Terrace Level 34	-	61.2	-	-	-

Using the impact descriptors outlined in **Table 5**, the Development is predicted to result in an 'insignificant' impact on NO<sub>2</sub> concentrations at all existing sensitive receptors modelled. Using professional judgement, based on the magnitude of the impact and the concentrations predicted at sensitive receptors, it is considered that the effect of the Development on NO<sub>2</sub> concentrations would be **insignificant**.

Sensitivity analysis considers the potential effect of the Development against 2017 baseline conditions. The results of this sensitivity analysis in relation to NO<sub>2</sub> are presented in **Table 7**.

Table 7: Results of the Detailed Air Quality Modelling Assuming No Improvement in NO<sub>x</sub> and NO<sub>2</sub>- 1-Hour Mean

ID	Address	Without Development (µg/m <sup>3</sup> )	With Development (µg/m <sup>3</sup> )	Change (µg/m <sup>3</sup> )	% Change in Hourly Mean Concentration relative to Air Quality Assessment Level	Impact Descriptor
R1	Orchard Lisle House	99.4	99.5	0.1	0%	Insignificant
R2	Orchard Lisle House	111.3	111.5	0.2	0%	Insignificant
R3	Boland House	87.8	88.0	0.2	0%	Insignificant
R4	Guy's Hospital	80.7	80.8	0.1	0%	Insignificant
R5	The Shard	104.5	105.0	0.5	0%	Insignificant
R6	Nuffield House	72.5	72.6	0.1	0%	Insignificant
R7	26 Park Street	71.8	71.8	0.0	0%	Insignificant
R8	21 Park Street	73.0	73.1	0.1	0%	Insignificant
R9	31-41 Park Street	70.5	70.5	0.0	0%	Insignificant
R10	St. Thomas Church	151.9	152.6	0.7	0%	Insignificant
R11	2 St. Thomas Street	159.0	159.7	0.7	0%	Insignificant

ID	Address	Without Development (µg/m <sup>3</sup> )	With Development (µg/m <sup>3</sup> )	Change (µg/m <sup>3</sup> )	% Change in Hourly Mean Concentration relative to Air Quality Assessment Level	Impact Descriptor
R12	70 Southwark Bridge Road	154.2	154.5	0.3	0%	Insignificant
R13	Ilfracombe Flats	125.1	125.6	0.5	0%	Insignificant
R14	Maple Building	133.8	133.9	0.1	0%	Insignificant
R15	57 Borough High Street	286.6	287.0	0.4	0%	Insignificant
P1	Proposed: West Tower	-	142.3	-	-	-
P2	Proposed: Georgian Terrace	-	191.0	-	-	-
P3	Proposed:		61.4			

Assuming NO<sub>x</sub> and NO<sub>2</sub> concentrations are not declining as expected, the predicted 99.8<sup>th</sup> percentile 1-hour mean NO<sub>2</sub> concentration exceeds 200µg/m<sup>3</sup> at Receptor 15 both 'without' and 'with' the Development Scenario. This result is consistent with the Development being located within the London Borough of Southwark AQMA and the London Bridge at Borough High Street TfL NO<sub>2</sub> Focus Area.

Using the impact descriptors outlined in **Table 5**, the Development is predicted to result in a 'insignificant' impact on NO<sub>2</sub> concentrations at all sensitive receptors modelled, when assuming no improvement to NO<sub>x</sub> and NO<sub>2</sub>. Using professional judgement, based on the magnitude of the impact and the concentrations predicted at the receptor locations, it is considered that the effect of the Development on NO<sub>2</sub> concentrations, when assuming no improvements to NO<sub>x</sub> and NO<sub>2</sub>, would be **insignificant**. As such, the conclusions of the updated ES Chapter (**Appendix F**) remain valid.

## 10. Chapter 10: Archaeology

As a result of the Revisions there are no material changes that would alter the assessment of Archaeological effects resulting from the Development. Therefore, no further assessments are considered necessary. However, some further reassessment of the residual effects has been undertaken and this is set out in the clarifications below.

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified in the Chapter, these are set out in the following paragraphs.

### Clarifications

#### Planning Policy

Since the submission of the December 2018 ES, the National Planning Policy Framework<sup>5</sup> (NPPF) and the London Plan<sup>6</sup> have been updated. The NPPF was updated in February 2019, with the 'Intend to Publish' London Plan issued in December 2019. A review of these documents has identified that there is no material change to the policies considered with Chapter 10: Archaeology, accordingly the findings remain unchanged.

#### Review of Residual Effects

There has been no change to the assessment of the potential for, and significance of, baseline archaeological assets at the Site, nor to the physical effects of the Development since the December 2018 ES Chapter 10: Archaeology.

Whilst the exact significance of archaeological remains (and therefore scale of likely residual significance of effect) is not known until further site field investigation is undertaken, as a precaution, residual effects have been reassessed as follows on the basis that preservation by record offsets the environmental effect but does not prevent or change the physical loss of the archaeological resource.

Without mitigation, the effects of the scheme are as follows:

- on archaeological remains of **Medium significance** (i.e. Isolated and truncated prehistoric and/or Roman cut features) the effects would be of **major adverse** significance;
- on archaeological remains of **Low significance** (redeposited prehistoric and/or Roman artefacts, truncated post-medieval remains, and disarticulated human bone) the effects would be of **moderate adverse** significance.

On completion of the programme of archaeological investigation to the satisfaction of the LBS's Archaeological Advisor it is considered that the residual effects on any truncated prehistoric and/or Roman cut features will be **moderate adverse**, and on any redeposited prehistoric and/or Roman artefacts, truncated post-medieval remains, and disarticulated human bone will be **minor adverse**.

#### Updated Cumulative Assessment

With the completion of the construction works of Shard Place, previously included as a cumulative scheme but now considered as part of the baseline for archaeology, no nearby development scheme, including the additional cumulative schemes requested by LBS, is located within the study area used for the archaeological assessment of the Development Site. No elevated effects are therefore predicted that are greater than those identified in relation to the Development alone i.e. moderate and minor adverse.

<sup>5</sup> Ministry of Housing, Communities and Local Government (2019): National Planning Policy Framework, February 2019

<sup>6</sup> Mayor of London (2019); The London Plan 'Intend to Publish Version' December 2019.



However, any development project that has an impact on archaeology contributes to the cumulative erosion of this resource.

## 11. Chapter 11: Water Resources and Flood Risk

As a result of the Revisions there are no material changes that would alter the assessment of Water Resources and Flood Risk. Therefore, no further assessments are considered necessary, and the findings remain unchanged as valid.

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified in the Chapter, these are set out in the following paragraphs.

### Clarifications

#### Planning Policy

Since the submission of the December 2018 ES, the National Planning Policy Framework (NPPF) and the London Plan have been updated. The NPPF was updated in February 2019, with the 'Intend to Publish' London Plan issued in December 2019. A review of these documents has identified that there is no material change to the policies considered with Chapter 10: Archaeology, accordingly the findings remain unchanged.

