



# The Wharves, Deptford

Environmental Statement

# Non-Technical Summary

Prepared for Lend Lease by Quod

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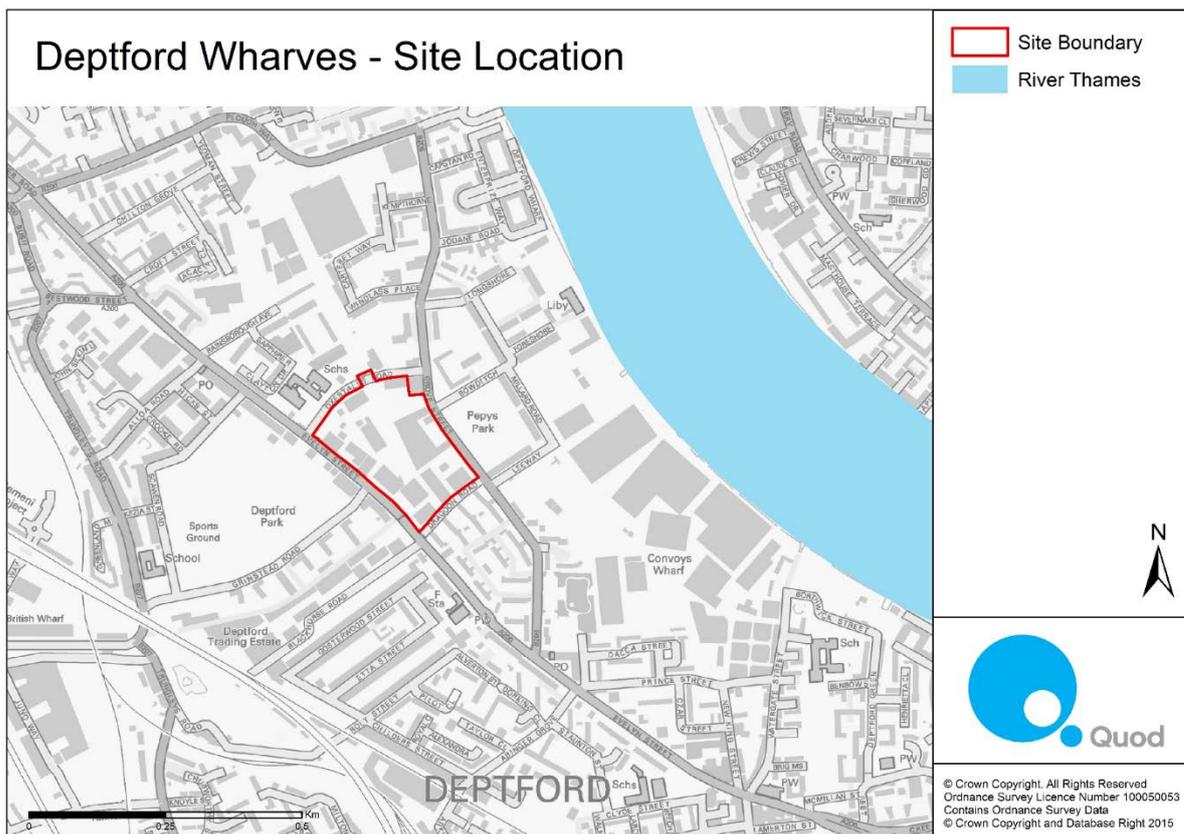
## INTRODUCTION

1. This Non-Technical Summary (NTS) presents the findings of an Environmental Impact Assessment (EIA) undertaken on behalf of the Applicant, Lend Lease Deptford Limited (LLD Ltd), to accompany a hybrid planning application for the re-development of land at Deptford Wharves in the London Borough of Lewisham ('LBL'), referred to hereafter as 'the Proposed Development'.
2. The NTS is a statutory requirement and forms part of the overall Environmental Statement (ES), which comprises a Main Report (Volume 1a and 1b) and a series of Technical Appendices (Volume 2). The planning application is also accompanied by standalone reports such as a Planning Statement and two Design and Access Statement (DAS) (Volume 1: Overarching DAS and Volume 2: Landscape).
3. The design of the Proposed Development has been informed by a comprehensive programme of consultation with the LBL, other stakeholders and the public. It is being advanced in the context of the existing planning permission for comprehensive mixed-use redevelopment of the Site (ref: DC/09/73189/X), which was issued by LBL on 30 March 2012 and lawfully implemented by the Applicant.

**THE SITE AND SURROUNDINGS**

4. The application site ('the Site') is shown on Figure 1.1 It is approximately 4.7 hectares (ha) in area and is located in the north of the LBL in an area to the south of Surrey Quays.
5. The Site is bounded to the north by Oxestalls Road, to the east by Grove Road, to the south by Dragon Road and to the west by Evelyn Street (the A200).

Figure 1 – Site application boundary



6. The Site is located in a highly developed urban area and is surrounded by a mix of land uses. The Pepys Housing Estate lies to the north and east, along with Pepys Park to the east. The area to the south-east is currently vacant, but is expected to be comprehensively redeveloped as part of the consented Convoys Wharf scheme (DC/13/83358), while the area to the south is occupied by a low-rise housing estate. The area to the south-west is occupied by the Deptford Industrial Estate and low-rise housing, while the area to the north-west is occupied by Deptford Park.
7. The wider area is predominantly occupied by housing interspersed with industrial areas. The Surrey Quays Shopping Centre lies approximately 900 m to the north of the Site and the River Thames approximately 375 m to the east.
8. The Pepys Housing Estate is a social housing development constructed in the 1960s and comprising 11 eight-storey blocks, a range of smaller blocks and three tall buildings. The three tall buildings were originally constructed with 25 storeys. Two of these blocks remain this height, while one (Aragon House) was refurbished in 2006, during which a further five storeys were added.
9. The recently consented Convoys Wharf development (ref DC/13/83358) is located directly to the south-east of the Site. Convoys Wharf is a major mixed-use development scheme occupying a prominent site on the banks of the River Thames, comprised of up to 419,000 sq m of mixed use redevelopment and up to 3,500 residential units.

