



Environmental Statement Part 5:  
Non-Technical Summary  
WATERMAN INFRASTRUCTURE & ENVIRONMENT



## **New City Court**

### **Environmental Statement Non-Technical Summary**

November 2018

**Waterman Infrastructure & Environment Ltd**





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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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## Comments

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First: draft for team comment

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### Contents

## 1. Introduction

This Non-Technical Summary (NTS) of the Environmental Statement (ES) has been prepared by Waterman Infrastructure & Environment Ltd ('Waterman IE') on behalf of GPE (St Thomas Street) Limited ('the Applicant') in support of a full planning application and listed building consent application for the redevelopment of a site at 4-26 St. Thomas Street in the London Bridge area, to the south of the Thames (the 'Site') within the administrative boundary of Southwark Council.

The location, existing buildings and boundary of the Site is shown in **Figure 1**. The Site occupies an area of approximately 0.36 hectares and is bounded by St. Thomas Street to the north, shops on Borough High Street (A3) to the west; King's Head Yard to the south; and Guy's Hospital buildings to the east.

The redevelopment (hereafter referred to as 'the Development') would provide an office-led, mixed use scheme (including new retail, leisure and community floorspace) and significant, high quality public realm. The Development would involve the demolition of all existing buildings and structures within the Site with the exception of the Georgian listed terrace of townhouses which will undergo significant restoration. Keats House façade would be reconstructed 2.7m to the west on Site to provide a new standalone building.

An Environmental Impact Assessment (EIA) has been undertaken by Waterman IE to assess the environmental effects of the Development. The EIA is reported in an ES which has been prepared to accompany the applications. The ES describes the likely significant environmental effects of the Development. This document forms part of the ES and provides a summary of the ES in non-technical language.

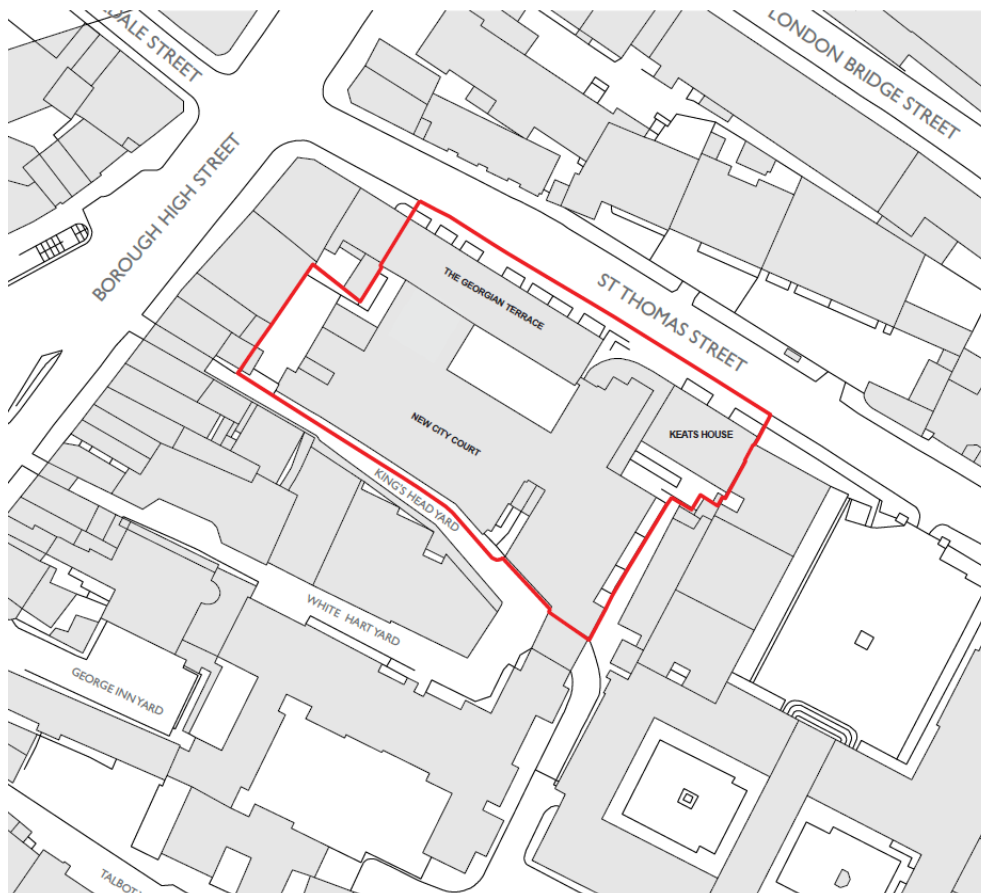
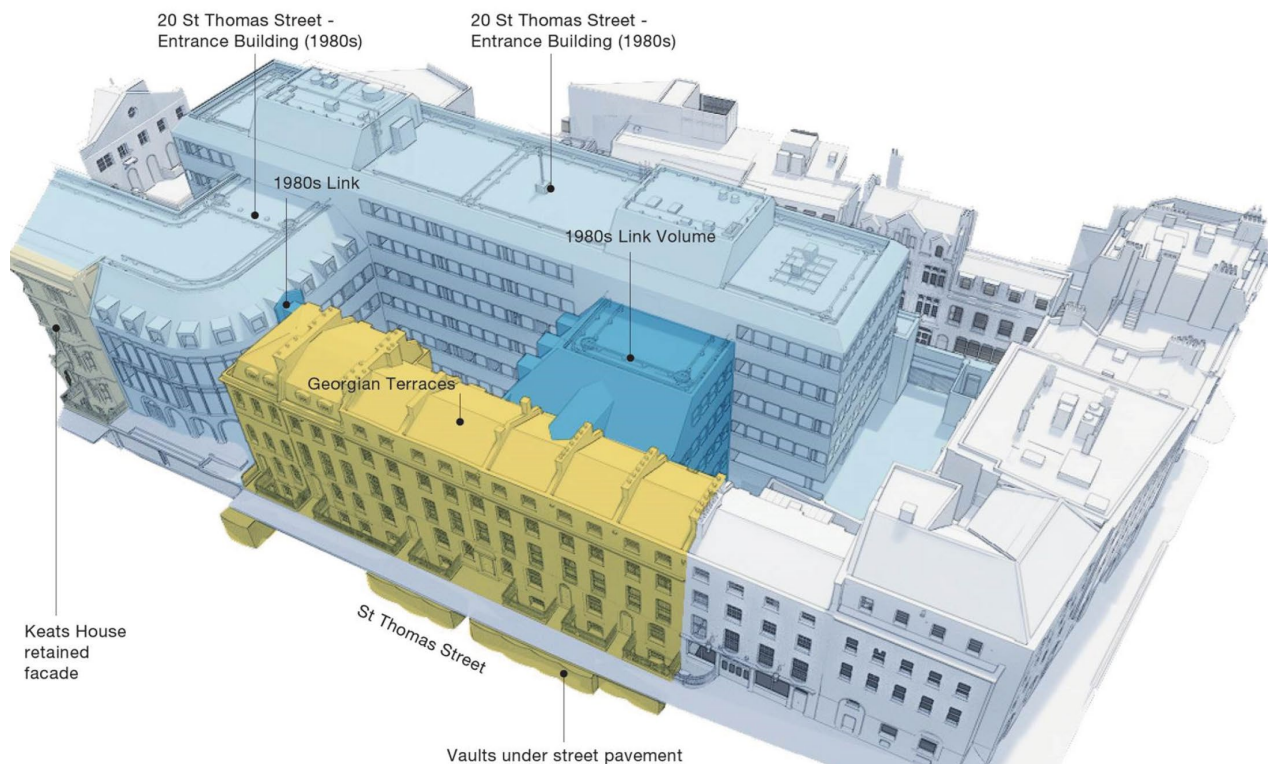


Figure 1 Existing Buildings and Red Line Planning Application Boundary.