#### Site Environment Management Plan

The contents of the SEMP pertaining to Water Resource and Flood Risk are set out in Paragraphs 11.82-11.88 of Chapter 11 of the December 2018 ES. For clarity these are repeated below:

- **Groundwater flooding** - Groundwater management measures would be set out within the SEMP. Appropriate dewatering and disposal, using standard techniques such as sumps and pumps would likely be required.
- **Surface water (pluvial) flooding** - The SEMP developed for the Works would include temporary measures to control surface water runoff from the Site. Such measures would include the provision of adequate drainage to manage surface water run-off. Construction of the drainage system should be designed and managed to comply with BS 6031:2009 'The British Standard Code of Practice for Earthworks'<sup>7</sup>, which details methods that should be considered for the general control of drainage on construction sites. Discharge rates and volumes of water discharged would be agreed with the EA and Thames Water.
- **Effects to Controlled Waters from ground contamination** - The Works would be undertaken in accordance with the SEMP to negate adverse risks to Controlled Waters. Protective measures would include:
  - Handling and storing any potential hazardous liquids/materials in accordance with relevant legislation and Environment Agency (EA) pollution prevention guidance;
  - The use of appropriately tanked and bunded storage areas for fuels, oils and other chemicals;
  - Procedures for the management of materials, spillage and spill clean-up, use of best practice construction methods and monitoring;
  - Surface drainage would pass via settlement and oil interception facilities, where required, and discharge arrangements would be agreed with the EA and Thames Water Utilities Limited (TWUL);
  - The provision of adequate drainage to manage surface water run-off and minimise contaminated water reaching the groundwater;
  - The stockpiling of contaminated materials would be avoided, wherever possible. Stockpiles would be located on areas of hard standing or on plastic sheeting to prevent mobile contaminants

<sup>7</sup> British Standards (2009): BS 6031:2009 'The British Standard Code of Practice for Earthworks', December 2009.

infiltrating into the underlying ground; and

- Potentially hazardous liquids on the Site, such as fuels and chemicals, would be managed and stored in accordance with best practice guidance, such as that published by the EA. Storage tank and container facilities would be appropriately bunded with designated areas and located away from surface water drains.
- **Potable water demand** – all relevant contractors would be required to investigate opportunities to minimise and reduce the use of water in accordance with the SEMP. These would include:
  - selection and specification of equipment;
  - implementation of staff-based initiatives such as turning off taps, plant and equipment when not in use;
  - use of recycling water systems in functions such as wheel washes and toilets; and
  - where possible, water from excavation would be used for dust suppression during construction.

## Consultation

Appendix 3 of December 2018 ES Part 4 - Appendix 11.1 (Drainage Strategy prepared by AKTII) contains Thames Water's response to AKTII's pre-planning enquiry, which confirms that there is sufficient sewer capacity for the proposed foul flows of the Development.

## Evolution of Baseline Conditions

For avoidance of doubt it should be noted that the baseline conditions for water resources and flood risk are not considered to evolve. On this basis the 'future' baseline conditions would remain as reported in Chapter 11: Water Resources and Flood Risk of the December 2018 ES. The flood risk baseline information used the latest available EA data, which considers the impact of climate change on future flood levels.

## Receptor sensitivity

Since the submission of the December 2018 ES a review of the receptor sensitivities has been undertaken. This is set out in **Table 8** of this ES Addendum.

Table 8: Sensitivity of Receptor

Receptor	Commentary	Sensitivity (H/M/L)
River Thames	<p>The River Thames forms part of the River Thames and Tidal Tributaries Site of Metropolitan Importance for nature conservation. The section of River Thames nearest to the Site is also known as the Middle Thames and is located within the Thames River Basin Management Area. It has been assessed by the EA as having a 'Moderate' Ecological Potential (failure against the Water Framework Directive, 2000 (WFD)<sup>8</sup>). It also fails with regard to Chemical Quality. Owing to the historic physical habitat modifications of the river throughout this reach, the Middle Thames is classified as a Heavily Modified Waterbody (HMWB).</p> <p>As the current chemical quality of the Middle Thames has been recorded as 'Fail' and the ecological status is Moderate, the surface water quality receptor is assessed as being of high importance / sensitivity.</p>	High
Existing surface and foul water	Thames Water combined public sewers are located adjacent to the Site. It is believed that all surface water and foul water from the existing building currently discharges to one or more of these public sewers. Given these sewers are public	High

<sup>8</sup> European Union, (2000), 'Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive)'.

Receptor	Commentary	Sensitivity (H/M/L)
sewers	(rather than private) these are considered to be have high importance / sensitivity.	
Existing water mains	Thames Water public water supplies are located adjacent to the Site. Given these water mains are public (rather than private) these are considered to be have high importance / sensitivity.	High
Deep Principal Aquifer	As stated in Table 11.3 of the December 2018 ES, a deep Principal Aquifer lies within the Chalk Group stratum. This aquifer classification has a high intergranular and/ or fracture permeability – meaning they usually provide a high level of water storage and likely to be used for potable water abstraction. This Principal Aquifer therefore has high sensitivity.	High
Secondary Aquifers	As stated in Table 11.3 of the December 2018 ES, the shallow aquifers (Secondary Undifferentiated Aquifer in the Alluvium and Secondary A Aquifer in the Kempton Park Gravel Formation) above the low permeable London Clay Formation (Unproductive Stratum) underneath the Site may be important in supporting local abstractions or in providing baseflow to rivers and streams. As such these aquifers have medium sensitivity.  Secondary A Aquifers lie within the Lambeth Group and Thanet Formation stratum underneath the Site. These Secondary A Aquifers are permeable layers capable of supporting water supplies at a local rather than strategic scale and as such have medium sensitivity.	Medium
Groundwater quality	The Site is not located in a groundwater Source Protection Zone. Groundwater vulnerability is therefore classified as medium-low.	Medium-Low

On review of the above, the sensitivity value of the identified receptors in **Table 8** do not affect the significance criteria in Table 11.1 of Chapter 11 of the December 2018 ES. The sensitivity of a receptor is often based on its spatial scale (i.e. locality to the Site and its local or regional importance), which is inherently considered within Table 11.1 of Chapter 11 of the December 2018 ES and used for determining the significance of effect (e.g. a major adverse effect if there were was an increase in water supply which would exceed the water resource capacity of the region versus a minor adverse effect if it placed additional pressure on existing local supplies and existing water supply infrastructure). The review of sensitivity does not change the findings as presented in the December 2018 ES.

## 12. Chapter 12: Wind

As a result of the Revisions there are no material changes that would alter the assessment of Wind Effects. Therefore, no further assessments are considered necessary, and the findings remain unchanged as valid.

Since the submission of the December 2018 ES, a number of typographical and presentational issues have been identified in the Chapter, these are set out in the following paragraphs.

### Clarifications

#### CFD Modelling Software

For clarity the software that Wirth Research use for wind analysis is ANSYS Fluent.

#### Wind Gust Analysis

In order to aid the reader, further information is set out within this ES Addendum with regard to the methodology behind the assessment of wind gusts.

The Gust Equivalent Mean (GEM) for these results is calculated using a proprietary method which uses the Turbulent Kinetic Energy (TKE) field and the velocity field from the Computational Fluid Dynamics (CFD) to estimate the gust velocity across the Site and surrounds.

The use of TKE has been questioned due to the known limitations of Reynolds-averaged Navier–Stokes (RANS) in predicting absolute TKE values, but for the purposes of generating GEM only the additional TKE generated by the flow structures within the Site and surrounds is relevant.