## BACKGROUND AND MAIN ALTERNATIVES

10. The Proposed Development has been designed in consultation with the LBL and other stakeholders. The Proposed Development has been designed in the context of the existing mixed-use redevelopment consent for the Site (ref: DC/09/73189/X), which was issued on 30 March 2012.
11. Map 2.5 of the London Plan indicates that the Site falls within an 'Area of Regeneration', whereby the Mayor will work with strategic and local partners to co-ordinate their sustained renewal by prioritising them for neighbourhood-based action and investment (Policy 2.14).
12. Policy 2.13 of the London Plan identifies a number of 'Opportunity Areas and Intensification Areas'. The London Plan, and Map 2.4, does not define the exact boundaries of 'Opportunity Areas and Intensification Areas'. However, the Site is located within/adjacent to Opportunity Area 9 ('Deptford Creek/Greenwich Riverside') and Opportunity Area 20 ('Lewisham, Catford and New Cross').
13. Annex 1 of the London Plan outlines the broad principles that should be applied for Opportunity Areas and Intensification Areas. In its entirety, the 'Deptford Creek / Greenwich Riverside' Opportunity Area extends to 165ha, and is anticipated to provide a minimum of 5,000 new homes and have an indicative employment capacity of 4,000. The Lewisham, Catford and New Cross Opportunity Area extends to 815ha and is anticipated to provide a minimum of 8,000 new homes and have an indicative employment capacity of 6,000.
14. The Lewisham Core Strategy identifies the Site as being within the Deptford including Deptford Creekside Regeneration Area. This is one of four Regeneration and Growth Areas within the borough which have been identified to provide key regeneration and growth opportunities.
15. The Site is also allocated one of seven Mixed Use Employment Location (MELs). MELs are allocated to redevelop sites to include employment and housing uses to deliver radical improvement to their physical quality and overall appearance and attract further investment where the environment is poor.
16. The Site is also specifically allocated as "Strategic Site Allocation 4: Oxestall Rd" which allocates the site for comprehensive mixed use development.
17. The above demonstrates that the Site is a suitable location to accommodate the Proposed Development. The Proposed Development will provide residential and commercial uses and represents a significant regeneration opportunity.
18. On the basis of the above allocations, no alternative locations for the Proposed Development have been considered.
19. However, a range of alternative design proposals have been considered through the evolution of the site Masterplan since 2013. There have been many iterations, and the Masterplan has evolved in consultation with LBL, the Greater London Authority (GLA), and other stakeholders (including the public) and to reflect constraints and opportunities identified through the EIA process.
20. The alternatives of building out the existing consent for the Site (ref: DC/09/73189/X) and the 'No Development' alternative have also been considered and discounted. The existing consent option has been discounted on the basis that this would lead to development of a less sustainable and viable scheme. While the 'No Development' alternative has been discounted on the basis that this would be contrary to the London Plan and local planning policy and would mean foregoing the range of benefits associated with the Proposed Development, including socio-economic and regenerative benefits and improvements in the biodiversity of the Site and surrounding townscape.
21. The key attributes of the Proposed Development are set out in the following section of this Report.



**THE DEVELOPMENT PROPOSALS**

22. A hybrid planning application, with part submitted in detail and part submitted in outline, has been submitted for the proposals to which this ES relates. The hybrid planning application proposes the comprehensive redevelopment of the Site as a mixed use, residential led development. The key elements of the Proposed Development (including both detailed and outline parts of the scheme) comprise:
- Up to 1,132 residential units, of these 568 included in the detailed part of the Application and 564 are included in the outline part of the Application;
  - Erection of buildings ranging in height from 3 to 24 storeys, including two tall buildings in the north western (corner of Dragoon Road / Grove Street) and south eastern (corner of Oxestalls Road / Evelyn Street) of the Site;
  - A mix of business uses, primarily located on the ground floor;
  - Community and Cultural uses, including re use of The Victoria Public House;
  - An Energy Centre;
  - New vehicular access into the site from Grove Street and associated highway infrastructure works, new servicing routes and car/cycle parking; and
  - Landscaping and public realm works, including modification works to Oxestalls Road bridge and provision of public open space and a water feature.
23. See Figure 2 for a copy of the Proposed Development Masterplan and Figure 3 for an artist's impression of the Proposed Development (for illustrative purposes only).

Figure 2: Proposed Development Masterplan



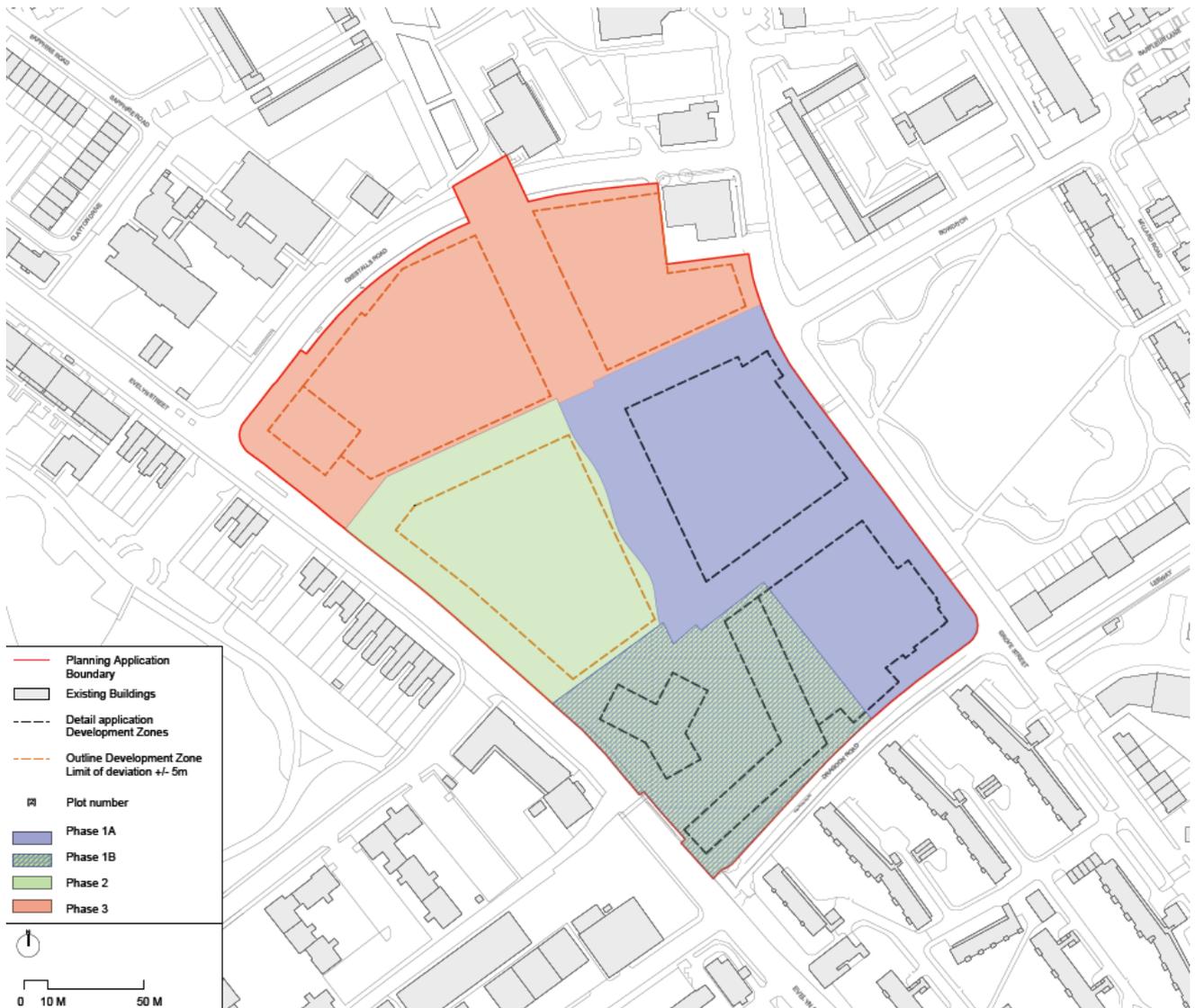
Figure 3: Artists Impression of the Proposed Development (for illustrative purposes only)



