2 EIA Methodology

Introduction

2.1 This Chapter sets out the general approach to, and methodology adopted for, the Environmental Impact Assessment (EIA). Consideration is given to the legislative framework within which the EIA has been undertaken, and to the process of scoping the EIA. The general significance criteria adopted to assess the likely environmental effects identified and the resulting likely residual effects are also set out. Finally, this Chapter sets out the general structure of the technical Chapters of this Environmental Statement (ES).

2.2 Specific assessment methodologies and significance criteria relating to each of the technical assessments are provided in the relevant technical chapters of this ES.

2.3 The EIA for the Development has been prepared to comply with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the '2017 EIA Regulations')[1].

General Approach

2.4 The Applicant intends to submit two separate planning applications (the 'Planning Applications') for the Site. However, as set out in **Chapter 1: Introduction**, the Planning Applications would not be implemented separately from one another or in any combination that would not bring forward the Planning Applications together as one comprehensive redevelopment proposal. As such, for the purposes of the EIA and this ES, the proposals defined by the Planning Applications are collectively referred to as the 'Development'. Similarly, the collective parcels of land associated with the Planning Applications including the Section 278 (S278) works are referred to as the 'Site' (refer to **Figure 1.4**). It therefore follows that this ES reports the key findings of the EIA process undertaken for the Development.

2.5 The assessments undertaken as part of the EIA process and reported within this ES have addressed both the likely beneficial and adverse effects of the Development during the demolition, refurbishment, alteration, and construction works (the 'Works') required to facilitate the Development and once the Development is complete, occupied and operational. In line with legislative and best practice requirements, direct, indirect, cumulative, short, medium, long-term, temporary, beneficial, and adverse effects have been addressed, where applicable.

2.6 Detailed technical studies have been undertaken on an on-going basis throughout the design process, providing information about environmental issues and constraints that may affect the Development. The Applicant and the design team have taken these environmental issues and constraints into account during the design evolution and sought to 'design out' potential adverse effects, wherever possible. Further details are provided in **Chapter 4: Alternatives**.

2.7 Following the findings of the various studies contributing to the EIA process, and where likely significant effects of the Development cannot be designed out, methods of avoiding, reducing, or off-setting significant adverse effects (collectively known as 'mitigation measures') were identified. Such mitigation measures are set out in each relevant technical Chapter.

2.8 The 2017 EIA Regulations (Part 1 of Schedule 4) state that certain information must be included in an ES. **Table 2.1** sets out these information requirements and notes the location(s) where this information is presented within the ES.

Table 2.1: Location within the ES of Information Required by Schedule 4, Part I of the EIA Regulations

	Specified Information	Location within ES
1	Description of the development, including in particular:	
	a) a description of the location of the development;	Chapter 3: Existing Land Uses and Activities;
	b) a description of the physical characteristics of the whole development, including, where relevant requisite demolition works, and the land-use requirements during the construction and operational phases.	Chapter 5: The Proposed Development; and Chapter 6: Development Programme, Demolition, Refurbishment and Construction.
	c) a description of the main characteristics of the operational phase of the development (in particular any production processes), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used.	Chapter 5: The Proposed Development.
	d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.	Chapter 5: The Proposed Development; Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; Chapter 8: Transport and Access; Chapter 9: Noise and Vibration; Chapter 10: Air Quality; Chapter 11: Ground Conditions and Contamination; Chapter 12: Surface Water Drainage and Flood Risk; Chapter 19: Greenhouse Gases; and Chapter 20: Cumulative Effects.
2	A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 4: Alternatives.
3	A description of the aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 3: Existing land uses and Activities; and Chapter 4: Alternatives.
4	A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydro-morphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to	All Technical Chapters (7 to 19).