There is published literature which demonstrates that discrepancies between mean velocities from CFD and GEM from wind tunnels are only marked when concerned with the gustiness associated with flow accelerations around the corners of buildings.

The CFD method has been correlated against wind tunnel data. The studies used for this are confidential, but an anonymised section is shown in **Figure 2** to demonstrate the benefits from changing from mean velocity to GEM.

#### Revised Cumulative Assessment Methodology

As a point of clarification, the methodology used in this ES Addendum for the revised cumulative assessment does not differ to the approach undertaken for the December 2018 ES.

#### Replacement Cumulative Figures

Cumulative wind figures were presented as Figures 12.8-12.10 and 12.13-12.15 of the December 2018 ES. These figures have been replaced to include the additional cumulative schemes since submission of the 2018 Planning Application and presented as Figures 14.2 – 14.7 (re-numbered to accompany Chapter 14: Cumulative Effects for clarity). These are presented within **Appendix A** of this report.



## 13. Chapter 13: Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution

As a result of the Revisions there are no material changes that would alter the assessment of Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution. However, in order to address comments from a consultee post submission it has been necessary to review and update the assessment undertaken. A replacement Chapter 13: Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution is therefore included as **Appendix H** of this Addendum, this includes an updated Light Pollution Assessment (**Appendix G**). To aid the reader we have provided a summary of changes and clarifications in the following paragraphs.

### Clarifications

#### Compliance with ILP Guidance

In the December 2018 ES a number of windows are identified to received obtrusive light levels close to the ILP guidelines. To aid the reader further clarification is provided as to whether, when the background lighting levels are added, these guideline levels were exceeded.

The Light Pollution assessment (**Appendix G**) assumes all floors of the proposed Development are fully lit with lighting of 500 lux which is a worst-case scenario. In reality, owing to the occupancy sensors being proposed, fewer floors would be fully lit, especially post-curfew (after 11pm), and the effects would likely be lower than those reported within the December 2018 ES and as demonstrated by the 300 Lux light pollution assessment for 9 St Thomas St (**Appendix G**). Including baseline light pollution, it is unlikely that windows marginally under the guidance, would exceed the ILP maxima. In addition, as the detailed lighting design progresses, it will do so using the ILP Guidelines. In addition to this, the lower floors will contain restaurants and other retail uses, which typically use a lighting design far lower than 500 lux. Therefore, any windows affected by the lower floors of the Development, will be lower than those reported within the December 2018 ES.

#### Revised Sunlight Impact – Shard Place

The text in paragraph 13.225 of Chapter 13: Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare (**Appendix H**) relating to total annual probable sunlight hours (APSH) for Shard Place has been amended from the December 2018 ES to state: *‘For total APSH, four rooms would experience alterations between 20-29.9% which is considered a Minor Adverse effect, and 16 would experience an alteration between 30-39.9% which is considered a Moderate Adverse effect. The remaining 11 rooms would experience an alteration in excess of 40% which is considered a Major Adverse effect.’* However, the effect should remain the same.

#### Updated Light Pollution Assessment – 9 St Thomas Street

Following submission of the December 2018 ES an additional light pollution assessment for the residential element at 9 St Thomas Street has been undertaken (**Appendix G**). Overall the results show that the levels of light trespass seen on sensitive receptors at 9 St Thomas Street pre-curfew are acceptable and below those recommended by the ILP. Post-curfew potential light pollution issues have been identified on some of the tested windows. However, in reality, the proposed lighting system will include occupancy sensors which would detect the presence of a person to automatically control the lighting system, turning artificial lights off when rooms are unoccupied. Therefore, as demonstrated by additional assessments with a 300 Lux maximum output (pages 12 to 15 of **Appendix G**), the proposed

lighting system is unlikely to cause any significant nuisance post-curfew upon 9 St Thomas Street and therefore the effect of the Development is considered insignificant. The conclusion of the December 2018 ES Chapter 13: Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution that the residual effect of light pollution would be insignificant to all properties therefore remains valid.

## 14. ES Part 3: Townscape, Visual Impact and Built Heritage Assessment

As a result of the Revisions there are no material changes that would alter the assessment of Townscape, Visual and Built Heritage Impacts. However, in order to address comments from LBS, their advisors and consultees post submission it has been necessary to review and update the assessment undertaken.

Part 3 of the December 2018 ES has not been replaced in totality, rather, it is supported by a set of additional documents prepared by Peter Stewart Consultancy (PSC) and Miller Hare (MH):

- TVIBHA Cumulative Assessment Addendum (**Appendix B**);
- Updated Figure 3-7 of the TVBHIA (**Appendix I**);
- TVBHIA Erratum Notice (**Appendix I**);
- Correspondence with LBS on the agreed viewpoints (**Appendix I**);
- Clarification of effects on built heritage assets (**Appendix I**) – Part 1 of this response comprises a table, which sets out:
  - The significance of effect for individual heritage assets considered in the December 2018 ES TVIBHA, including grouped assets referred to in Table 3-6 of the December 2018 ES TVIBHA;
  - A clear statement of whether the effect is significant or not significant EIA terms relating to the 'Works' and once the Development is completed and operational; and
  - Further detail on the mitigation to be undertaken on the Site during the Works, including control measures.
- Part 2 of this clarification (**Appendix I**) provides further information regarding the Development's effect on the significance of heritage assets lying within the study area. This provides more detail on those attributes of each heritage asset and/or its setting that contribute to significance.
- Supplement to the December 2018 TVBHIA (**Appendix I**) which includes an assessment on additional heritage assets;
- TVIBHA Night Views Supplement (**Appendix I**); and
- TVIBHA ES Addendum (**Appendix I**) including three new views.

In addition to the revised assessment, a number of clarifications have been provided to aid the reader and their understanding of the assessment. These are set out in summary below, and where necessary in the documents detailed above, with reference to the following documents that comprised part of the December 2018 ES:

- Part 3: Townscape, Visual Impact and Built Heritage Assessment of the December 2018 ES.
- Part 4: Appendices of the December 2018 ES:
  - Appendix BHTVIA: KM Heritage Listed Building Heritage Assessment.
  - Appendix BHTVIA: Peter Stewart Consultancy Heritage Limited.

### Townscape and Visual Impact Clarifications

#### Comparison in Assessment of Views 50 & 51

The commentary on these views is provided in the December 2018 ES TVIBHA, which explains why the assessments of effects differ. As noted, at paragraph 5.635, by comparison with View 50, the 'as proposed' image for view 51 illustrates that:

- the public realm benefits of the Development would become more apparent the closer one gets to it;
- the removal of the unsatisfactory 20<sup>th</sup> century office building currently fronting St Thomas Street allows for a better appreciation of the Georgian terrace and Keats House; and
- the new opening in the street frontage signals the location of the main point of entry to the office development and to the new public space within the Development, and the new route to the underground station.

Further it is noted at paragraph 5.636 that by contrast with View 50, the proposed tower is less visually dominating, since this viewpoint is closer, and the upper parts are peripheral to the viewer's field of vision.