## 2. The Existing Site and Surrounding Context

As shown in **Figure 2**, the Site comprises the following:

- Georgian terraced townhouses at Nos. 4, 6, 8, 12, 14 and 16 St. Thomas Street (No. 10 St. Thomas Street does not exist) which are grade II listed buildings (the 'Georgian Terrace');
- New City Court office building at No. 20 St. Thomas Street built in the 1980s; and
- Keats House at Nos. 24 to 26 St. Thomas Street, which was built in the 1980s with a retained 19<sup>th</sup> century façade fronting St. Thomas Street.



**Figure 2 Existing Site Buildings. Source: AHMM**

In addition to the above, there is also a central courtyard at lower ground level, which adjoins the rear of the Georgian Terrace, and a service area off King's Head Yard. There is no public open space on the Site, although a non-public pedestrian route runs through the Site from St. Thomas Street to King's Head Yard.

The Site is located in an area which has been in use by humans since the prehistoric period. The 11-14<sup>th</sup> centuries (later medieval period) saw the southern side of the Thames develop with many townhouses, churches and inns. The Site was part of St. Thomas' Hospital and was developed with backyards and outbuildings of properties lining the road. By the 18<sup>th</sup> century the Site was occupied by residential terraced buildings along the north-eastern boundary (the present Grade II listed buildings), a single building occupying the western and southern boundary and a dis-used graveyard situated in the south-east of the Site. The Site was relatively unaffected by bombing during the Second World War, with the majority of the area listed as receiving minor blast damage. The current layout was built in the 1980s which remains to the present time.

A London Underground Limited (LUL) railway tunnel runs beneath the north-western corner of the Site.



There is a mix of land uses surrounding the Site (see **Figure 3**). These are made up of residential, retail, office, hospital, and public transport infrastructure. In particular, the larger area of the Site is bounded by:

- Commercial properties located to the north, south-east and west of the Site, including shops, restaurants, office, hotels, public houses (including The Old King's Head), banks, museums and post offices;
- Residential properties including those situated on St. Thomas Street, King's Head Yard, White Hart Yard and Borough High Street; and
- King's College University facilities, including Guy's Campus, which comprises Guy's Hospital, student centre and student accommodation, as well as a library, IT suite, and auditoriums to the south and east of the Site.

The Shard, which is a mixed-use building, is located approximately 60m to the east of the Site and includes retail, offices, hotel, apartments, restaurants and a public viewing gallery. It is a destination for tourists. Other tourist attractions in the area include Borough Market, Shakespeare's Globe theatre, Hayes Galleria and Tate Modern. Southwark Cathedral is located to the west of the Site beyond Borough High Street. The Old Operating Theatre Museum and Herb Garret is located on the opposite side of St. Thomas Street to the Site.

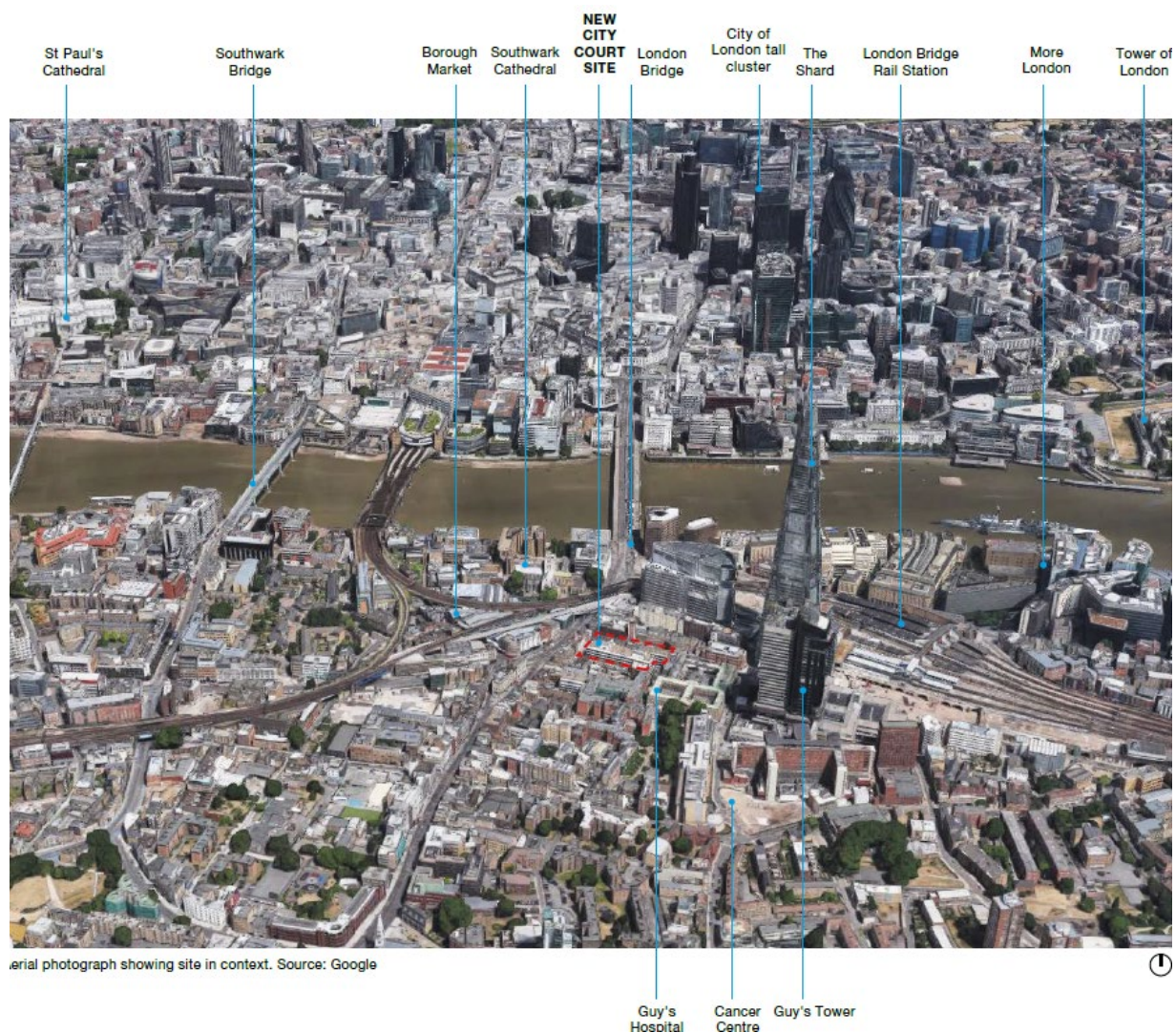


Figure 3 Aerial Photograph Showing the Site in Context of Surrounding Land Uses. Source: AHMM

### 3. What are the Proposals?

The detailed planning and listed building consent applications seek approval for the redevelopment of the Site for office, retail and leisure uses. Existing buildings would either be demolished (20 St. Thomas Street), restored and refurbished (the Georgian Terrace) or relocated and redeveloped (Keats House, the façade of which will be retained).