	Specified Information	Location within ES
	adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	
5	A description of the likely significant effects of the development on the environment resulting from, inter alia:	
	a) the construction and existence of the development, including, where relevant, demolition works;	Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; All Technical Chapters (7 to 19); Chapter 20: Cumulative Effects; and Chapter 21: Summary of Mitigation Measures and Likely Residual Effects.
	b) the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;	Chapter 6: Development Programme, Demolition, Refurbishment and Construction; and Chapter 19: Greenhouses Gases.
	c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and the disposal and recovery of waste.	Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; Chapter 8: Transport and Access; Chapter 9: Noise and Vibration; Chapter 10: Air Quality; Chapter 11: Ground Conditions and Contamination; Chapter 12: Surface Water Drainage and Flood Risk; Chapter 13: Ecology; Chapter 17: Wind Microclimate; Chapter 18: Daylight, Sunlight, Overshadowing and Light Pollution; Chapter 19: Greenhouses Gases; Chapter 20: Cumulative Effects; and Chapter 21: Summary of Mitigation Measures and Likely Residual Effects.
	d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);	Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; Chapter 11: Ground Conditions and Contamination; Chapter 12: Surface Water Drainage and Flood Risk; Chapter 15: Built Heritage; Chapter 17: Wind Microclimate.
	e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;	Chapter 2: EIA Methodology; Chapter 8: Transport and Access; Chapter 9: Noise and Vibration; Chapter 10: Air Quality; and Chapter 20: Cumulative Effects.
	f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;	Chapter 5: The Proposed Development; Chapter 12: Surface Water Drainage and Flood Risk; and Chapter 19: Greenhouse Gases.
	g) the technologies and the substances used.	Chapter 5: The Proposed Development.
	The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of	All Technical Chapters (7 to 19); Chapter 20: Cumulative Effects; and Chapter 21: Summary of Mitigation Measures and Likely Residual Effects.

Specified Information		Location within ES
	the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(88) and Directive 2009/147/EC(89).	
6	A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	All Technical Chapters (7 to 19) and Chapter 21: Summary of Mitigation Measures and Likely Residual Effects.
7	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; All Technical Chapters (7 to 19) and Chapter 21: Summary of Mitigation Measures and Likely Residual Effects.
8	A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/ or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(90) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(91) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	Chapter 6: The Development Programme, Demolition, Alteration, Refurbishment and Construction; Chapter 11: Ground Conditions and Contamination; Chapter 12: Surface Water Drainage and Flood Risk; Chapter 17: Wind Microclimate.
9	A non-technical summary of the information provided under paragraphs 1 to 8 of this Part.	Non-Technical Summary (NTS) (separate document).
10	A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Chapter 2: EIA Methodology; and where appropriate Technical Chapters (7 to 19).

Scoping the EIA

2.9 The 'scoping' stage of the EIA process involves focusing the study (and hence the ES) on those issues of greatest likely significance. The 2017 EIA Regulations provide applicants with the opportunity to ask the relevant Local Planning Authority (LPA) to state in writing the information

that they believe ought to be provided in an ES, i.e., a 'Scoping Opinion'. However, it should be noted that seeking a Scoping Opinion from an LPA is not mandatory. As part of the 2018 Planning Applications, the Applicant commissioned Waterman Infrastructure & Environment (Waterman) to undertake an EIA Scoping Study and seek a Scoping Opinion from the London Borough of Richmond upon Thames (LBRuT).

2.10 The key issues to be addressed by the EIA were identified through a review of the emerging development design, the consideration of available baseline information, consultation with various statutory consultees as part of the 2018 Planning Applications, alongside the application of professional judgement and relevant experience.

2.11 The findings of this exercise were presented within an EIA Scoping Report (refer to **Appendix 2.1**), submitted to LBRuT on 30th March 2017, to provide LBRuT and the relevant statutory consultees with an opportunity to comment on the content and broad EIA methodology.

2.12 Following consultation with the relevant consultees, LBRuT issued a draft EIA Scoping Opinion on 25th May 2017 (refer to **Appendix 2.2**). Following receipt of LBRuT's draft EIA Scoping Opinion, Waterman and the Applicant's Planning Lawyer (Dentons) prepared and issued scoping clarification responses to LBRuT on 26th June 2017 (refer to **Appendix 2.3**). LBRuT's subsequently issued a formal EIA Scoping Opinion on 30th June 2017 (refer to **Appendix 2.4**). Dentons provided a final response on the formal EIA Scoping Opinion on 19th July 2017 (refer to **Appendix 2.5**).