## Townscape and Visual Impact Clarifications

### Methodology – Assessment of Impact

The Built Heritage Assessment (BHA, within the December 2018 ES TVIBHA) has been informed by the findings of the KMH Listed Building Heritage Statement (LBHS) (an appendix to the December 2018 TVIBHA). The BHA quotes from the LBHS (paragraphs 12.62-63), which in turn quotes the NPPF when discussing the potential for 'substantial' harm to the listed buildings on the Site. This is entirely appropriate.

Elsewhere, where the December 2018 BHA quotes the NPPF (such as in the concluding paragraphs on residual effects 13.2 and 13.12) this is also appropriate – the point being made in these instances is that PSC have been mindful of the NPPF in carrying out the assessment according to PSC's methodology, setting out the assessment in the context of the national policy framework which includes consideration of public benefit.

On the question of 'balance', PSC's methodology states when referring to effects being assessed qualitatively, that '*an effect on an HA or its setting can enhance its heritage significance (a beneficial effect), harm its heritage significance (an adverse effect) or leave its heritage significance unchanged (a neutral effect).*' (paragraph 10.22). At paragraph 10.25, it states '*The general conclusions about the effect of the Development on HAs include consideration of the overall effect on the historic environment considered in the round.*' The balancing exercise carried out in line with PSC's methodology weighs any harm against heritage benefits and comes to a conclusion based on professional judgement.

In referring to 'consideration in the round', this simply means that while there may be an adverse effect on a view of a Heritage Asset (HA) that has been chosen to illustrate general townscape effects, and not a special view of that HA, it is one of many views of that HA, and this does not affect any element of setting that contributes to the significance of the asset.

Built Heritage Assessment Clarifications Part 1 (refer to **Appendix I**) provides an updated assessment of individual assets, based on the amended methodology set out in in the same document. In carrying out an assessment of effect on a given HA, it is only heritage benefits brought about by the Development that are taken into account. The decision as to what constitutes a heritage benefit is based on professional judgement and considers the condition of that HA as found today. The December 2018 TVIBHA draws to the reader's attention that existing condition. This will in some cases include both positive and negative qualities. Borough High Street Conservation Area (CA) is used here as an example. At paragraph 1.411 of Appendix A7 of the December 2018 TVIBHA (Statements of Significance) it is stated:

*'Although the present-day form of the yards, entered below buildings fronting Borough High Street which open onto narrow passages open to the sky, clearly reflects their historic origins, their physical form today is in many cases run down and disappointing once one is beyond the frontage buildings. Fragments of older buildings and street surfaces remain but even in the best of the yards there is no sense of an intact*

*historic setting, and there is clearly considerable room for improvement; the BHSCAA notes at 3.2.7 of the yards, after discussing the George yard, that 'other yards and alleys have generally been reduced to no more than utility and service accesses for frontage buildings, but retain potential for more active use.'*

It is clear from inspection that there is considerable scope for improvement to the part of the CA within which the Site lies, not least to the public realm, to enhance one's experience and appreciation of the heritage significance of the CA. The December 2018 TVIBHA considers that the Development does just that, enhancing the quality of the public realm, including the new routes and spaces on the Site. These are heritage benefits brought about by the Development and they were taken into account in determining the assessment of effect on the CA as a whole.

## Extent of Study Area

The area of study was informed by professional experience, including a good knowledge of the area and of other developments in planning, site visits, and desktop research. A Zone of Theoretical Visibility (ZTV) was commissioned as part of the December 2018 ES TVIBHA to inform the process of agreeing townscape viewpoints with LBS. It was only used to confirm decisions taken regarding the extent of coverage of the study area.

PSC exercised their professional judgment in determining which HAs were reasonable to include within the 1km radius. For example, decisions concerning the area of coverage to the north of the Thames took into account the densely developed townscape of the City of London beyond the built-up edge of the north bank. It was considered appropriate to include HAs lying on streets aligned on the Site (e.g. along Gracechurch Street) within the radius, a decision that was supported by the results of the ZTV.

A map detailing Built Heritage Assets included in the study area was supplied to officers in mid-October 2018, for the LBS commissioned review of the EIA Scoping Report (September 2018, Appendix 2.1 of the December 2018 ES). This was provided specifically to be read alongside the ZTV map. No further correspondence was received from LBS in relation to the heritage baseline prior to planning submission.

The December 2018 TVBHIA Figure 3-7 (listed building groups considered in the assessment) has been updated, which now lists those assets falling within each group. No heritage assets have been scoped out.

Figure 3-7 (as updated, refer to **Appendix I**) should be read alongside the ZVI report and the following figures submitted in the December 2018 ES TVIBHA:

- Figure 3-4 (Townscape Character Areas);
- Figure 3-5 (Townscape Character Areas with Heritage Assets); and
- Figure 3-6 (Built Heritage Assets considered in the assessment).

## Assessment of Tower of London

One assessment was undertaken for the purposes of the ES. The assessment is carried out at paragraphs 12.30-12.32 of the December 2018 TVIBHA. The text at paragraphs 12.34-12.58 demonstrates how PSC's assessment at 12.30 - 12.32 relates to guidance in the Mayor's SPG: 'London's World Heritage Sites – Guidance On Settings' (Ref. 3-38 in the December 2018 TVIBHA)<sup>9</sup>.

This example demonstrates there can be more than one way of carrying out such an assessment, and that different methodologies can be equally valid.

<sup>9</sup> Mayor of London (2012); Supplementary Planning Guidance: 'London's World Heritage Sites – Guidance On Settings'.

## Difference in Significance Rating

PSC applied their standard methodology, which has been found to be acceptable when tested at public inquiry. This approach was agreed in consultation with the Environmental Impact Assessment consultants, Waterman IE.

PSC methodology is consistent with the guidance set out in Guidelines for Landscape and Visual Impact Assessment (Third Edition)<sup>10</sup>, which states (at paragraph 3.32) that *'There are no hard and fast rules about what effects should be deemed 'significant' but LVIA's should always distinguish clearly between what are considered to be the significant and non-significant effects.'* At paragraph 3.34 the Guidance states *'When drawing a distinction between levels of significance is required (beyond significant /not significant) a word scale for degrees of significance can be used (for example, a four-point scale of major/moderate/minor/negligible). Descriptions should be provided for each of the categories to make clear what they mean, as well as a clear explanation of which categories are considered to be significant and which are not. It should also be made clear that effects not considered to be significant will not be completely disregarded.'* PSC's assessment draws a distinction between levels of significance, providing descriptions for each of the categories (see Table 3.4, Ch10). The distinction between significant and non-significant effects is made clear at paragraph 10.20 and Table 3-5 in Chapter 10 of the December 2018 BHA.

Paragraph 2.33 in Chapter 2: EIA Methodology of the December 2018 ES states:

*'For the purposes of this ES, minor, moderate and major are all considered as significant effects. The exception to this is in the Townscape, Visual Impact and Built Heritage Assessment where minor or minor/moderate effects are considered to be not significant; moderate and major effects are considered as significant effects'*

To ensure further transparency, ES Chapter 14 Cumulative Effects (**Appendix B**) and ES Chapter 15: Residual Effects and Monitoring (**Appendix J**) have been updated to explain this difference.