The Development would provide:

- demolition of the existing 1980s buildings and alterations;
- delivery of a 37-storey building (including ground, mezzanine and two storeys of plant at roof level) extending to 144m Above Ordnance Datum (AOD), providing high quality office and retail floorspace ('the Tower');
- introduction of retail floorspace at ground, lower ground and first floor level providing an enhanced retail offer for the local area and provision of active frontages along St. Thomas Street;
- provision of 1,067 sqm of affordable workspace on upper floors of the Georgian Terrace and 181 sqm of affordable retail at ground floor/lower ground floor level of the Georgian Terrace;
- provision of hub space at 21st and 22nd floor level of the Tower providing auditorium and exhibition space for both office and wider commercial use;
- sympathetic restoration of listed buildings along St. Thomas Street;
- reconstruction of Keats House as a standalone building with retention of the existing façade;
- delivery of high quality and fully accessible public realm, providing enhanced connectivity through new public routes and a public square;
- delivery of an elevated double height public garden at fifth and sixth floor level of the Tower with a complementary café/restaurant area;
- creation of a new entrance to London Bridge Underground Station; and
- improved servicing strategy to maximise servicing options.

As shown in **Figure 4 and 5**, there would be three buildings comprising the Development: The Tower (at 37 storeys), the Georgian Terrace and Keats House (both four storeys). As well as new pedestrian entrances to the Site would also be created: one off St. Thomas Street, one off King's Head Yard and one to the east of New City Court and entrances to retail units in the Georgian Terrace off the New Yard.



Figure 4 Aerial view of buildings and public realm areas. Source: MRG Studio



Figure 5 Elevation Drawing of New City Court Looking South from St. Thomas Street. Source: MRG Studio



The façade of Keats House would be carefully deconstructed, stored and reconstructed 2.7m to the west to enable a service route to be created off St. Thomas Street. There would be a new loading bay outside Keats House on St. Thomas Street. The Georgian Terrace would be retained and refurbished for retail and office use.

The Tower would provide 29 storeys of office space, with a double height ground floor. Retail uses would be on ground, lower ground and first floor levels as well as the fifth and sixth floors of the Tower. There would be a hub on the 21st and 22nd floors of the Tower, including an auditorium, which would be used for presentations and meetings. A gym would be located on Level B1. Plant would be located on the 34<sup>th</sup> and 35<sup>th</sup> floors as well as being on the lower basement Level B2.

A double basement is proposed across the Site. Basement Level 1 would include showers, cycle parking and the gym (beneath the Tower), retail and storage (beneath the Georgian Terrace) and building management offices (beneath Keats House). At Basement Level 2, there would be storage, plant and the service yard (beneath the Tower), plant (beneath the Georgian Terrace) and the bin holding zone and plant (beneath Keats House). Vehicle lifts, accessed off White Hart Yard, would enable access to the service yard at basement Level B2.

**Figures 6-11** are artists impressions of how the scheme would look.

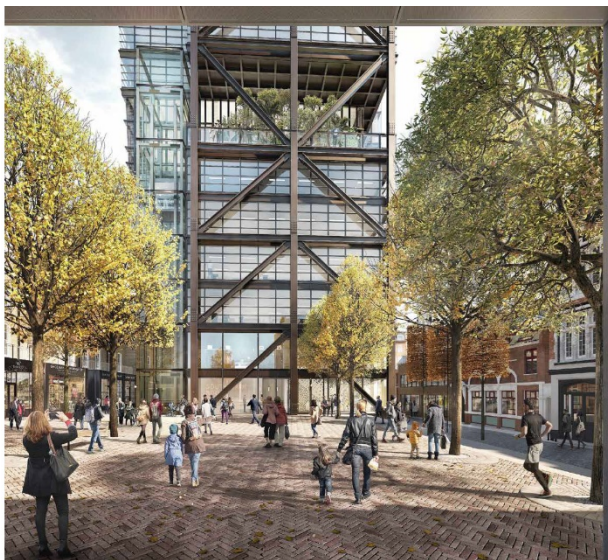


Figure 6 Artist's Impression of The Development Looking East from Proposed Exit from London Bridge Underground Station. Georgian Terrace on Left, Tower Straight Ahead and King's Head Yard to the Right. Source: AHMM



Figure 7 Artist's Impression of The Development Looking South from the Georgian Terrace to King's Head Yard. Source: AHMM





Figure 8 Artist's Impression of The Development Looking East Along King's Head Yard. Source: AHMM



Figure 9 Artist's impression of Keats House Relocated and Rebuilt (with Original Façade) to be a Standalone Building. Source: AHMM



Figure 10 Artist's Impression of The Development Looking South East from St. Thomas Street with Relocated Keats House and Level 5 Public Gardens Visible Above the Refurbished Georgian Terrace. Source: AHMM



Figure 11 Artist's Impression of The Development from Southwark Street in Context of Surrounding Buildings. Source: AHMM

There are two areas of public realm proposed, totalling 2,021 sqm:

- One at ground level, surrounding the three buildings and providing connectivity between St. Thomas Street, White Hart Yard and Borough High Street. It is intended to be fully accessible and used by both the office tenants and the wider general public. The ground level public realm (see **Figure 12**) is split into five areas: Main Courtyard (664 sqm), New Yard (181 sqm), St. Thomas Street Entrance (239 sqm), East Courtyard (149 sqm), East Passage (72 sqm).
- An elevated garden on Level 5 and 6 of the Tower which will provide 640sqm of double height temperature controlled enclosed area accessible to the public during working hours. There is also a 76 sqm external terrace garden at this level of the Tower.



Figure 12 Plan of Public Realm Areas on Ground Level and Level 5 of the Tower. Source: MRG Studio

There would also be a terrace on Level 34 of the Tower, but this would be for use by the office workers.

Deliveries and servicing carried out by cars and small vans would utilise White Hart Yard to access the vehicle lifts to the service yard (where three loading bays are proposed) on basement Level B2. By using White Hart Yard as a primary service route, traffic can be alleviated on King's Head Yard, making it more pedestrian friendly and accessible.

The movement of Keats House to the west allows the creation of a new controlled service route to the east, including convenient access to a new bin store for the collection of refuse. The creation of a broader pavement via loading and parking bays elevated to a shared surface type, would make St. Thomas Street feel less congested and pedestrian friendly, while a new loading bay adjacent to Keats House would allow more convenient deliveries from the new loading bay on St. Thomas Street.