### PHASING STRATEGY

24. The Proposed Development is expected to be developed in three phases as set out below. Where possible Phase 1 will be developed as a single phase. However, if this is not possible (due to Plot 3 being outside of the Applicant's control) it will be developed as two separate sub phases
  - Phase 1;
    - Phase 1A – Plots 1 and 2;
    - Phase 1B – Plot 3;
  - Phase 2 – Build Plot 4; and
  - Phase 3 – Build Plots 5 and 6.
  
25. Detailed planning permission is sought for Phase 1 (A and B), while outline planning permission is sought for Phases 2 and 3. See Figure 4 for a graphical representation of the phase and plot boundaries.

Figure 4: Phasing Plan



**PUBLIC REALM**

- 26. The Proposed Development is arranged around a central and linear area of open space/public realm which re-introduces reference to the former Grand Surrey Canal in a southeast/northwest alignment.
- 27. The building plots are also positioned to respond to pedestrian movement patterns and position of the Site in relation to Evelyn Street (a busy arterial route to the west/southwest) and Grove Street (being more fragmented and relating more to Pepys Park to the east/northeast).
- 28. The Masterplan is set out to allow for linear green spaces along both of these streets. On Evelyn Street, buildings are set back by around 14m from the pavement edge, allowing for a double row of trees to be planted. On Grove Street, buildings are set back by around 8m, to accommodate a single row of trees. Grove Street benefits already from a line of mature trees on the edge of Pepys Park, so will feel more like a boulevard.

**ACCESS**

- 29. A total of six access points will be provided onto Oxestalls Road, Grove Street and Dagoon Road. All accesses accord with design guidance, and computer modelling to demonstrate their satisfactory operation.

30. The Site has a good level of public transport accessibility, with London Underground, London Overground and National Rail services all within walking distance. There are also a number of bus routes serving the local area, and providing interchange opportunities with other public transport modes. Walking and cycling facilities in the local area are of good quality.
31. In total there will be 380 vehicle parking spaces across the site of which 116 will be accessible. This level of provision is in accordance with guidance set out in the London Plan.
32. There will be a total of 340 residential parking spaces provided on a podium within the plots.
33. A total of 40 spaces will also be provided for non-residential uses to be situated in an on-street location. This includes 8 wheelchair compliant bays.
34. A total of 2,095 secure cycle parking spaces will be included within the Proposed Development.

## SUSTAINABILITY

The Proposed Development has been designed to achieve Code for Sustainable Homes (CfSH) level 4 star and BREEAM Very Good.

A range of sustainability measures are featured in the Proposed Development including:

- Equipment specification - The specification of the equipment proposed for the site aims to mitigate noise, air and light pollution as a result of the proposed operation of the site;
- Ecological enhancements - Biodiverse 'Green' roofs, black redstart boxes, sparrow terraces, swift boxes, and bat roosts;
- Waste - To encourage future residents to recycle their domestic waste, all dwellings will be provided with recyclable waste bins in the kitchen area;
- Energy - An energy centre containing a gas combined heat and power (CHP) facility; and
- Water - Green roofs have been incorporated into the design, as has rainwater harvesting for Phase 1 to be used for irrigation.