2.13 A summary of the key responses and comments received during the EIA scoping process and where they are addressed within the ES is presented in **Appendix 2.6**.

2.14 Given the Development would provide broadly similar scale and uses, construction activities and phasing as the 2018 Planning Applications, it is considered that the scope of assessment and methodologies previously employed would remain suitable for the current Application. Thus, this ES assesses the same topics with the same scope of assessment (with revisions to respond to updated policy and guidance) as those previously agreed with LBRuT and reported in the 2018 ES (as amended), which was suitable for determining the 2018 Planning Applications.

2.15 Changes to the scope of the EIA are however required to ensure the ES accords with the requirements of the 2017 EIA Regulations. The 2017 EIA Regulations introduce additional technical considerations, notably the additional topics of Human Health, Climate Change and Major Accidents & Disasters (MAD), which are considered later in this Chapter.

Potentially Significant Issues

2.16 It was concluded that the Development would have the potential to give rise to a number of significant environmental effects that would need to be considered and assessed as part of the overall EIA process. These were categorised within key topic areas as follows, and are presented according to the Volume (and where relevant, Chapter) in which they are presented within this ES:

- Socio-Economics (**ES Volume 1, Chapter 7**);
- Transport and Access (**ES Volume 1, Chapter 8**);
- Noise and Vibration (**ES Volume 1, Chapter 9**);
- Air Quality (**ES Volume 1, Chapter 10**);

- Ground Conditions and Contamination (**ES Volume 1, Chapter 11**);
- Surface Water Drainage and Flood Risk (**ES Volume 1, Chapter 12**);
- Ecology (**ES Volume 1, Chapter 13**);
- Archaeology (**ES Volume 1, Chapter 14**);
- Built Heritage (**ES Volume 1, Chapter 15**);
- Townscape and Visual (**ES Volume 1, Chapter 16**);
- Wind Microclimate (**ES Volume 1, Chapter 17**);
- Daylight, Sunlight, Overshadowing and Light Pollution (**ES Volume 1, Chapter 18**);
- Greenhouse Gases (**ES Volume 1, Chapter 19**); and
- Cumulative Effects (**ES Volume 1, Chapter 20**).

Human Health

2.17 As required under the 2017 EIA Regulations, the potential for significant effects on Human Health has been considered. Several key guidance documents[2,3,4] relating to the consideration of health as part of EIA have been published since the inclusion of this topic in the 2017 EIA Regulations. This guidance indicates that consideration of health as a topic should be proportionate and, in most cases, can be scoped out of the EIA. The Development will not include any uses or activities that would be considered to pose a significant effect to human health. Furthermore, the Development is not located within the vicinity of any activity or uses that would be considered to impact human health of future residents or users of the proposed Development. Nonetheless, the topic of Human Health substantially overlaps with the other proposed ES chapters and documents to be submitted in support of the Planning Applications, the following human health implications have been identified as being of potential relevance to the Development:

- Amenity issues to existing occupants surrounding the Site, and future occupiers of the Development, arising as an indirect result of typical activities at the Site, for example noise and air emissions from road traffic and heating plant. A full assessment of the air quality and noise and vibration effects arising from the Development is provided in **Chapters 9** and **10** of this ES respectively;
- Amenity, well-being, and safety issues as a direct effect of the physical form of the Development in terms of crime, daylight, sunlight, and overshadowing, wind microclimate effects. A full assessment of these effects on future on-Site receptors and existing neighbouring receptors is presented in **Chapters 7, 17** and **Chapter 18** respectively;
- Encouragement of physical activity through the provision of open space, enhanced cycle provision, and improved Site permeability. As reported in **Chapter 5**, the Development would provide public amenity space, play space, communal amenity space and cycle parking spaces. The effects on the local population in relation to the provision of open space and playspace is assessed in **Chapter 7: Socio-economics**; and
- Access to healthcare, community facilities, education, housing including affordable housing, and employment opportunities, all of which are assessed in **Chapter 7**.

2.18 A stand-alone Health Impact Assessment has been prepared by Hatch and is submitted alongside the planning applications for the Development. This draws upon the findings of the ES and identifies aspects for consideration as part of the future detailed design; no additional likely

significant effects are identified or assessed in the Health Impact Assessment that are not already considered within the EIA.