No car parking is proposed, with the exception of 2 spaces for disabled users. Cycle parking would be in accordance with planning standards and would comprise 1,310 cycle spaces as well as 70 showers and 447 lockers across the three buildings.

The ground floor external spaces would be planted with medium and tall trees to enhance biodiversity and microclimatic conditions on the Site. There would be use of native trees of local habitats where appropriate as well as the use of ornamental non-native species. The planting selection would include plants historically used for medicinal purposes at Guy's Hospital. Typically, rainwater attenuation would be integrated into soil and an attenuation layer under permeable paving at ground level.

The elevated garden would be filled with tropical and subtropical planting inspired by habitats found in Asia and East Africa today (see **Figure 13**). The external terraces will be planted with temperate and



hardy subtropical plants. Natural paving and natural stone cladding on raised planters is proposed on these terraces.



Figure 13 Artist's Impression of a Section through the Internal Gardens on Level 5/6 of the Tower.  
Source: MRG Studio

Bird boxes would be included within the Development to encourage the local bird population to nest, including house sparrows, swifts and starlings.

The waste and foul water, including sewage, from the Development would be discharged to the existing public sewers. In order to reduce the surface water discharge rate to greenfield rate (5 litres per second (l/s)), some storage would be required on Site in voids. These voids would be located below ground level and also on the 34<sup>th</sup> floor of the Tower, below the plant and photovoltaic cells. Both systems would allow gravity discharge to the sewers in St. Thomas Street and King's Head Yard.

The Development has been designed to ensure that it is accessible to all. Design features would include raising the ground level of the Site and creating level entrances into the rear of the Georgian Terrace as well as removing the stepped entrance into the rebuilt Keats House façade to enable level access into the reception / office areas via lift.

The Development has also been designed to be an energy efficient as possible. Key features include:

- south facing staircases incorporate vents and shadow boxes to reduce overheating risk;
- high efficient LED lighting and occupancy sensors and daylight control sensors;
- a good level of insulation on the new building fabric and where possible also on the refurbished exposed walls and roof of the Georgian Terrace;
- openable fenestrations provided at every floor of Keats House and the Georgian Terrace to allow for the potential of natural ventilation during mid-season period;

- well insulated ductwork with very low losses in the heating/hot water system distribution and thermal insulation on solid elements of the new building fabric; and
- high efficiency mechanical ventilation with heat recovery systems will be provided for the office and retail spaces of the Tower and Keats House.

An outline Construction Management Plan (CMP) has been prepared and is submitted with the application. The CMP sets out the measures and procedures for keeping interested parties informed of progress and forthcoming activities which may affect them and includes measures to minimise nuisance and disturbance such as those resulting from noise and vibration, dust, air pollution and traffic. The effectiveness of mitigation measures would be monitored as part of the CMP, for example of construction dust, noise and vibration. In advance of the commencement of demolition and construction works a detailed CMP based upon the outline CMP would be submitted to, and approved by, Southwark Council.



## 4. Alternatives and Design Evolution

In line with the UK regulations which relate to EIA, the ES **Chapter 4 Alternatives and Design Evolution** provides a description of the main alternatives to the Development which were considered by the Applicant and a description of how the design of the Development evolved over time.

Guidance on the preparation of EIA suggests that it is good practice to consider 'alternative sites'. However, given the Applicant has owned the Site for ten years and due to policy objectives for the redevelopment of the Site, the Applicant has not considered alternative locations for the Development.

EIA guidance also suggests that the option of doing nothing (the 'No Development' scenario) is considered in an ES. The 'No Development' scenario would entail leaving the Site in its current state. Much of the Site is not an efficient use of space or pedestrian friendly and does not connect well to its surroundings. It is considered that under this scenario, the planning policy aims for redevelopment of the Site would not be realised leading to a number of missed opportunities for the Site.

Masterplanning of the Development commenced in 2014 and since this time the design has evolved in response to extensive public consultation, consultation with Southwark Council, and other statutory consultees (such as Historic England and the Greater London Authority), together with the findings of environmental and other technical studies. Key environmental considerations in the evolution of the Development have included:

- London View Management Framework (LVMF) height constraints and other key viewpoints identified;
- heritage setting effects to Borough High Street Conservation Area, as well as other conservation areas;
- daylight, sunlight and overshadowing effects to neighbouring residential properties;
- wind microclimate effects at ground level;
- considering the location of the Tower element to respond to the scale of neighbouring properties as well as to height constraints;
- improving connectivity within the surrounding area and assisting in reducing crowding outside the London Bridge Underground Station on Borough High Street;
- facilitating a new entrance and exit from the London Bridge Underground Station directly into the Site;
- assistance with reducing crowded pavements of Borough High Street outside the underground station;
- retention of key listed buildings and returning them closer to their original design;
- increasing active frontages along St. Thomas Street and King's Head Yard; and
- considering effects on, and ensuring appropriate conditions at sensitive receptors, for example by undertaking wind studies and noise and vibration assessments.

## 5. Approach and Environmental Impact Assessment Methodology

EIA is a process which aims to ensure that the likely significant environmental effects of a proposed development are given due consideration in the determination of a planning application. Effects can be beneficial (positive) or adverse (negative). In accordance with the relevant legislative requirements and best practice guidelines, the EIA was undertaken using established methods and assessment criteria. This involved visits to the Site, along with surveys, data reviews, consultation with relevant statutory authorities, computer modelling and specialist assessment undertaken by a team of qualified and experienced consultants.

The first stage of the EIA process involved undertaking 'EIA scoping studies'. The purpose of the study was to identify the potentially significant environmental effects associated with the Development and therefore provide the focus or scope of the EIA. The EIA Scoping Report which presented the findings of the scoping studies was submitted to Southwark Council to support a request for their 'Scoping Opinion'. Southwark Council issued their Scoping Opinion on 4 October 2018.

It was agreed with Southwark Council that the EIA would need to include an assessment of the following environmental topics:

- Transportation and Access;
- Noise and Vibration;
- Air Quality;
- Archaeology (Buried Heritage);
- Water Resources and Flood Risk;
- Wind Microclimate;
- Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare;
- Townscape, Built Heritage and Visual Impact Assessment; and
- Cumulative Effects.

Each of the above topics are addressed in the ES, with a chapter dedicated to each topic (with Townscape and Visual and Built Heritage impact assessments presented within ES Part 3, separate from the main text in ES Part 1 due to its size. In each chapter, a description of the assessment methodology is given together with the relevant environmental conditions on and adjacent to the Site and the likely significant effects of the Development (both beneficial and adverse). The significance of likely effects is graded on a scale as either insignificant, minor, moderate or major (note, this NTS does not include this terminology of effects as its purpose is to present the findings of the ES in non-technical language). Each chapter also describes a range of measures that would be incorporated to avoid, reduce, or offset any identified likely adverse effects, and / or enhance likely beneficial effects. Such measures are referred to as 'mitigation measures'. The resulting effects (known as 'residual effects'), following the implementation of mitigation measures, are also described.

The likely significant cumulative effects of the Development in combination with other 'reasonably foreseeable' redevelopment proposals are set out in ES **Chapter 14 Cumulative Effects**.