## APPROACH TO THE EIA

35. The EIA has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011<sup>i</sup> (the 'EIA Regulations'), which implement Council Directive No. 2011/92/EU, and the Government's online EIA guidance,
36. Given the nature and scale of the Proposed Development, the sensitivity of the surrounding environment and the potential for likely significant effects, the applicant decided that an EIA would be required and did not seek confirmation of this from LBL.
37. A formal Scoping Opinion was issued by LBL on 3 October 2014, refer to Appendix 3, Volume 2 of the ES. The Scoping Opinion identified that the Proposed Development could potentially have significant effects on the following topics, which have therefore been identified for assessment and form their own topic chapters of this ES:
- Air Quality (Chapter 7);
  - Archaeology and Built Heritage (Chapter 8);
  - Flood Risk and Drainage (Chapter 9);
  - Ecology (Chapter 10);
  - Electronic Interference (Chapter 11);
  - Ground Conditions, Hydrogeology and Contamination (Chapter 12);
  - Noise and Vibration (Chapter 13);
  - Socio-Economics (Chapter 14);
  - Sunlight and Daylight (Chapter 15);
  - Transport (Chapter 16); and
  - Wind (Chapter 17).
38. Other 'Context' and 'Summary' chapters presented within this ES include:
- Introduction (Chapter 1);
  - EIA Methodology (Chapter 2);
  - Site Location and Description (Chapter 3);
  - The Proposed Development (Chapter 4);
  - Alternatives and Design Evolution (Chapter 5)
  - Development Programme (Chapter 6);
  - Summary of Cumulative Effects (Chapter 18); and
  - Summary of Residual Effects (Chapter 19).
39. The EIA has considered beneficial and adverse, short and long-term (temporary and permanent), direct and indirect, and cumulative impacts. The significance of the effects has been evaluated with reference to accepted standards, criteria and legislation where available. Where the quantification of impacts has not been possible, qualitative assessments have been carried out, using professional judgement. The following terminology has been used to express the nature of the effects:
- **Adverse:** Detrimental or negative effect to an environmental resource or receptor;
  - **Neutral:** No significant effect to an environmental resource or receptor; and
  - **Beneficial:** Advantageous or positive effect to an environmental resource or receptor.
40. Following their identification, significant beneficial or adverse effects have been classified on the basis on their nature and duration as follows:
- **Temporary:** Effects that persist for a limited period only (due, for example, to particular activities taking place for a short period of time);
  - **Permanent:** Effects that result from an irreversible change to the baseline environment (e.g. land-take) or which will persist for the foreseeable future (e.g. noise from regular or continuous operations or activities);

- **Direct:** Effects that arise from the effect of activities that form an integral part of the Proposed Development (e.g. direct employment and income generation);
  - **Indirect:** Effects that arise from the effect of activities that do not explicitly form part of the Proposed Development (e.g. off-site infrastructure upgrades to accommodate the development);
  - **Secondary:** Effects that arise as a consequence of an initial effect of the Proposed Development (e.g. induced employment elsewhere); and
  - **Cumulative:** Effects that can arise from a combination of different effects at a specific location or the interaction of different effects over different periods of time.
30. The assessment has distinguished between potential effects and residual effects (i.e. those remaining following the adoption of mitigation). Where necessary, mitigation measures have been identified on the basis of best practice and legal requirements, and wherever possible have been incorporated into the design of the development or into the management procedures to be adopted during its construction and operation.
31. The assessment has considered the likelihood that cumulative effects may arise due to the interaction between the impacts of the Proposed Development and those of other committed developments (i.e. that have or are likely to receive planning permission). The schedule of other developments was agreed with LBL. A total of 13 schemes were considered within a 1km radius of the Site. The closest of these being the Convoys Wharf development, directly to the south east of the Site and comprising, a major mixed-use development scheme occupying a prominent site on the banks of the River Thames and comprised of up to 419,000 sq m of mixed use redevelopment and up to 3,500 units.
32. In addition to formal consultation with LBL on the scope of the assessment, consultation was carried out with officers and other organisations to agree the scope or to obtain information relating to specific topics. Meetings were held with LBL, together with meetings with the Council's transport and pollution officers along with Transport for London (TfL) and the GLA. Advice was also provided by the Environment Agency and Thames Water.

## ASSESSMENT OF PROPOSED DEVELOPMENT PHASES

33. The planning application to which this Environmental Statement (ES) relates is a hybrid application with detailed planning permission sought for part of the Site and outline permission for the remainder. The Proposed Development is expected to be developed in three phases as set out below. Where possible Phase 1 will be developed as a single phase. However, where this is not possible (due to Plot 3 being outside of the Applicant's control) it will be developed as two separate sub phases.
- Phase 1;
    - Phase 1A – Plots 1 and 2;
    - Phase 1B – Plot 3;
  - Phase 2 – Build Plot 4; and
  - Phase 3 – Build Plots 5 and 6.
34. The planning application provides details of access, appearance, landscaping, layout and scale for Phase 1A/B (Plots 1-3). No detailed information is provided for Phases 2/3 (Plots 4-6) with the matters of access, appearance, landscaping, layout and scale being reserved for approval under subsequent reserved matters applications
35. This means that any planning permission granted subsequent to this application could be implemented directly for Phase 1 A and B (subject to the discharge of any pre-commencement conditions) but that reserved matters applications will be required for Phases 2 and 3 (to establish their detailed design), prior to their construction.
36. Reflecting the structure of the planning application, the ES considers the following scenarios:
- Scenario 1 - Effects associated with the completion of Phase 1A (Plots 1 and 2);

- Scenario 2 - Effects associated with the completion of Phase 1A and 1B (Plot 3); and
- Scenario 3 - Effects associated with the completed Proposed Development (Phases 1, 2 and 3 – Plots 1 to 6)

## SUMMARY OF ASSESSMENT OF EFFECTS

### AIR QUALITY (CHAPTER 7)

37. Chapter 7: Air Quality assessed the likely significant effects on air quality as a result of the Proposed Development along with the pollutant concentrations to which future residents of the Proposed Development and exposure to odour emissions are also considered. Effects arising from the Proposed Development during the construction phase could include potential dust generation and emissions, while those associated with the operational phase include increase in road traffic and energy centre emissions.
38. The Site is located within an Air Quality Management Area (AQMA) declared by LBL as a result of exceedances of the annual mean nitrogen dioxide (NO<sub>2</sub>) and 24-hour mean Particulate Matter (PM<sub>10</sub>) Air Quality Objectives (AQOs). However, the closest monitoring site to the Proposed Development, an NO<sub>2</sub> diffusion tube site, indicates that it is unlikely that the AQOs are currently exceeded across the majority of the Development Site.
39. Construction effects were assessed using the Institute of Air Quality Management (IAQM) methodology and the effect of emissions from road traffic and the energy centre were assessed through dispersion modelling using the ADMS-Roads and ADMS software respectively.
40. The assessment of construction effects showed that there is a 'high risk' of dust soiling during demolition and 'medium risk' for earthworks and construction phases. Suitable dust and emission control measures have been recommended and are reflected in the Draft Construction Environmental Management Plan (CEMP) submitted in support of the planning application. With the employment of these best practice mitigation measures, impacts during the construction phase will be temporary, and will be reduced to a level that is not significant.
41. No exceedances of the AQOs are predicted at the Proposed Development in the opening year of Phase 1, or the fully completed development. The effect of the Proposed Development on air quality at existing receptors is slight adverse at worst and is not considered to be significant. The Proposed Development is also air quality neutral in accordance with GLA guidance when considering the combined effect of traffic and building emissions. As the Proposed Development is air quality neutral and no significant effects and no exceedances of the AQOs are predicted within the Proposed Development there will be no further residual effects.