Climate Change

2.19 The Development will lead to the release of Greenhouse Gases (GHGs) from its construction and operation. **Chapter 19: Greenhouse Gases** considers the impact of the Development upon climate change by calculating the GHG emissions arising from the construction and use of the Development (referred to as a 'carbon footprint' or 'inventory'). The calculated carbon footprint is compared to appropriate benchmarks (including regional GHG emissions) to provide context for the scale of the carbon footprint of the Development.

2.20 In respect to climate change adaptation, in accordance with relevant guidance, the Flood Risk Assessment (FRA) (**Appendix 12.1**), accounts for the effects of climate change including the possibility of a storm (1 in 100 year event) and an increase of 40% rainfall intensity due to climate change, which allows for a design life of over 100 years. The siting, layout and arrangement of land uses within the Development have been designed based on the results of the flood risk assessment.

2.21 Further to the above, **Chapter 5** provides a description of the inherent sustainable design features of the Development that would aim to reduce the generation of greenhouse gases (including CO_2) and therefore reduce the effect of the Development on climate change. Such descriptions have been drawn from several stand-alone documents that have been prepared to support the detailed planning application including the stand-alone Sustainability Statement and Energy Strategy.

2.22 **Chapter 5: The Proposed Development** also includes a Climate Change Resilience Review which summarises the measures that have been adopted within the Development to enhance its resilience to climate change.

Insignificant Issues

2.23 As part of the EIA scoping process and based on professional judgement, it was considered that the following issues would not be likely to experience, or materially affect the significance of environmental effects as a result of the Development. Accordingly, such issues have been considered as 'insignificant issues' which have not been considered within the full EIA process and have been scoped out of this ES. A summary of these scoped out issues is provided below, with further detail within the EIA Scoping Report (**Appendix 2.1)** as agreed through LBRuT's EIA Scoping Opinion (**Appendix 2.4**), apart from MAD, which is an additional topic for consideration under the 2017 EIA Regulations:

- **Waste:** It is inevitable that waste would be generated during the Works required to facilitate and implement the Development. This would be the case for any redevelopment project and the critical aspect is how waste is managed. For this reason, a Site Waste Management Plan (SWMP) and a Construction Environmental Management Plan (CEMP) would be prepared prior to commencement of the Works commencing to ensure good Site management practice would lead to a minimisation of waste creation and the reuse or recycling of waste materials where practicable. Summary information regarding the generation and management of waste arising from the Works is provided in **Chapter 6: Development Programme, Demolition, Alteration, Refurbishment and Construction**. The implications of the transportation of waste materials associated with the Works are considered within **Chapter 8: Transport and**

Access. The likely indirect effects of these vehicular trips on noise levels and ambient air quality are considered in **Chapter 9: Noise and Vibration** and **Chapter 10: Air Quality**. Once operational, a quantity of domestic and commercial waste would result from the Development. However, again, the critical aspect is how the waste is managed. The Development will be designed to optimise good operational waste management practices, such as the segregation of waste to minimise effects from waste disposal. A Framework Construction Management Statement and Waste Management Plan, submitted as standalone documents with the Planning Applications, cover waste management during the Works. An Operational Waste Management Plan will also be submitted with the Planning Applications once the Development is completed and operational. In addition, all waste management proposals of the Development are described within **Chapter 5: The Proposed Development**. Whilst various Chapters of this ES consider the implications of waste generation and demonstrate the appropriate management of waste during all stages of the Development, a separate ES chapter is not considered necessary to deal with such matters.