## **6. What are the Likely Environmental Effects and how would they be minimised?**

### **6.1 Transportation and Access**

As set out in **Chapter 7** of the ES and Transport Assessment (**Appendix 7.1** in Part 4 of the ES), an assessment of the transportation effects of the Development in terms of effects on road users, pedestrians, cyclists and public transport users was undertaken. This has been based upon a range of information sources and includes baseline surveys and computer models.

During the demolition, refurbishment and construction phase there would be a short-term increase in traffic flow, particularly heavy goods vehicles (HGVs), associated with general plant and materials deliveries and the removal of waste from the Site. To effectively manage this traffic management measures would be set out within a Site Environmental Management Plan (SEMP) and Construction Logistics Plan (CLP). This would be agreed with Southwark Council prior to the commencement of works and would include measures such as the use of agreed appropriate routes to and from the Site for construction vehicles. Appropriate signage would be implemented around the Site as well as communication methods for keeping local residents informed of activities.

The Site has a high level of accessibility to public transport, with London Bridge Mainline and Underground Stations in close proximity to the Site. Several bus services pass close by the Site. However, current pedestrian provision within the Site itself is poor.

Overall, once the Development is completed and occupied, it is predicted to result in no noticeable increases in traffic flows on the local road network. The two blue badge car parking spaces and cycle parking spaces provided are in accordance with relevant policy guidelines and have been agreed in consultation with Southwark Council and Transport for London (TfL). A Travel Plan has been developed in support of the planning application. This sets out a framework for the delivery of new transport initiatives and measures for users of the Site that would travel to and from the Development on a regular basis and how they can minimise reliance on private vehicle use and maximise the use of more sustainable modes of transport.

With regard to the increased use of public transport in the area, the predicted net increase in passengers using London Bridge Mainline and Underground stations and local buses is not expected to give rise to any significant capacity issues.

The Development is predicted to generate additional walking and cycle trips on the local network surrounding the Site. However, the Development provides a new pedestrian route through the Site and enhances the Site's permeability and connectivity for pedestrians and cyclists. The pedestrian environment within the Site would be of high quality with the provision of attractive open spaces, well maintained and legible pathways, lighting and active ground floor uses, thus providing natural surveillance. The new pedestrian route linked to the proposed new exit/entrance to the Underground station would reduce the existing pedestrian overcrowding on the pavements on Borough High Street. Cycling will be encouraged via the provision of 1,310 cycle parking spaces for users of the Development.

### **6.2 Noise and Vibration**

As set out in **Chapter 8** of the ES, the noise and vibration effects of the Development have been established in accordance with published guidelines and included a comprehensive baseline monitoring survey at the Site. The assessment used calculations based on the baseline monitoring survey and the proposed layout of the Development.

The baseline noise survey found the noise climate to be dominated by road traffic noise from the surrounding road network, construction activities on nearby sites as well as distant mainline railway and aircraft noise.

Vibration monitoring found that the LUL Jubilee Line tunnel underneath the Site had no material effect on existing occupants or would have on future occupants at the Site.

Demolition, refurbishment and construction works would include activities that would be likely to temporarily increase noise levels and potentially cause vibration within and immediately adjacent to the Site (particularly demolition activities, breaking activities and piling). In particular, when activities are occurring closest to the Site boundary, this could result in temporary effects on occupants in surrounding properties, including residents.

The implementation of noise and vibration control and management measures through the SEMP during demolition and construction would help to reduce noise disturbance to occupants of existing and future properties. Such measures would include using low-noise machinery and equipment, enclosing and screening machinery, using low-vibratory foundation methods and the use of appropriate hoarding to the required height and density. Despite these measures there could still be temporary noise disturbance of Guy's Hospital including the Chapel, the Bunch of Grapes Public House and Iris Brook House / Orchard Lisle House during demolition and concreting works. Demolition and construction traffic is not predicted to result in significant noise increases on local roads and would be managed through the CLP.

Any items of fixed building services plant installed as part of the completed Development would have the potential to generate noise. Suitable noise level limits have therefore been proposed to ensure that noise from plant would not cause disturbance to existing or future receptors in the surrounding area or future occupants of the Development.

Although predicted potential effects arising from servicing and delivery are not likely to be significant, a Delivery, Servicing and Waste Management Plan (DSWMP) submitted to support the application would be implemented to manage the arrival and departure of delivery and servicing vehicles and their activities when on-site, and therefore assist in mitigating noise emissions.

### **6.3 Air Quality**

As set out in **Chapter 9** of the ES, the air quality within the administrative boundary of Southwark Council exceeds legal limits and, as a result, Southwark Council have designated the entire northern part of the Borough as an Air Quality Management Area (AQMA). The Site is located within this AQMA. An AQMA is designated where there is public exposure (e.g. residential properties) in areas exceeding the Air Quality Strategy (AQS) Objectives. An assessment was undertaken to determine the likely effects of the Development on local air quality.

Monitoring undertaken by Southwark Council shows that, at the nearest monitoring location to the Site on Borough High Street, nitrogen dioxide (NO<sub>2</sub>) levels exceeded the national objectives. NO<sub>2</sub> is primarily produced as a result of road traffic and other processes that burn fossil fuels.

The main likely effects on local air quality during the demolition and construction works would relate to the generation of dust and to exhaust emissions from construction vehicles. A range of measures to minimise or prevent dust would be implemented through the SEMP so that no significant dust effects would result. Such measures include dust suppression techniques such as water sprays, appropriate hoardings and dust monitoring.

A detailed modelling exercise has been undertaken to assess likely effects on local air quality associated with proposed heating plant emissions from the operational Development. The modelling indicates that

levels of NO<sub>2</sub> would not exceed UK acceptable limits at any of the nearby properties as a result of the Development. It is concluded that the effect of the Development on levels of NO<sub>2</sub> would be not significant.

Whilst no mitigation is needed, as the Development is predicted to have no noticeable effects on local air quality, the Applicant is committed to adopting a range of measures to reduce impacts on air quality and promote health and wellbeing within the Development and wider area. In addition to the measures included within the SEMP, measures which are likely to have a benefit to the air quality include, but are not limited to:

- a new entrance/exit to the London Bridge Underground Station, which would reduce pedestrian footfall on Borough High Street and encourage the use of public transport;
- new open space within the Site would be planted with medium and tall trees;
- the provision of 1,322 cycle spaces, 70 showers and 447 lockers, to encourage sustainable forms of transport;
- implementation of a Delivery, Servicing and Waste Management Plan to manage the arrival and departure of delivery and servicing vehicles and their activities when on-site; and
- implementation of a Travel Plan to encourage employees to move up within the sustainable transport hierarchy.

## **6.4 Archaeology (Buried Heritage)**

As set out in **Chapter 10** of the ES, an assessment of the effects of the works on the archaeological (below ground heritage asset) resource within the Site was undertaken. This was assessed qualitatively based on professional judgement using a desk study and review of historical archaeological fieldwork undertaken at the Site.

The Site does not contain any statutorily designated heritage assets, but does contain the Grade II listed Georgian Terrace on St. Thomas Street. The Site lies within an archaeological priority area designated by Southwark Council. The Site is therefore recognised as being in an area of significant known archaeological interest or potential.