### ARCHAEOLOGY AND BUILT HERITAGE (CHAPTER 8)

42. Chapter 8: Archaeology and Built Heritage assesses the likely significant effects associated of the Proposed Development on archaeological and built heritage assets.
43. An archaeological Desk Based Assessment and Built Heritage Statement form baseline reports which identify heritage assets likely to be affected by the Proposed Development, their significance and contribution that the Site makes to their setting.
44. These documents identify a 1 km study area around the Site, of which it was found that those assets within 500 m were most likely to be affected and therefore should be the focus of the assessment. Investigation of the Historic Environment Record, local and national archives, historic maps, relevant planning policy and a Site visit (August 2014) formed the basis of these documents and the assessment set out in the ES Chapter.
45. The Desk Based Assessment found that below ground archaeological remains on the site are anticipated to be of purely local importance and potential effects associate with disturbance of the remains to be limited to the construction phase. Implementation of a suitable programme of pre construction trial trenching and watching brief, as necessary, will reduce potential effects to a negligible level.
46. 51 listed buildings (36 Grade II, 15 Grade II\*), 7 non - designated buildings of local interest and 2 conservation areas are located within 1 km of the Site. Upon a Site investigation it was made clear that that built heritage assets located beyond 500 m from the Site will see a neutral effect, limited to a perceivable alteration in the distant skyline, which will sit well amongst the tall buildings of Deubeney and Eddystone Towers.

47. The Gate Piers to the former Royal Dockyard (Grade II) and Olympia Convoy's Wharf (Grade II) are situated east of the Site, sharing direct inter-visibility. However, the historical setting of both structures is considered to be associated with the abandoned dockyard to the east, whilst any historical context read in conjunction with Grove Street has since been lost.
48. Following the implementation of mitigation measures at the construction phase (noise, dust and disruption control measures) these assets will see a reduction in the level of identified residual effect from moderate/minor to negligible. At the operational stage, this level of effect will remain negligible, comprising an expansion of existing residential development experienced to the west of the assets. The Proposed Development would not affect the heritage significance of any identified built heritage asset.

## FLOOD RISK AND DRAINAGE (CHAPTER 9)

49. Chapter 9: Flood Risk and Drainage assesses the likely significant effects to hydrology, flood risk and drainage associated with the Proposed Development.
50. The Site is significantly urbanised and covered by existing buildings and hard surfaces, consisting mainly of light industrial uses. Rainwater currently runs off the Site into the combined drainage system surrounding the Site, with little or no controls.
51. There are no watercourses within or bordering the Site, and high groundwater levels and underlying soil conditions are unlikely to encourage infiltration. The closest watercourse to the Site is the River Thames, located approximately 375m to the east of the Site. The existing uses at the Site increase the potential for contaminated rainwater runoff.
52. The River Thames is a potential source of flooding to the Site, putting the Site within a zone which has a high probability of flooding. However, existing defences provide protection against flooding which makes the site suitable for the Proposed Development. The consequences of flooding caused by a failure of the defences are reduced because the elevation of all sleeping accommodation will be 300 mm above the predicted flood level. A flood evacuation plan and flood resilient construction is also proposed.
53. The effect of increasing the foul water flow caused by the intensification of residential use is overcome by measures to limit the flow of rainwater runoff from the Site. The Proposed Development includes green roofs, trapped gullies, new soft landscaped areas, and measures to temporarily store surface water within the Proposed Development. The removal of industrial units reduces the likelihood of contaminated runoff from the Site.
54. The effects of climate change have been embedded into the calculation of flood levels, and in the sizing of tanks to hold back the flow of surface water.
55. The Proposed Development is assessed as having an at worst negligible and best beneficial effect upon the water environment predominately due to the use of better control measures, and the significant reduction in the flow of water discharge to the combined drainage system off-site.

## ECOLOGY (CHAPTER 10)

48. Chapter 10: Ecology considers the likely significant effects of the Proposed Development in terms of ecology.
49. Detailed ecological survey of the Site have been carried out to establish pre-development baseline ecological conditions. The Site is largely occupied by buildings and hardstanding with no green space, watercourses or waterbodies and only small areas of scrub. Buildings and scrub typically provide shelter and breeding opportunities for bats and birds, and therefore surveys for both species groups were completed. The bat survey work confirmed the likely absence of any bat roosts on Site, as well as only very low levels of bat activity in relation to the Site. Adverse effects on bats are therefore not anticipated as a result of the Proposed Development. The breeding bird survey recorded five bird species nesting at the Site. Of these, only dunnock is considered to be at risk of adverse effects from the Proposed Development, thanks to its inclusion in the Birds of Conservation Concern Amber list.

50. Thirteen non-statutory nature conservation sites are located within 1 km of the Site were identified to be potentially at risk of adverse effects resulting from the Proposed Development, as they fall within its anticipated 'zone of influence'. None of these sites occur within 100 m of the Site, nor do they support particularly sensitive habitat types. As such, the viability of these sites will be unaffected by the construction of any phase of the Proposed Development.
51. Construction of Phases 1A and 3 will result in the temporary loss of two dunnock breeding territories that were identified during the breeding bird survey. Given that the construction of all phases of the Proposed Development will ultimately result in a significant increase in the area of available dunnock nesting habitat at the Site, this temporary loss of breeding territories is anticipated to have a negligible effect on viability of the local dunnock population.
52. Areas of public open space both within and in the vicinity of the Proposed Development will effectively absorb most, if not all, of the recreational pressure generated by residents during its operational phase, which would otherwise have an impact on nearby non-statutory sites. As such, the viability of these non-statutory sites will not be affected by the Proposed Development.
53. No mitigation measures are required in relation to nearby non-statutory sites or nesting dunnock and no cumulative or residual effects are anticipated.
54. A range of artificial roosting / nesting features will be provided as part of the Proposed Development, in order to increase the ecological value of the Site. These will benefit a range of locally important species including bats, swift, peregrine falcon, black redstart and house sparrow. The inclusion of several living roofs across the Proposed Development will also provide valuable habitat for a range of invertebrates, which in turn will provide a food source for local wildlife.