- **Solar Glare:** Several buildings present on the Site would be retained, altered, and refurbished, which are of non-reflective brick construction. The common material of the new buildings would also be brick. This is to complement the architectural style of the retained buildings, although other materials such as stone and metal cladding would be incorporated into the design of the new buildings. Despite this, the proportion of reflective materials to be used within the Development is considered low and would not materially affect the significance of solar glare issues. As such, the topic of solar glare has been scoped out of the ES.
- **Vibration (associated with the completed and operational Development):** Following a Site walkover survey and desk-based appraisal of the immediate vicinity of the Site it was confirmed there are no significant vibration generating sources (e.g., London Underground Limited, or Mainline Rail Lines) within approximately 195m of the Site. Furthermore, no significant sources of vibration would be introduced as part of the Development.
- **Archaeology (associated with the completed and operational Development):** Any likely effects to archaeology would result from intrusive ground works only. These would be limited to the Works only. Accordingly, there would be no archaeological effects associated with the completed and operational Development.
- **Odour:** Any ventilation extracts associated with the café and restaurant uses within the Development would be designed in accordance with best practice design and appropriate regulations. This would be secured by a suitably worded planning condition. As such, it is not anticipated that odours generated by café and restaurant uses within the Development would materially affect the significance of environmental effects. An Odour Assessment Report is submitted as a standalone planning report which sets out the design principles to be considered at the detailed design stage with regards to the design of odour extraction related to the commercial elements of the Development.
- **Telecommunications:** As requested by LBRuT's EIA Scoping Opinion (**Appendix 2.4**), further consideration of telecommunications has been undertaken at the scoping stage. Analogue television broadcast has now been phased out and replaced by digital television, which is largely unaffected by atmospheric conditions that rendered analogue television unwatchable and does not suffer reflection effects and ghosted image generation. Given the switch to digital television broadcast, the Development would be unlikely to materially affect the significance of effects on digital television.

- **Major Accidents and Disasters:** As set out above, MAD is an additional topic under the 2017 EIA Regulations and was therefore not considered at the scoping stage for the 2018 ES which was under the 2011 EIA Regulations (as amended). There are no Control of Major Accident Hazards (COMAH) sites located within 3 miles of the Site[5]. Additionally, the Site is not located within a mining area[6] or within the Airport Public Safety Zone of the closest airports, London Heathrow Airport (10km west of the Site) and London City Airport (over 20km east of the Site) or near any aerodromes. As such and based on the proposed uses of the Development, it is not expected that these would cause major accidents or disasters. Furthermore, the Applicant is committed to implementing a Construction Environmental Management Plan (CEMP) to manage the demolition and construction works and implement practices to manage environmental issues and any environmental risks during the works. Other major accidents and / or disasters are addressed within the scoped in ES chapters including ground contamination and Unexploded Ordnance in **ES Chapter 11: Ground Conditions and Contamination,** flood risk and extreme weather in **ES Chapter 12: Surface Water Drainage and Flood Risk**, and strong winds in **ES Chapter 17: Wind Microclimate**. As such, the risk(s) of major accidents and / or disasters to or from the Development is considered to be low and associated environmental effects unlikely and this topic is therefore not considered further within this ES.
- **Type 2 cumulative effects (the combined effects arising from the Development together with other reasonably foreseeable schemes):** As part of the 2018 ES, Waterman together with Gerald Eve, undertook a thorough search of valid planning permissions within 1 km of the Site (refer to **Appendix 2.3**). As requested by LBRuT within their draft EIA Scoping Opinion (**Appendix 2.2**), major schemes within LBRuT and the London Borough of Hounslow (LBH), and below the cumulative criteria threshold set out in the EIA Scoping Report (**Appendix 2.1**) (any new residential development; schemes over 1,000 m^2; and decisions issued since January 2014), were reviewed. It was concluded that from this exercise, there are no other schemes within 1 km of the Site that would materially affect the significance of environmental effects owing to their small scale and location within established residential areas. An updated cumulative review has been undertaken as part of this ES and no further cumulative schemes have been identified **(Appendix 2.7)**.

Nature of the Planning Applications and EIA Approach

2.24 As described earlier in this Chapter and summarised within **Chapter 1: Introduction**, the Development comprises two separate planning applications, as set out below.

Application A: The Hybrid Planning Application

2.25 The hybrid planning application seeks demolition of the majority of buildings and structures within the Site (except for the Maltings and the façades of the former Hotel and Bottling building) and the redevelopment of the majority of the former Stag Brewery Site as follows:

The Outline Component of the Hybrid Planning Application

2.26 For the outline component of the hybrid planning application, within the west part of the Site (referred to as Development Area 2), all matters are reserved for future determination (access, appearance, landscaping, layout, and scale). This means that the principles (but not the details) of the outline component of the hybrid planning application are sought for approval by way of:

- maximum and minimum spatial parameters (height, width, and length) for each proposed building;
- design principles;
- maximum floor areas*, cycle parking spaces and car parking spaces;
- maximum accommodation schedules;
- key access points; and
- a number of spatial and non-spatial descriptive parameters.