However, due to the construction of the existing building and its basement on the Site, archaeological survival is expected to be very limited and localised and may include isolated and truncated (partially removed) prehistoric cut features, isolated and truncated Roman cut features, redeposited Roman artefacts or Roman pits/ditches, and truncated post-medieval remains. All of these, if present, would be of low or medium significance and do not require preservation in situ.

The likely effects of the Development on any potential archaeological remains are associated with the excavation of a new lowered basement level and for new foundations, and any underpinning beneath the Georgian Terrace. These works will truncate or remove entirely any archaeological remains within the area affected. Accordingly, archaeological mitigation has been proposed in the form of a suitable programme of archaeological investigation and recording before demolition (archaeological monitoring of geotechnical test pits etc) and / or during groundworks (archaeological trenched evaluation followed by targeted excavation and/or watching brief), to advance understanding of the archaeology achieve preservation by record.

There would be no likely effects on archaeological assets once the Development is complete and occupied.

## 6.5 Water Resources and Flood Risk

The assessment in **Chapter 11** of the ES was supported by a Flood Risk Assessment and Drainage Strategy (**Appendix 11.1** and **11.2** in Part 4 of the ES). The lowest point of the Site is the south eastern corner near where King's Head Yard and White Hart Yard meet. The nearest surface water to the Site is the River Thames, approximately 200m to the north. The Site is protected by the Thames Tidal Defences, and as such, tidal and fluvial flood risk at the Site is considered to be low. However in the event that the tidal defences fail, the design includes demountable flood resilient barriers at the building entrances in order to prevent flood water entering the buildings and a permanent flood barrier to prevent ingress into the basement.

Thames Water stated that there was not a history of flooding from sewers in the vicinity of the Site and the risk of flooding to the Site from surcharged (overloaded) sewers is therefore considered low.

Surface water flooding can occur as a result of either overland flow or ponding. Overland flow occurs following heavy or prolonged rainfall, snow melt, or where intense rainfall is unable to soak into the ground or enter drainage systems due to blockages or capacity issues. Unless it is channelled elsewhere, the run-off travels overland, following the gradient of the land. Ponding occurs as the overland flow reaches low lying areas in the local topography. These flood events tend to have a short duration and depend on a number of factors such as geology, topography, rainfall, saturation, extent of urbanisation and vegetation.

As the surrounding area is highly developed, it almost entirely comprises impermeable hardstanding area, which during high intensity storms will generate large surface water runoff flows. The Site is located within an area identified as having surface water 'critical' drainage problems and the Site is located within an area identified as a low to medium risk of surface water flooding (or a risk between 1% to 0.1% of flooding occurring each year).

A drainage strategy for the Development has been developed, which includes measures to reduce water runoff from the Site and control the rate of discharge of this water to the local sewer network. The waste and foul water, including sewage, from the Development would be discharged to the existing public sewers. In order to reduce the surface water discharge rate to the greenfield runoff rate (5 litres per second (l/s)), some storage would be required on Site in voids. The greenfield runoff rate is the runoff that would occur from the site in its undeveloped and undisturbed state. This is required to be calculated by the Environment Agency to ensure that the drainage network is not overloaded.

These voids would be located below ground level permeable paving in public realm areas and hold about 150 cubic metres of water and also on the 34<sup>th</sup> floor as blue roof below the plant and photovoltaic cells (holding 50 cubic metres of water). These volumes allow for the likely future increase in rainfall due to climate change.

The inclusion of the voids would result in a reduction in the volume and peak rate of surface water runoff from the Site and hence a reduction in flood risk elsewhere compared to the current situation. The risk of surface water flooding from the ponding of water in the low point in levels along King's Head Yard would be mitigated through the use of the demountable and permanent flood barriers within the Development.

The Pre-Development enquiry submitted to Thames Water has confirmed that the existing public sewer network has the capacity to accommodate the foul and surface water flows from the Development and Site.

There would be an increased demand for water supply resulting from the Development. However, the implementation of water efficiency measures would be incorporated into the Development to minimise the demand as far as possible.



The Site is underlain with a chalk aquifer at >50m below ground but this is hydrologically separated from the Site by a layer of clay. The deepest level of the basement would be constructed within a gravel layer (known as the Kempton Park Gravel formation) which could contain groundwater. This groundwater would be expected to flow around and beneath the basement, and so not result in any groundwater flooding. In addition, the basement would be appropriately waterproofed to enable it to remain watertight throughout the lifetime of the Development.

## 6.6 Wind

As set out in **Chapter 12** of the ES, an assessment of the likely wind conditions as a result of the Development and the suitability of these in terms of pedestrian comfort has been undertaken. The assessment has been informed by appropriate meteorological data and computational fluid dynamics (CFD) modelling. CFD is a computer based modelling technique, which simulates the effect of wind on the built environment.

The meteorological data for the Site shows that prevailing winds blow from the south-west throughout the year, which is typical for many areas of southern England, with the strongest winds during the winter season. There is a secondary peak from the north-east during the late spring and early summer. The winds from the north-east are not as strong as the prevailing winds from the south-west. The wind microclimate conditions throughout and surrounding the Site are generally as would be expected within an urban environment, ranging from acceptable for sitting use to leisure walking use during the windiest season.

During the Development design process the CFD modelling results were used to inform the design of the Development and resulted in the southern façade being stepped and including a wider base to the building along the southern boundary to protect the ground level in King's Head Yard.

The demolition of the existing buildings would not be expected to have a significant effect on the wind conditions within, and immediately surrounding, the Site. As construction of the Development proceeds, the wind conditions of the Site would gradually change to the conditions of the completed Development.

Following completion of the Development, and with mitigation measures in place such as localised screening and landscaping, the wind conditions likely to be experienced at all locations within, and immediately surrounding, the Site have been found to be suitable for the intended uses. These locations include pedestrian thoroughfares, entrances, and amenity spaces including above ground level terraces. It is therefore considered that wind conditions would not significantly affect pedestrian comfort or safety either within the Development or for the streets or buildings in proximity to the Site, following completion of the Development.

## 6.7 Daylight, Sunlight, Overshadowing, Light Pollution and Solar Glare

As set out in **Chapter 13** of the ES, an assessment has been made of the likely effect of the Development on the daylight, sunlight, overshadowing, and light pollution on neighbouring properties and amenity spaces. A solar glare assessment has also been undertaken by identifying sensitive viewpoints for road and train drivers surrounding the Site.

The technical analysis has been undertaken quantitatively via the creation of a digital three-dimensional model of the Site and surroundings, based on measured survey data. A total of 2,127 windows serving 775 rooms within 18 (mainly residential) buildings surrounding the Site have been assessed for existing daylight conditions.

A total of 255 rooms were assessed for existing sunlight conditions. These rooms serve residential buildings, student accommodation (Iris Brook House and Orchard Lisle House) and one hospital (Guy's

hospital with two wings).

In respect of overshadowing, two public amenity locations were assessed. Twenty-seven locations, including road junctions and on rail tracks, were assessed for the solar glare assessment and residential receptors in close proximity to the Site were assessed in the light pollution assessment.