## Level of Significance for Individual Heritage Assets

The grouping of heritage assets is common practice and has been accepted on numerous other assessments. Grouping is carried out in part for the benefit of the reader, avoiding unnecessary repetition in an assessment. Nevertheless, all effects to heritage significance have now been assessed and reported taking account of an additional listed building, two further above ground SMs and LLBs. See updated Built Heritage Assessment Clarifications Part 1 and the TVIBHA Supplement (**Appendix I**).

## Mitigation of Harm

The December 2018 TVIBHA has drawn to the attention of the decision maker those instances where harm would result from the Development. PSC consider the commentary in paragraph 13.2 to be sound, highlighting where adverse effects would occur. It does not state that the harm identified would be offset by mitigation. It does state that *'The adverse effects noted in respect of the hospital and the Cathedral have been considered in the context of the impact of the Development overall, which would result in a number of benefits to other HAs, as detailed above'*, a point that is valid in this context. All effects to heritage significance have now been assessed and reported, taking account of an additional listed building, two further above ground Scheduled Monuments (SMs) and Locally Listed Buildings (LLBs). See updated Built Heritage Assessment Clarifications Part 1 and the TVIBHA Supplement (**Appendix I**).

## Identification of Heritage Assets

Since the December 2018 ES, the following has been provided (refer to **Appendix I: Built Heritage Assessment Clarifications**):

<sup>10</sup> Landscape Institute (2013); 'Guidelines for Landscape and Visual Impact Assessment (Third Edition)'.



- A full baseline of HAs (taking account of an additional listed building, two further above ground SMs and LLBs); and
- A statement of heritage significance for every HA, including the contribution of setting to heritage significance (if any).

Please also refer to New City Court TVBHA Supplement (**Appendix I**) for the assessment of those additional HAs considered.

The following provides further explanation of the Built Heritage Assessment methodology.

## 1. Heritage Significance and Significant Effects

The method set out in the TVBHIA notes that there are two different uses of the words 'significance' / 'significant' in heritage assessments for ES (for example, the introduction of a prominent building within the setting of a listed building could be a significant effect, but it would not necessarily affect the heritage significance of the listed building).

The term 'heritage significance', which is an aspect of sensitivity to change (i.e. an 'input' in the assessment process), has been used when referring to heritage significance as set out in the NPPF; elsewhere, the term 'significance' is used in the sense used generally in EIA i.e. the significance of an effect, in relation to a change (an 'output' of the assessment process).

The method of assessment is a staged process.

The assessment first identifies significant effects by considering (1) the combination of sensitivity to change of a heritage asset (receptor) (which has been informed by consideration of heritage significance) and (2) magnitude of change brought about by the proposed development. However, magnitude of change is not necessarily magnitude of change to heritage significance, and significant effects are not necessarily significant effects on heritage significance.

The next stage is to consider whether the significant effect identified has any effect on heritage significance, and if so whether this is beneficial or adverse.

This method of assessment identifies effects that are likely to be of interest to the local authority, HE and consultees, because they are noticeable. The method then goes on, as a second stage, to consider whether or not those noticeable effects are effects on heritage significance.

This method is transparent and helpful to planning authorities and members of the public because reactions to new development in historic settings are strongly influenced by the scale of visual impact, even though this does not necessarily determine the nature or scale of impact on heritage significance (see also the next paragraph). Visual effects are not the only effects considered. The assessment process corresponds to the way that proposed developments are considered and discussed by applicants and local authorities and HE officers.

## 2. Consideration of Visual Effects in Assessing Effects on Heritage Significance

With regards to effects on the setting of heritage assets, the principal guidance document is the HE planning advice note 'The Setting of Heritage Assets<sup>11</sup>'. This states (p2) that:

*'The extent and importance of setting is often expressed by reference to visual considerations. Although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places. For example, buildings that are in close proximity but are not visible from each other may have a historic or aesthetic connection that amplifies the experience of the significance of each.'*

Visual effects are the primary effects by which effects on the setting of a heritage asset are assessed with

<sup>11</sup> Historic England (2017). The Setting of Heritage Assets. Historic Environment Good Practice Advice in Planning: 3 (2nd Edition).

regards to their effect on heritage significance of that asset. Townscape and urban design considerations are also relevant, and so are other aspects noted in the HE guidance. The HE guidance also notes that (p4) that:

*‘Consideration of setting in urban areas, given the potential numbers and proximity of heritage assets, often overlaps with considerations both of townscape/urban design and of the character and appearance of conservation areas.’*

The HE guidance is consistent with the approach of HE officers in practice in consultation responses and LPAs in response to application schemes for new developments, which is to consider visual effects as the primary consideration in assessing effects on setting. It is common, for example, for assessment of ‘harm’ in responses from HE and LPAs, to limit themselves to questions of whether a proposed development is visible, without any accompanying cross-reference to heritage significance.

### 3. Narrative vs. Tables

The HE guidance on ‘The Setting of Heritage Assets’ notes (p8) that:

*‘Cases involving more significant assets, multiple assets, or changes considered likely to have a major effect on significance will require a more detailed approach to analysis, often taking place within the framework of Environmental Impact Assessment procedures. Each of the stages may involve detailed assessment techniques and complex forms of analysis such as viewshed analyses, sensitivity matrices and scoring systems. Whilst these may assist analysis to some degree, as setting and views are matters of qualitative and expert judgement, they cannot provide a systematic answer. Historic England recommends that, when submitted as part of a Design and Access Statement, Environmental Statement or evidence to a public Inquiry, technical analyses of this type should be seen primarily as material supporting a clearly expressed and non-technical narrative argument that sets out ‘what matters and why’ in terms of the heritage significance and setting of the assets affected, together with the effects of the development upon them.’*

The method used for heritage assessment reports provided by PSC as part of Environmental Statements is informed by this advice and is consistent with it. The method has been accepted at many public inquiries without criticism.

### Magnitude of Effects

The nature of the effects on each HA, which is now supported by a clear statement of the heritage significance of each HA and those attributes of setting (if any) that contribute to the HA’s heritage significance are now set out in Built Heritage Assessment Clarifications Part 1 and TVBHIA Supplement (**Appendix I**).

### Review of GLHER

As noted at paragraph.10.7 of the December 2018 TVIBHA, PSC made use of data available on LBS’s website and Historic England’s online database: ‘The Heritage List’ (officially the National Heritage List for England or NHLE at <http://www.historicengland.org.uk/listing/the-list>)<sup>12</sup> - the official and up to date record of all nationally protected historic buildings or sites in England.

With regard to Scheduled Monuments (SMs), paragraph 10.1 of the December 2018 BHA notes under ‘Scope’ that only those lying above ground that are also listed grade II\* or higher were included in the assessment. In the Applicant’s response to the scoping review, LBS was made aware that:

*‘The scope of this assessment covers above-ground SAMs in the study area that are also grade I/ II\* LBs (or a WHS in the case of the Tower of London). These comprise the following:*

<sup>12</sup> Historic England’s (2019): ‘The Heritage List’ (officially the National Heritage List for England or NHLE at <http://www.historicengland.org.uk/listing/the-list>)



- *Remains of Winchester Palace;*
- *Vintners Hall;*
- *Fishmongers Hall;*
- *The Monument;*
- *Portion of Old London Wall, Tower Hill, and*
- *Tower of London.'*

Given that the effect on above ground SMs that are also listed grade II\* or higher was considered as part of the assessment of effect on the subject listed buildings (as noted in paragraph 12.467), it was judged appropriate to use the sources noted above. There was no need to extend the source material to include the GLHER.