#### ELECTRONIC INTERFERENCE (CHAPTER 11)

55. Chapter 11: Electronic Interference of the ES presents an assessment of the likely significant effects of the Proposed Development on television (TV) reception (both terrestrial and satellite), mobile telephones, wireless networks and emergency services communication signals.
56. The reception of mobile telephone signals, wireless networks and emergency service communications would not be affected by the Proposed Development unless their transmitting aerials are sited on top of nearby buildings at heights less than those of the Proposed Development. No such aerials were noted from a search of the Office of Communications (Ofcom) database and a visual inspection around the area during the site visit so no adverse effects are expected.
57. The communication networks of the Docklands Light Railway, the Port of London Authority and the Maritime and Coastguard Agency have been considered and, where appropriate, these bodies have been consulted. No potential for adverse effect was raised.
58. Terrestrial TV signals to the Site are provided by the Crystal Palace transmitter, carrying the 'Freeview' service. It is located approximately 7.6 kilometres south south-west of the site. Cable television is available throughout the area.
59. Numbers of dwellings whose TV reception would be adversely affected were calculated by a combination of a desk-based study and an on-site inspection of viewers' aerials. The level of predicted interference to TV reception by the Proposed Development will vary throughout the construction phases, depending on the level of obstruction caused, reaching the maximum predicted adverse effect once construction has been completed.
60. The Proposed Development is predicted to cast a terrestrial TV shadow to the north north-east. There are four dwellings and one housing block (with 21 flats inside) within this shadow currently depending solely on terrestrial TV signals i.e. they are not using satellite TV. There are therefore 25 dwellings predicted to have their terrestrial TV reception adversely affected.
61. The Proposed Development is predicted to cast a small satellite TV shadow to the north-west. There are no domestic satellite dishes within this shadow so there is predicted to be no effect.

62. For those dwellings with adversely affected terrestrial TV reception, mitigation will include upgrading the existing aerials by increasing their height and/or gain or resiting them outside of the shadow area, or providing a non-subscription satellite service such as 'Freesat' or the 'Sky' equivalent. After mitigation no adverse effects to TV reception are predicted.

## GROUND CONDITIONS, HYDROGEOLOGY AND CONTAMINATION (CHAPTER 12)

63. Chapter 12: Ground Conditions, Hydrology and Contamination assess the potential environmental effects of the Proposed Development on ground conditions, hydrogeology and ground contamination at the Site.
64. The Site and surrounding area has a lengthy history of industrial and commercial land use including timber yards, scrap yards, garages a petrol filling station and a gasholder. The Site was previously bisected by the Grand Surrey Canal, which was infilled by 1981.
65. The local geology can be summarised as Made Ground underlain by sequences of Cohesive Alluvium (CA), Granular Alluvium (GA), Thanet Sands (TS) and Chalk. The thickness of Made Ground increases in areas of the Site that were subject to historical infilling (e.g. former Grand Surrey Canal and gasholder). Perched groundwater is present within the Made Ground and underlying Alluvium whilst deeper groundwater is encountered with underlying granular deposits and Chalk.
66. Soil and groundwater contamination has been identified, predominantly associated with Made Ground soils and perched waters. Known contaminant sources include deposits within the in-filled canal and gasholder, use and storage of fuels and other industrial products and contaminating commercial and industrial activities. The primary contaminants of concern include lead, arsenic, Polycyclic Aromatic Hydrocarbons (PAH), Total Petroleum Hydrocarbons (TPH) and Volatile Organic Compounds (VOC).
67. During the construction phase of the Proposed Development there are likely to be temporary, direct, short-term adverse effects on controlled waters, neighbouring properties and residents and construction workers. However, during the operational phase of development there are likely to be direct, permanent positive effect on controlled waters, human health and the performance of building materials.
68. Appropriate mitigation measures have been incorporated into the project to manage adverse effects on Site. These include active remediation works based upon a risk based methodology to address soil sources and groundwater contamination. This will be implemented alongside a discovery strategy to address previously unidentified contamination, a Construction Environmental Management Plan, Foundation Design Risk Assessment and Ground Gas Design.

## NOISE AND VIBRATION (CHAPTER 13)

69. Chapter 13: Noise and Vibration assesses the likely significant effects of the Proposed Development on the surrounding area along with the noise and vibration effects experienced by future residents of the Proposed Development.
70. The following considerations were scoped out of the noise and vibration assessment as they were considered to have no effect; vibration from road traffic and vibration from the operational phase of the Proposed Development.
71. A noise survey comprising attended measurements adjacent to Evelyn Street, Grove Street and Oxestalls Road has indicated that the previous noise surveys (undertaken by Max Fordham in 2009 and Sandy Brown Associates ('SBA') in 2014) provide a good representation of current baseline noise levels. The noise climate across the Site is dominated by road traffic noise.
72. Noise and vibration limits and appropriate mitigation measures have been recommended to minimise disturbance caused to nearby receptors as a result of demolition and construction activity. These measures include a 2.4 m high hoarding around the Site boundary and use of enclosures around particularly noisy items of plant. Other mitigation measures recommended include adhering to best practice on minimising noise during construction. Noise and vibration from demolition and construction will be managed to achieve Negligible or Minor adverse effects during the majority of

operations, however, even with the inclusion of mitigation measures, construction noise may occasionally cause Major adverse effects, particularly during the noisiest activities, such as breaking up foundations or during excavation, piling or cutting concrete, and when demolition and construction activities are close to the receptor.

73. The results of the noise survey have been used to calculate the attenuation required to achieve internal noise criteria suggested by national and local guidance for new residential and commercial buildings. If mechanical ventilation or high performance trickle vents are not provided alongside natural ventilation to Block 3A a Moderate adverse effect is predicted. Use of these mitigation measures will result in a Negligible effect to the majority of receptors.
74. The results have also been used to set noise limits at source for the energy centre and other items of fixed plant associated with the Proposed Development to achieve a negligible effect.
75. A comparison has been made between the predicted road traffic noise levels with and without the Proposed Development. The increase in road traffic noise is predicted to be negligible.