During the demolition works there would be some temporary improvements to the level of daylight, sunlight, overshadowing, light pollution and solar glare to properties and areas surrounding the Site. As construction of the Development progresses, the daylight, sunlight, overshadowing, solar glare and light pollution effects to properties and areas surrounding the Site would progress to the conditions predicted for the completed Development.

In relation to daylight, eight of the 18 buildings identified would not experience a noticeable alteration in the levels of daylight that they receive with the completed Development in place. The remaining ten properties would experience noticeable effects with reductions in daylight levels in excess of the industry standard guidelines with respect to daylight availability. The properties that would be affected are located along Nos. 43, 51, 53-55, 57 and 63a Borough High Street, No. 6 London Bridge Street, Chaucer House, the two student accommodation blocks to the south and Shard Place to the northeast.

In relation to sunlight, 14 of the 16 buildings identified would not experience a noticeable alteration in the levels of sunlight that they receive with the completed Development in place. The remaining two properties would experience noticeable effects with reductions in sunlight levels in excess of the industry standard guidelines with respect to sunlight availability. The properties that would be affected are located along No. 6 London Bridge Street and Shard Place to the northeast.

Despite the above, it is widely accepted that the industry standard guidelines for daylight and sunlight should be applied with flexibility, particularly given their original application was intended for developments within the suburban environment. Accordingly, it is considered that the relatively limited impacts of the Development upon daylight and sunlight availability are acceptable.

The Development would not have significant effects on surrounding amenity areas in terms of overshadowing.

In terms of solar glare, the assessment considered the worst-case potential occurrence of solar reflections from the Development and proximity to a driver's line of sight. Eight out of the 27 locations were considered to be insignificant with effects to varying degrees at the other 19 locations. Of these 15 locations had mitigating factors such as reflections occurring from a small section of façade, the ability to deploy a car visor or the traffic signals being unaffected. There were varying degrees of short term effects expected from solar glare at a point on Southwark Street, on Borough High Street and on the London Bridge Station rail track, however without the Development in place the track and road would be exposed to direct line of sight of the sun.

The Development would not have significant light pollution effects on the residential receptors assessed.

## **6.8 Townscape, Built Heritage and Visual**

As set out within Part 3 (**Townscape, Visual Impact and Built Heritage Assessment**) of the ES, the Site is located within Borough High Street Conservation Area and there are listed buildings – the Grade II Georgian Terrace - on the Site. There are several conservation areas surrounding the Site and numerous listed buildings. Five Townscape Character Areas (TCAs) have been identified as being relevant to the assessment. A TCA is an area which has readily identifiable characteristics in common, for example building form or patterns of land use.

In the visual assessment, the suitability of the design of the Development has been assessed using 67



different viewing positions, including 12 London View Management Framework (LVMF) viewpoints; all viewpoints were agreed with Southwark Council. Other statutory bodies, such as the GLA, Historic England and Historic Royal Palaces, were also consulted.

The likely significant effects on visual amenity and townscape character would vary according to the nature of the demolition and construction works over time, with certain operations having more perceptible effects than others. The most significant visual effect would be the presence of tower cranes which would be likely to be visible from all viewpoints where the Development is visible. Visible construction activities would be likely to form only small to medium features of most views and in many instances would be seen in combination with the existing buildings and other local construction activities. With mitigation in place, including appropriate hoarding and following best construction industry standards, visual effects would range from no effect on distant views to adverse effects on some local views.

The Development would transform the Site from a disparate collection of buildings, varied in quality, into a major new development in which the best buildings are retained, a major and substantial new building of high quality is added, and the buildings are brought together into a coherent whole with a significant new contribution to the public realm of the conservation area which provides useful new routes and connections, and a variety of new landscaped spaces open to all. The Development would encourage more use and enjoyment of King's Head Yard, benefitting the conservation area in which it lies. The Development's office Tower would be at a height and scale that would reflect the landmark significance of the Site at the intersection of Borough High Street and St. Thomas Street, in close proximity to London Bridge Station. It would take advantage of the townscape opportunities offered by the Site, to the benefit of the local and wider area around it.

Only 7 out of the 67 views were judged in the assessment to have adverse effects and 11 of the views were considered to have beneficial effects. The assessment concluded that the effects on the TCAs would be either beneficial or neutral.

The built heritage assessment assesses the likely effect of the Development on heritage assets on and around the Site including listed buildings, conservation areas, World Heritage Sites and scheduled monuments. Extensive data have been collected on the heritage assets, so ensuring that a full assessment can be made.

During the demolition and construction works there will be temporary direct effects on the Borough High Street Conservation Area. There will also be temporary direct and indirect effects on the listed Georgian terrace. The direct effects and the indirect effects will be due to the detrimental appearance of the construction activities. Effects on other heritage assets will be less significant.

Whilst there will be direct effects to the listed Georgian terrace during the works, measures will be put in place to ensure that there is no damage to the fabric of the buildings including the use of specialist techniques, condition surveys and monitoring. Alterations made to the listed terrace over time and in particular during the 1980s will be removed and original features reinstated.

The heritage assessment concludes that the Development delivers a scheme that is sensitive to heritage assets and demonstrates various references in its design to local building types. The direct effects on the Borough High Street Conservation Area and effects on the listed buildings would be beneficial.

The restoration of the listed terrace will ensure its continued contribution to the heritage significance of the conservation area. Similarly, the reconstruction of Keats House will enhance its contribution to the heritage significance of the conservation area.

The assessment identifies that there will be adverse effects to the settings of two heritage assets: Southwark Cathedral (Grade I listed) and Guy's Hospital (Grade II\* listed). However, in line with the

relevant national planning policy, any harm to their settings would be greatly outweighed by the considerable wider public benefits the Development will offer in the form of urban design and townscape enhancements.

## 6.9 Cumulative Effects

As set out in **Chapter 14** of the ES, two types of cumulative effects have been assessed in relation to the Development:

- Type 1 Cumulative Effects: The interaction of individual effects from the Development upon a set of defined sensitive receptors. For example, noise and dust during the demolition and construction works; and
- Type 2 Cumulative Effects: The combination of effects from several developments (in this case, the Development together with other reasonably foreseeable schemes (hereafter referred to as 'cumulative schemes'), which individually might be insignificant, but when considered together could create significant cumulative effects.

A number of cumulative developments have been identified within the vicinity of the Site. Each technical environmental topic has considered the cumulative effects of these schemes all taking place in combination with the Development (both during construction and demolition works and once the Development is completed). The 15 cumulative schemes included in the assessment were agreed with Southwark Council (refer to **Figure 14** for the location of the schemes).