The contents of the GLHER are set out on pages 3 and 4 of the Greater London Historic Environment Record Information and Recording Policy<sup>13</sup> produced by HE.

The TVIBHA does not cover below ground archaeology which is covered by Chapter 10: Archaeology of the December 2018 ES.

Of the resource types mentioned within the GLHER contents, those relevant to the heritage assessment of the Development are:

1. World heritage sites;
2. Scheduled monuments (SM) (above ground SMs only);
3. Listed buildings;
4. Historic parks and gardens;
5. Conservation areas; and
6. Locally listed heritage assets (note the GLHER is stated to have only partial coverage of these).

Information on all of these resource types can be found elsewhere, in the sources referred to in the December 2018 BHA:

- Items 1-4 are available on the HE website, via the map search function.
- Items 5 and 6 are available on the LPA website.

The other contents of the GLHER relate to archaeology, which is not covered by the TVIBHA.

There is no information relevant to the TVIBHA that is available in the GLHER that is not available in the sources PSC have used to compile the baseline, so the baseline compilation undertaken is equivalent to consulting the GLHER. However, for completeness since the preparation of the December 2018 TVIBHA, the HE National Heritage List (which includes SMs) has been revisited to identify any above-ground SMs within the study area to ensure all are included. As a result, PSC have now included an additional listed building, two further SMs within the City of London that include above ground remains, namely Smiths' Wharf and Queenhithe Dock. Similarly, the LBS Draft Local List (2018)<sup>14</sup> has been consulted to identify locally listed buildings not previously included in the December 2018 TVIBHA. Further details, and an assessment of the Works and the proposed Development of the additional SM and LLB are detailed within the TVIBHA Supplement (**Appendix I**). As detailed within the TVIBHA Supplement, the conclusions of the December 2018 TVIBHA do not change with the inclusion of these additional heritage assets.

## 1746 Map

It is confirmed that the 1746 map of the Site referred to is reproduced in Chapter 2 of the December 2018

<sup>13</sup> Historic England (2015). Greater London Historic Environment Information and Recording Policy, January 2015.

<sup>14</sup> Southwark Council (2018). Draft Locally Listed Buildings List.

Design and Access Statement (DAS), as noted at Paragraph 4.12 of the December 2018 TVIBHA.

## Non-Designated Heritage Assets

PSC's approach to non-designated HAs was consistent with that set out in the scoping opinion which requested that the Applicant's Heritage Statement *'covers the direct effects (physical and setting change) to the non-designated heritage asset on the site, namely the façade of Keats House'*. It further stated that *'The heritage assessment must present a full consideration of significant effects on the designated and non-designated assets on site, as well as any heritage assets in the wider area'*. It was concluded, with reference to the HAs mentioned in the scoping submission that *'...non-designated heritage assets are not mentioned, and these should be given due consideration in the assessment. If there are none within the study area, this should be clearly stated in the assessment'*.

Under the title 'Scope' in Chapter 10 (Assessment Methodology and Significance Criteria) of the December 2018 TVIBHA, it is noted at paragraph 10.2 *'Registered Parks and Gardens of Special Historic Interest (RPGSHI) are also considered as HAs but none were identified at a distance close enough to be affected by the Development. The same is true of Locally Listed Buildings, which are considered as non-designated HAs'*. In Chapter 11 (Baseline Conditions) of the December 2018 TVIBHA, it is confirmed that *'No Registered Parks and Gardens of Special Historic Interest (RPGSHI) or Locally Listed Buildings lie within the study area'*.

Notwithstanding, the December 2018 TVIBHA acknowledges the status of both Keats House and no.20 St Thomas Street (New City Court) on the Site, as defined in the Borough High Street Conservation Area Appraisal (BHSCAA), which characterises each as an *'unlisted building that makes a positive contribution'* (i.e. a positive contribution to the character and appearance of the conservation area). The PSC Heritage Statement, located in Part 4: Appendices of the December 2018 ES, considers the impact of the Development on the Site's positive contributors to the Borough High Street Conservation Area (Chapter 6), applying the methodology set out in the English Heritage document, 'Understanding Place: Conservation Area Designation, Appraisal and Management' (2011). The main text of the December 2018 TVIBHA considers the effects of the Development on the Site's 'positive contributors' in its assessment of the direct effect on the Borough High Street Conservation Area as the designated heritage within which they lie (Refer to paragraphs 12.8-12.15 and 12.391 -12.397). Reference should also be made to the Listed Buildings Heritage Statement by KMHeritage in the December 2018 ES Part 4: Appendices, which provides further detail on the works to both Keats House and no.20 St Thomas Street's screen wall to King's Head Yard (paragraphs 2-17 – 2.23).

Built Heritage Assessment Clarifications Part 1 (refer to **Appendix I**) covers:

- A full baseline of HA (taking account of an additional listed building, two further above ground SMs and LLBs); and
- A statement of heritage significance for every HA, including the contribution of setting to heritage significance (if any).

Please also refer to the TVIBHA Supplement (**Appendix I**) for the assessment of those additional HAs considered.

## Updating Figure of Heritage Assets

The heritage assets falling under each group are clearly listed in the assessment text. Updated Figure 3-7 (Listed building (LB) groups considered in the assessment in **Appendix I**), now lists those assets falling within each group.

## Additional Views

Following requests from LBS Officers amendments have been made to a number of figures illustrating views as follows (provided in **Appendix I: TVIBHA ES Addendum**):

- TVIA View 10: LBS Borough View 2 – St Paul’s Cathedral from Nunhead Cemetery. In response to the request from LBS officers, these AVRs identify the protected view corridor and wider assessment area for reference; and
- TVIA View 29: Wireline and night views. The assessment for the daytime view provided in the December 2018 TVIBHA also applies to the daytime wireline and night time views provided in this Addendum: This is a change of insignificant to minor magnitude to a view of high sensitivity. The significance would be minor to moderate. The effect would be neutral. The effect is at regional level and long term.

## Further Details of Heritage Assets’ “Quality” and “Visual Setting”

The assessment is not based solely on the quality of a visual setting of a heritage asset. For example, the assessment has regard for the dense urban context of heritage assets assessed and their distance from the Site. A case in point is the characterisation of the setting of LBs lying with Group vii – ‘*Southwark Street, east end and streets to the north (grade II)*’ (paragraph 12.129) This notes that ‘*The Development will be seen as an addition to the evolving urban landscape, consistent with the character of the existing setting of these listed buildings. That setting includes large scale and tall post-war and modern buildings at London Bridge, including The Shard, The Place, Guy’s Hospital tower, and the recently completed Shard Place on St Thomas Street. This is illustrated in TVIA views 41 and 42 from Southwark Street*’. Views are referenced here as they help to illustrate the point, demonstrating the relevance of visual considerations in making an assessment.

Notwithstanding, further details has been provided regarding those aspects of the HAs’ settings that contribute to their heritage significance, if any.

Built Heritage Assessment Clarifications Part 1 (refer to **Appendix I**) provides an updated assessment of individual assets, based on the amended methodology set out in in the same document.