#### SOCIO-ECONOMICS (CHAPTER 14)

76. Chapter 14: Socio-Economics assesses the likely socio-economic effects of the Proposed Development.
77. National, Regional and Local policy is supportive of housing development. The Site is within an area identified for comprehensive redevelopment – it is within, and surrounded by, a Regeneration and Growth area and Opportunity Areas. The London Plan outlines the broad principles that should be applied for Opportunity Areas. In its entirety, the 'Deptford Creek/Greenwich Riverside' Opportunity Area is anticipated to provide a minimum of 5,000 new homes and have an indicative employment capacity of 4,000. The Lewisham, Catford and New Cross Opportunity Area is anticipated to provide a minimum of 8,000 new homes and have an indicative employment capacity of 6,000 jobs.
78. There are approximately 250 jobs currently located within the red-line boundary of the Proposed Development. Given the types of land proposed on-site, it is likely that all of the current uses will leave the Site. Some of these uses provide essential local services e.g. the Veolia Depot that would seek to relocate elsewhere within the borough. Other services may also seek to re-locate within the Local Area or the wider borough. The loss of the existing employment uses should be balanced against the provision of new employment uses on-site – the proposed floorspace will support 460-630 full time equivalent (FTE) jobs.
79. The loss of the existing employment uses should be balanced against the provision of a greater number of jobs on-site created by the Proposed Development. It should also be considered in the context of other local priorities such as the delivery of new housing and high quality public realm. The effect of this demolition on employment space is assessed to be temporary, short term, moderate and adverse at the Local Level. The effect would be negligible at all other spatial levels. The Proposed Development will create demolition and construction employment. It is estimated that approximately 370 permanent FTE construction jobs would be created as a result of the demolition and construction (including alterations) of the Proposed Development. This number reflects the total number of permanent full time construction jobs that would be created in the whole economy as a result of the proposed investment.
80. The Proposed Development would deliver a total of 1,132 new homes in a range of sizes and tenures including affordable and family homes. This would deliver 8% of LBL's ten year target. The completed Proposed Development would result in a permanent and Major Beneficial effect at local and borough level and a minor beneficial effect at regional level.
81. The proposed new floorspace will have an estimated employment capacity of 460-630 FTE jobs – or a net gain of up to 380 FTE jobs: The completed Proposed Development would result in a permanent, moderate beneficial at the Local Level and minor and beneficial effect at a district level.
82. The Proposed Development would increase demand for social infrastructure as a result of the increase in residential population. This would have a particular effect on healthcare and primary school provision in the local area. This potential impact would be mitigated through the payment of Community Infrastructure Levy (CIL) which would be used by LBL to provide social infrastructure as required. In addition the Proposed Development includes the provision of D1/D2 community

floorspace. As this is a Hybrid Planning Application the precise use of this floorspace has not yet been determined. This space would be used for the provision of community uses, such as a healthcare facilities should it be required. The potential for on-site facilities would be agreed with the LBL and the relevant stakeholders in due course.

#### DAYLIGHT AND SUNLIGHT (CHAPTER 15)

83. Chapter 15: Daylight and Sunlight assesses the likely significant effects of the Proposed Development presents an assessment of the effects of the Proposed Development on the daylight, sunlight and overshadowing amenity of the residential properties and open space surrounding the Site and on the proposed residential properties and open space within the Proposed Development itself.
84. The shape, height and proximity of building massing to neighbouring properties and structures can result in changes to the daylight and sunlight amenity to buildings and open spaces surrounding a development.
85. An assessment has been undertaken to determine the likely effect of the Proposed Development on the daylight and sunlight amenity of residential buildings close to the Site and also the daylight and sunlight amenity of residential accommodation within the Development itself. The assessment also considered whether the new buildings would overshadow amenity spaces within and around the Proposed Development.
86. There would be no specific construction related effects on sunlight, daylight and overshadowing. As would be expected, the levels of daylight and sunlight received by adjacent properties would decrease during construction, while the effect of overshadowing would increase as the Proposed Development progresses to completion.
87. An accurate three-dimensional computer model was developed to identify the effects of the Proposed Development on surrounding residential properties. This assessment was based on guidance published by the Building Research Establishment (BRE).
88. The effect on the vast majority of properties surrounding the Proposed Development is negligible. Given the scale of the Proposed Development compared to the low density and low rise light industrial buildings that currently occupy the site, adverse effects on the amount of daylight and sunlight experienced by some of the surrounding residential properties is unavoidable. In line with the guidance given in the BRE Report, it is considered that the resultant daylight and sunlight levels would be consistent with other developments in such urban areas.
89. The assessment considered the levels of daylight and sunlight within the Proposed Development. The results show that the overwhelming majority of rooms would be compliant with the daylight and sunlight targets given in the BRE Report.
90. New development can also affect the level of overshadowing of amenity areas, such as gardens or open space. However, the level of permanent overshadowing within the majority of existing and proposed amenity spaces, caused by the Proposed Development, would meet and better the target guidance given in the BRE Report.

#### TRANSPORT (CHAPTER 16)

91. Chapter 16: Transport assesses the effects of the Proposed Development with respect to Transport.
92. The Site is accessible by all modes of travel. A range of public transport facilities are available within a short walking distance, including bus, London Overground and London Underground. Walking and cycling facilities in the local area are also of good quality.
93. As part of the assessment, the number of vehicle movements associated with the Proposed Development was calculated. All calculations have been agreed with Transport for London and LBL.
94. The Site benefits from an existing planning consent so the effects of the Proposed Development were compared to the effects of the consented development, which were considered acceptable.

95. The assessment identified that there would be minor beneficial effects in relation to severance, pedestrian delay, pedestrian amenity, driver delay and accidents and safety against the Consented Development. Due to an increase in public transport trips it has been concluded that there will be a negligible effect on public transport. Mitigation, in the form of increased permeability for pedestrians and cyclists, a Travel Plan and a Delivery and Servicing Management Plan will improve the environment; however the residual effects are not expected to change significantly.
96. The construction effects were also identified. Construction effects will be temporary negligible to temporary minor adverse. Mitigation in the form of a Construction Traffic Management Plan will ensure that the residual effects are only temporary and of negligible significance.