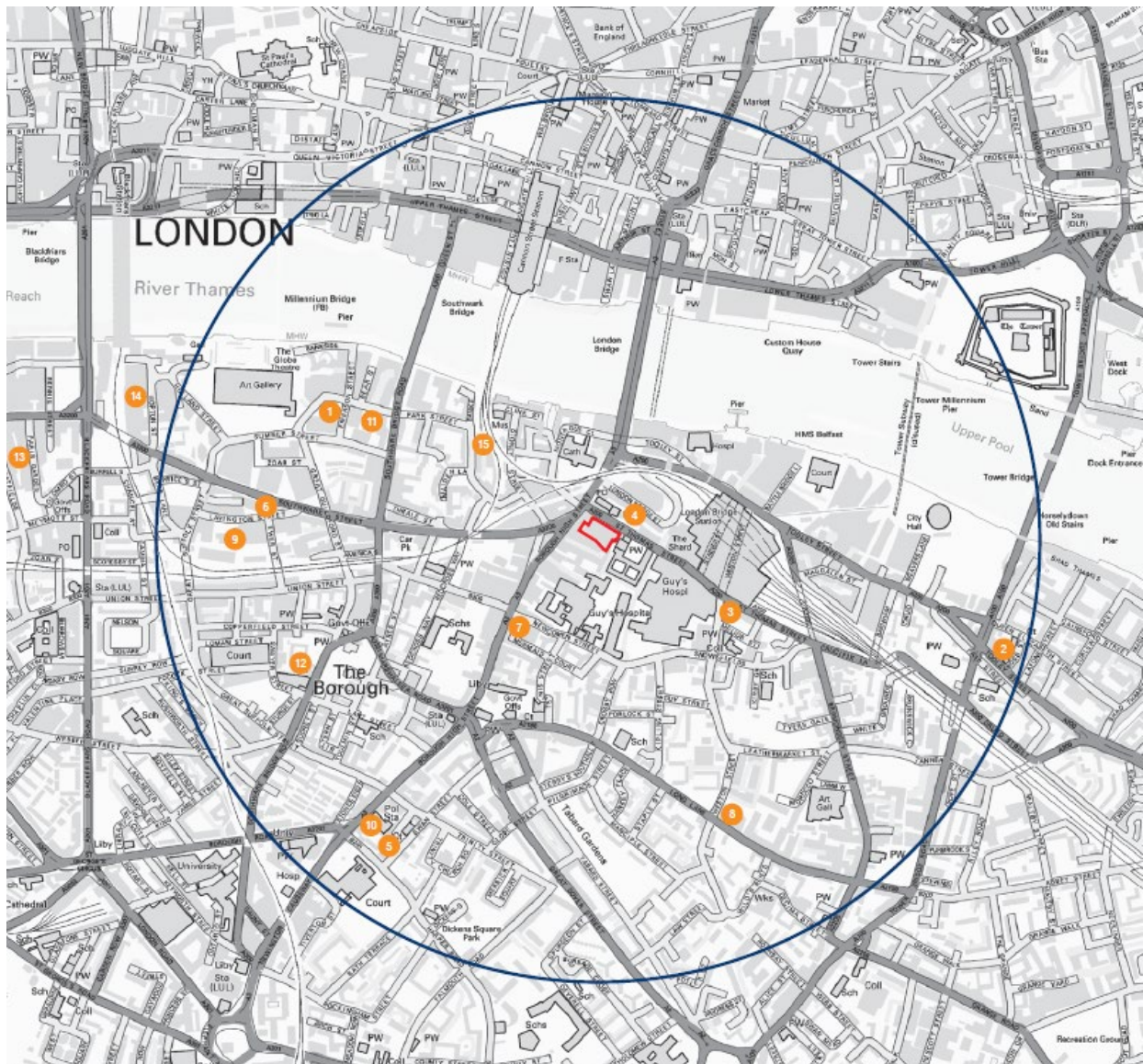
During the demolition, refurbishment and construction works, a combination of effects arising from the Development in isolation (i.e. Type 1 Effects) would likely arise from noise from demolition and construction plant and machinery and traffic, vibration, and townscape, heritage and visual effects. In addition, effects from daylight, sunlight and solar glare would change as the existing buildings on the Site are demolished and there is a gradual change to a situation where the effects will be as per the completed Development. The implementation of mitigation measures through the SEMP would minimise the effects to existing and future residents and occupants and users of existing commercial and education uses surrounding the Site.

In relation to the Type 2 Effects, the cumulative operational effects of the Development in conjunction with the schemes were found to not be significant for townscape, visual, built heritage, daylight, sunlight, overshadowing, solar glare, light pollution, wind, archaeology, noise and vibration.

The cumulative transport assessment showed that in real terms, the resultant traffic flows may increase on White Hart Yard but would continue to be well within the 'low traffic volumes' threshold for when pedestrians treat a street as a space to be occupied and not a road. Additionally, the proposed pedestrian and public realm enhancements are expected to encourage pedestrians to divert onto King's Head Yard instead. Therefore, the cumulative effect on traffic flows in White Hart Yard is expected to be at the worst noticeable and adverse and not noticeable across the wider road network.

With the implementation of appropriate Construction Logistics Plans for the cumulative schemes, the residual cumulative effect of construction vehicles is considered to not be noticeable on all users of the local transport network.

The improved public realm and pedestrian links through the Site when the committed developments are considered together with the Development, are expected to result in either no noticeable effect or a recognisable beneficial effects on pedestrians in respect of movement, capacity, severance, delay, fear, intimidation and amenity.



- 1 185 Park Street
- 2 Tower Bridge Magistrates Court and Police Station, 209-211 Tooley Street
- 3 Capital House
- 4 Shard Place (Fielden House) 28-42 St. Thomas Street
- 5 25-29 Harper Road
- 6 Isis House, 67-69 Southwark Street
- 7 153-159 Borough High Street
- 8 175-179 Long Lane
- 9 Lavington House, 25 Lavington Street
- 10 19-23 Harper Street, 325 Borough High Street and 1-5 and 7-11 Newington Causeway
- 11 133 Park Street
- 12 Southwark Fire Station, 94 Southwark Bridge Road;
- 13 1-5 Paris Garden and 16-19 Hatfields
- 14 Sampson House, 64 Hopton Street
- 15 1 Bank End

Figure 14 Plan of Cumulative Schemes Around the Development

The cumulative air quality assessment concluded that construction vehicle exhaust emissions from the combined construction traffic of the Development and the cumulative schemes could give rise to cumulative residual effects on local air quality. However, this would depend upon the extent to which the implementation of the Development and the cumulative schemes overlap. In the worst-case scenario, the demolition and construction of the cumulative schemes would overlap with the Works and use the same construction traffic routes. The residual cumulative effect is considered to be, at worst, temporary and noticeable, although in reality the construction works would be unlikely to be taking place at the same time or all using the same traffic routes.

The schemes would all be required to meet the London Plan targets for greater than 50% reduction in surface water runoff and therefore, once these measures are implemented, the cumulative effect on flood risk is considered to range from not noticeable to beneficial.

## 7. What will happen next?

Following the submission of the planning application, there will be an opportunity for any interested parties to comment on the proposals.

The ES 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 during normal office hours in the planning department of Southwark Council at the address provided below. Comments on the planning application should be forwarded to the Southwark Council planning case officer at the address given below:

Southwark Council  
160 Tooley Street  
PO BOX 64529  
London  
SE1P 5LX  
Tel: 0207 525 5000

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.

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## UK and Ireland Office Locations