Please see the updated response below and **Appendix I**. This sets out the approach and methodology with regard ‘quality’ and ‘visual setting’.

## Overall Assessment of Impact on Heritage Asset

In order to set out how overall judgements of the impact on heritage assets has been made within the ES, the example of the effect on St Saviours Southwark War Memorial, Borough High Street (grade II\*) can be considered.

The war memorial has a very local setting, dominated by the busy main road today, and the Development, as a consequence of its distance from the Site and the nature of the context of the HA would not affect any element of setting that contributes to its significance. The principal views of the memorial is from the south, looking directly at it, with grade II listed mid-19th century former Town Hall Chambers in the background, within which there is a clear civic association, and the principal reason for the ‘GV’ specifically noted in the list description (see Statement of Significance (SOS) at appendix A of the December 2018 TVIBHA)).

In referring to ‘consideration in the round’, this simply means that while there is an adverse effect on view 43 (in Section 1 of the December 2018 TVIBHA), the effect on this view chosen to illustrate general townscape effects and not a special view of the war memorial (simply one of many views of the war memorial) does not affect any element of setting that contributes to the significance of the asset.

## Neutrality of effect on the Tower of London

For clarity the submitted assessment provides clear reasoning behind the finding of a neutral effect on the World Heritage Site (WHS), as stated in paragraphs 12.25 – 12.29 of the December 2018 TVIBHA. This followed PSC's stated methodology (see paragraph 10.22 of the December 2018 TVIBHA). The assessment has regard for the guidance in the Mayor's SPG: '*London's World Heritage Sites – Guidance On Settings*'.

## Hoardings

Further Clarification has been provided with respect to the effects of temporary hoardings on heritage assets within Built Heritage Assessment Clarifications Part 1 (**Appendix I**).

## Potential Effects on Assets in the WHS

Individual assets lying within the WHS were identified under the Tower of London WHS Listed Buildings group (p357 of the December 2018 TVIBHA). It was made clear in the paragraph that followed (paragraph 12.390) that '*The effect of the Development on the listed buildings located within this group is considered as part of the assessment of effect on the Tower of London WHS, which also takes account of the Tower of London's designation as a SM. That assessment can be found at the start of this chapter*'.

Paragraph 12.49 states that '*With regard to other heritage assets within the WHS, there is no significant potential for any effect on the significance of other heritage assets not already considered as part of the WHS*'.

In effect, the assessment considered the 'worst case' by assessing HAs of all grades under the umbrella of the most highly graded asset: the WHS.

Notwithstanding, for clarification, Built Heritage Assessment Clarifications Part 1 (**Appendix I**: Part 1 of response to BH1) now presents an individual assessment of the Listed Buildings falling within this group.

## Assessment of Adverse and Beneficial Effects

Where beneficial and adverse effects have been identified, PSC have provided more information on the nature of these in the Built Heritage Assessment Clarifications Part 2 (**Appendix I**). The December 2018 TVIBHA draws to the reader's attention those areas where harm is considered to result to a HA. To illustrate this point, the following examples are given:

### Group (i) – The Site: Nos. 4-8 and 12-16 St Thomas Street and attached railings (grade II).

Paragraph 12.68 of the TVIBHA notes '*the degree to which the Development dominates the existing street scene from some viewpoints would be considerable, disrupting the coherent quality of the view of the terrace from the corner with London Bridge Street, as TVIA view 50 illustrates*'. The adverse effect is acknowledged. The reader can cross-refer to the before and after images and assessment of effect on View 50 to inform their understanding of the effect on this HA.

### Borough High Street CA

Paragraph 12.393 of the TVIBHA states '*... the Development would result in some harm to the visual quality of a limited number of views within the CA*'. This takes into account the effect of the Development on views such as View 43 and 44 from Borough High Street and View 50, as noted above. The reader can cross-refer to the before and after images and assessment of effect on such views to inform their understanding of the effect on this HA.

### St Saviours Southwark War Memorial (grade II\*)

The assessment of effect on this HA draws to the reader's attention the adverse effect of the Development on the view of this HA from Borough High Street (View 43). The assessment of effect on this HA notes at paragraph 12.119 *'The visual effect of the Development in that view was found to be adverse, in part due to the unfortunate visual relationship between The Shard and the Development'*. The reader can cross-refer to the before and after images and assessment of effect on this view to inform their understanding of the effect on this HA.

## Beneficial Effects

Further clarification, where beneficial effects have been identified, has been provided, along with more information on the nature of these, and how they relate to heritage significance in Built Heritage Assessment Clarifications Part 1 in **Appendix I**.

The December 2018 TVIBHA draws to the reader's attention the condition of the HAs within the study area as found today. This will in some cases include both positive and negative qualities. Borough High Street CA is used here as an example. At paragraph 1.411 of Appendix A7 of the December 2018 TVIBHA (Statements of Significance) it is stated:

*'Although the present-day form of the yards, entered below buildings fronting Borough High Street which open onto narrow passages open to the sky, clearly reflects their historic origins, their physical form today is in many cases run down and disappointing once one is beyond the frontage buildings. Fragments of older buildings and street surfaces remain but even in the best of the yards there is no sense of an intact historic setting, and there is clearly considerable room for improvement; the BHSCAA notes at 3.2.7 of the yards, after discussing the George yard, that 'other yards and alleys have generally been reduced to no more than utility and service accesses for frontage buildings, but retain potential for more active use.'*

It is clear from inspection that there is considerable scope for improvement to the part of the CA within which the Site lies, not least to the public realm, to enhance one's experience and appreciation of the heritage significance of the CA. The December 2018 TVIBHA considers that the Development does just that, enhancing the quality of the public realm, including the new routes and spaces on the Site. These are heritage benefits brought about by the Development and they were taken into account in determining the assessment of effect on the CA as a whole.

## 15. Chapter 14: Cumulative Effects

Since the submission of the December 2018 ES a number of additional cumulative schemes have been identified by LBS (refer to Table 9 below). Therefore, an update to the December 2018 ES Type 2 cumulative assessment has been undertaken, which considers the combined effects of the Development with the previous cumulative schemes assessed and the five additional schemes in **Table 9**. A replacement Chapter 14: Cumulative Effects has been provided at **Appendix B**. ES Figure 14.1 in the December 2018 ES has been replaced to show the location of these new cumulative schemes, refer to **Figure 14.1 (Appendix A)**. As reported in the replacement ES Chapter 14, additional ES figures have been prepared illustrating the results of the wind cumulative assessment considering the above additional cumulative schemes. These figures are listed below and located in **Appendix A**:

- Figure 14.1: Location of Cumulative Schemes Assessed;
- Figure 14.2 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Summer Season);
- Figure 14.3 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Winter Season);
- Figure 14.4 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Annual Wind Safety);
- Figure 14.5 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Summer Season);
- Figure 14.6 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Winter Season); and
- Figure 14.7 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Annual Wind Safety).

The methodology of the revised cumulative assessments remains unchanged from that used for the December 2018 ES.

It is considered that the cumulative effects remain the same as reported in the December 2018 ES for a number of topics owing to the distance of these additional cumulative schemes from the Development. Therefore, there would be no further cumulative effect from the following:

- Noise and Vibration;
- Water Resources and Flood Risk; and
- Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution.