## WIND (CHAPTER 17)

97. Chapter 17: Wind assesses the effects of the Proposed Development on wind microclimate, both of the Proposed Development on the surrounding area and within the Proposed Development itself.
98. The wind microclimate around the Proposed Development was assessed a wind tunnel test of a 1:300 scale model of the Proposed Development and surrounding buildings in a 360 m radius. Wind conditions are assessed using the widely accepted Lawson Comfort Criteria.
99. The existing Site acceptable for sitting, standing and leisure walking use with one occurrence of business walking (with strong winds in excess of Beaufort 7).
100. Generally, the wind microclimate around the Proposed Development ranged from sitting to leisure walking. There were 3 receptors which observed business walking conditions during different phases of the Proposed Development construction during the windiest season.
101. The majority of conditions are acceptable for thoroughfare use. Mitigation measures in the form of a 2.5 m Site hoarding and a 1.5 solid balustrade on the roof terrace within Plot 1 will lower winds to acceptable conditions.
102. Several entrances on Plot 1 observe windier than desired conditions; however with the proposed landscaping scheme in place wind speeds will reduce to the acceptable standing or calmer conditions. All entrances on Plot 2 and 3 experience the required standing or calmer conditions.
103. Amenity spaces on the podiums of Plots 1, 2 and 4-6 experience a mix of sitting and standing conditions. These conditions are acceptable for a mixed-use amenity space. The proposed landscaping scheme will only reduce wind speeds further and have a beneficial effect. The amenity space close to Plot 3 observed the required sitting conditions during the summer season.
104. Several roof terraces observe standing conditions, one category windier than desired. The wind speeds can be mitigated by a 1.5m balustrade on Plot 1 and soft landscaping within the terraces.
105. Strong winds will be eliminated or reduced with the implementation of the proposed landscaping scheme and mitigation measures described above.
106. With the implementation of the proposed landscaping scheme and mitigation measures described above, residual effects are negligible at worst (with some locations observing minor to moderate beneficial effects).

## TOWNSCAPE AND VISUAL (VOLUME 1B)

107. Volume 1b of the ES sets out the Townscape and Visual Impact Assessment for the Proposed Development. The assessment considers a range of short, medium and long range views, and considers the effect of the Proposed Development on townscape character areas and built heritage assets (in townscape and visual terms). The three development scenarios are considered for each receptor. In each case, an assessment is provided of the significance of the Proposed Development's effect (major, moderate, minor or negligible) and the qualitative nature of the effect (beneficial, adverse, or neutral).
108. Most of the Site is in commercial use of various kinds and parts of it are occupied by commercial and light industrial buildings, one or two storeys high, most of them nondescript and of no great age or

interest. The buildings are generally arranged in an ad-hoc manner across the Site and there are no public routes across the Site.

109. The townscape surrounding the Site can be considered as forming three townscape character areas: Evelyn Street (Area A); the area east of Evelyn Street (Area B); and the area west of Evelyn Street (Area C). Evelyn Street has a mixed character, including Victorian terraces, post-war estates and ad-hoc post-war commercial development. The area to the east includes Pepys Park and is dominated by two post-war estates. One of those, the Pepys Estate, includes tall buildings which are prominent in local views. The area west of Evelyn Street includes Deptford Park and areas of Victorian terraced housing.
110. There are no heritage assets on the Site or immediately adjacent to it. There are a number of listed buildings and locally listed buildings in the area around the Site, all of which are located within a local and wider context that includes large scale and tall post-war and modern buildings.
111. The effects of the completed Proposed Development as a whole in terms of views would range from negligible to moderate in significance and beneficial or neutral in all but one case in which an adverse effect is noted; moderate in significance and Beneficial in terms of all the townscape character areas; and 'minor to moderate' to moderate in significance and beneficial in terms of heritage assets.
112. Overall, the Townscape and Visual Impact Assessment concludes that the Proposed Development would offer a high quality design that is appropriate in terms of its scale, form and architectural expression, and would offer significant benefits to the local area in terms of urban design. It would have a substantial beneficial townscape effect on its immediate setting, and would provide a coherent new 'place' in a location that would clearly benefit from this.
113. The various parts of the Proposed Development, including the tall buildings within it, would appear as high quality new development in a range of views. In terms of the effect on the townscape setting of heritage assets in the area around the Site, the appearance of the Proposed Development, and particularly the taller elements, would be consistent with the existing context in which these heritage assets are seen.

## CUMULATIVE EFFECTS (CHAPTER 18)

114. A number of receptors will experience sequential or combined effects; for example, nearby residents will be aware of noise, visual intrusion and disruption to access during construction, which will be followed by the effects of the completed development. The potential for cumulative effects to arise in association with other developments may be summarised as follows for each topic:
  - Air Quality: None, since the residual effects would not be significant;
  - Archaeology and Built Heritage: None, since the residual effects would not be significant;
  - Flood Risk and Drainage: None, assuming all cumulative schemes comply with the NPPF drainage requirements;
  - Ecology: None, since the residual effects would not be significant;
  - Electronic Interference: None, since the residual effects would not be significant;
  - Ground Conditions, Hydrogeology and Contamination: None, since the effects are predominantly site specific and independent of other sites in the area;
  - Noise and Vibration: Potential for cumulative effects with Convoys Wharf during the construction period, noise limits should be applied to construction activities cumulatively;
  - Socio Economics: Beneficial, these schemes, along with the Proposed Development, would deliver new housing, generate employment and have a positive impact on the local economy through additional spending, which together would have a moderate to beneficial effect in terms of socio-economics at a Local Level;
  - Sunlight and Daylight: None, due to the distance of the schemes from the Site;
  - Transport: Minor beneficial, due to improvements in severance, pedestrian delay and amenity, driver delay and accidents and safety. There would be negligible cumulative effect on public transport;

- Wind: None, generally the wind microclimate with the cumulative developments in place is the same as without; and
  - Townscape and Views: None, cumulative effects are assessed a neutral.
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