The December 2018 ES Chapter 14: Cumulative Effects has been updated in regard to:

- Transport (revised assessment taking into account the revised traffic flows as a result of the additional cumulative schemes);
- Air Quality (revised assessment taking into account the combined traffic flows as a result of the cumulative schemes. Note – modelling of traffic emissions was not undertaken in the 2018 ES, therefore, this is a new assessment);
- Archaeology (noting that as the construction of Shard Place is now complete, this should no longer form part of the cumulative assessment);
- Wind (revised assessment to take into account the additional cumulative schemes that fall within the



wind model context Snowfield / Bermondsey Street; Vinegar Yard; Becket House, 60 St Thomas Street; and 2-4 Melior Place. It should be noted that as the results of this revised cumulative assessment were found not to be materially different from the results reported in ES Chapter 12: Wind Microclimate, Chapter 12 of the December 2018 ES has not been revised and remains valid); and

- Townscape, Visual and Built Heritage (this is provided in **Appendix B** as a separate ES Addendum document with revised Accurate Visual Representations (AVRs) and commentary)).

Table 9 provides the additional cumulative schemes considered in the Type 2 cumulative assessment:

**Table 9: Additional Cumulative Schemes to be considered since submission of the December 2018 ES**

Additional Cumulative Scheme	Planning Ref	Description	Distance from Site	Status
Capital House (revised scheme)	18/AP/0900	Redevelopment of the site to include the demolition of Capital House and the erection of a 39-storey building (3 basement levels and ground with mezzanine and 38 storeys) of a maximum height of 137.9m (AOD) to provide up to 905 student accommodation units (Sui Generis use), flexible retail/café/office floorspace (Class A1/A3/B1), cycle parking, servicing, refuse and plant areas, public realm improvements and other associated works incidental to the development. The application is accompanied by an Environmental Statement.	269m southeast	Approved May 2019
Becket House / 60 St Thomas Street	18/AP/4136	Request for an Environmental Impact Assessment Scoping Opinion relating to the redevelopment of the site for a commercial building up to 24 storeys in height.	286m southeast	Pre-application
Vinegar Yard	18/AP/4171	Redevelopment of the site to include the demolition of the existing buildings and the erection of a 5 to 19 storey building (plus ground and mezzanine) with a maximum height of 86.675m (AOD) and a 2 storey pavilion building (plus ground) with a maximum height of 16.680m (AOD) with 3 basement levels across the site providing a total of 30,292 sqm (GIA) of commercial floorspace comprising of use classes B1, A1, A2, A3, A4, D2 and sui generis (performance venue), cycle parking, servicing, refuse and plant areas, public realm (including soft and hard landscaping) and highway improvements and all other associated works.	356m southeast	Validated April 2019, not yet determined
Bermondsey Street/Snowfields	19/AP/0404	Demolition of existing buildings at 40-44 Bermondsey Street including partial demolition, rebuilding and refurbishment of existing Vinegar Yard Warehouse and erection of three new buildings (two linked) with up to two levels of basement and heights ranging from five storeys (24.2m AOD) to 17 storeys (67m AOD) to provide office space (Class B1); flexible retail space	392m southeast	Validated March 2019, not yet determined

Additional Cumulative Scheme	Planning Ref	Description	Distance from Site	Status
		(Classes A1/A2/A3/A4/A5); new landscaping and public realm; reconfigured pedestrian and vehicular access; associated works to public highway; ancillary servicing; plant; storage and associated works. The application is accompanied by an Environmental Statement.		
2-4 Melior Place	18/AP/3229	Redevelopment of the site involving the construction of a 6-storey plus basement building, comprising a retail art gallery (Class A1) on the ground floor and 3 x 2 bed, 2 x 3 bed and 2 x 4 bed residential units on the upper floors.	350m southeast	Approved June 2019



## 16. Chapter 15: Residual Effects and Monitoring

As a result of the updated assessments detailed within this ES Addendum, and to provide a clear summary, an updated Chapter 15: Residual Effects and Monitoring is appended to this report as **Appendix J**, replacing that set out in the December 2018 ES.

To aid the reader the changes are summarised in the following paragraphs.

Following the review of the likely residual archaeological effects, these have been updated on a precautionary basis to change the archaeology likely residual effects from insignificant to **moderate adverse** on any truncated prehistoric and/or Roman cut features, and **minor adverse** on any redeposited prehistoric and/or Roman artefacts, truncated post-medieval remains, and disarticulated human bone.

The likely residual effect on Townscape Area 5 (North Bank) has also been updated from minor to **moderate** significance, in correspondence to the TVIBHA Erratum Notice in **Appendix I**.

Built heritage likely residual effects on individual heritage assets is provided in full in **Appendix I: Part 1** for BH1 (which were not previously included in the December 2018 ES Chapter 15), which also includes additional Heritage Assets identified following the November 2019 DRR (Grade I listed St Paul's Cathedral and Churchyard, Smiths' Wharf Scheduled Monument, Queenhithe Dock Scheduled Monuments and a number of locally listed buildings). A summary of built heritage likely residual effects is included in the updated Chapter 15 (**Appendix J**).

## **APPENDICES**

### **A. Figures**

Figure 1: Pedestrian Comfort level Assessment Locations

Figure 2: A comparison of WT (dots) and CFD (continuous field) using CFD mean velocity versus CFD GEM ( $\nu$  & TKE combined)

Figure 14.1: Location of Cumulative Schemes Assessed

Figure 14.2 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Summer Season)

Figure 14.3 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Winter Season)

Figure 14.4 - Configuration 5: The Site (as existing) with the baseline and original cumulative schemes, plus further cumulative schemes (Annual Wind Safety)

Figure 14.5 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Summer Season)

Figure 14.6 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Winter Season)

Figure 14.7 - Configuration 6: The completed and operational Development with landscaping and mitigation measures, with the baseline and original cumulative schemes, plus further cumulative schemes (Annual Wind Safety)



**B. Updated ES Chapter 14: Cumulative Effects and TVIBHA Cumulative ES Addendum**

**Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum



## **C. Construction Phasing Gantt Chart**

### **Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum



#### **D. Post-planning Response the National Air Traffic Safeguarding Officer**

#### **Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum



## **E. Updated ES Chapter 7: Transport**

### **Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum



## **F. Updated ES Chapter 9: Air Quality**

### **Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum

## **G. Further Light Pollution Assessment on 9 St Thomas Street**



**H. Updated ES Chapter 13: Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution**

## **I. Townscape, Visual and Built Heritage Appendices**

- Updated Figure 3-7 of the TVIBHA
- TVBHIA Erratum Notice – June 2020
- Correspondence with LBS on the agreed viewpoints
- Built Heritage Assessment Clarifications Part 1
- Built Heritage Assessment Clarifications Part 2
- Supplement to December 2018 TVIBHA – June 2020
- Environmental Statement Part 3: TVIBHA Addendum – June 2020
- TVIBHA Night Views Supplement – June 2020



## **J. Updated ES Chapter 15: Residual Effects and Monitoring**

### **Appendices**

Environmental Statement Addendum

Document Reference: WIE11375-102-R.6.2.5\_ESAddendum

## UK and Ireland Office Locations