2.27 Such information is provided by way of:

- Parameter Plans;
- a maximum floorspace schedule;
- a maximum accommodation schedule; and
- a Design Code.

2.28 All relevant information pertaining to the above is provided in **Chapter 5: The Proposed Development**.

The Detailed Component of the Hybrid Planning Application

2.29 For the detailed component of the hybrid planning application, within the east part of the Site (Development Area 1), full details of building massing, siting, layout, articulation, and architectural details are sought for approval, together with detailed floor area schedules, accommodation schedules, cycle parking numbers, car parking numbers and a landscape masterplan. Such information is provided by way of:

- detailed planning application drawings;
- a schedule of proposed land uses;
- a schedule of residential accommodation; and
- landscape proposals.

2.30 All relevant information pertaining to the above is provided in **Chapter 5: The Proposed Development**.

Application B: The School Planning Application

2.31 As per the detailed component of the hybrid application, the detailed planning application for the six-form entry secondary school seeks approval for the details of building massing, siting, layout, articulation, and architectural details, together with detailed floor area schedules, cycle parking numbers, car parking numbers and a landscape masterplan. Such information is provided by way of:

- detailed planning application drawings; and
- a landscape masterplan.

2.32 In addition, as it is likely the six-form entry secondary school would be constructed and implemented as an early phase of Development (after demolition of the majority of buildings and structures on the entire Site as sought for approval via Application A), the detailed planning

application also seeks approval for temporary access routes and other interim works that would be implemented and exist until such time that future reserved matters applications associated with an approved Application A are approved and implemented.

2.33 The highways works proposed along Lower Richmond Road and Chalkers Corner to facilitate the Development are expected to be undertaken by way of a S278 agreement. The design of these highway works is presented on the detailed planning drawings submitted alongside the planning applications. Traffic information to inform the air quality and noise assessments is provided by Stantec, the project transport consultants.

2.34 All relevant information pertaining to the above is provided in **Chapter 5: The Proposed Development**.

EIA Approach

2.35 As noted above and within **Chapter 1: Introduction**, the Planning Applications would not be implemented separately from one another or in any combination that would not bring forward the Planning Applications together as one comprehensive redevelopment proposal. As such, for the purposes of the EIA and this ES, the proposals defined by Planning Applications are collectively referred to as the 'Development'. The assessments which have been undertaken to inform this ES therefore identify the likely significant environmental effects of the Development based upon:

- the maximum footprint and height of buildings as shown on the Parameter Plans (for the outline component of Application A);
- a maximum floorspace schedule (for the outline component of Application A)*;
- a maximum accommodation schedule (for the outline component of Application A)*;
- a Design Code (for the outline component of Application A);
- detailed planning application drawings (for the detailed component of Application A, the school planning application (Application B) and the S278 highways works));
- a schedule of proposed land uses (for the detailed component of Application A and the school planning application (Application B));
- a schedule of residential accommodation (for the detailed component of Application A);
- landscape proposals (for the detailed component of Application A and the school planning application (Application B)); and
- information pertaining to Works as outlined within **Chapter 6: Development Programme, Demolition, Alteration, Refurbishment and Construction**.

*Note, for Building 18 only, the minimum floor areas have been used so that units in this building are not presented as oversized as a result of the flexibility permitted by the parameters.

2.36 Regarding the level of flexibility sought for approval within the outline component of the hybrid planning application (Application A), each technical assessment scoped into this ES has assessed the 'worst-case scenario' that could result from this element of the Development. Where relevant, details are provided within each technical Chapter of this ES (**Chapters 7** to **19**).

2.37 Similarly, and as described within **Chapter 5: The Proposed Development**, the detailed component of the hybrid planning application seeks approval for a quantum of 'flexible' non-residential land uses. Again, each technical assessment scoped into this ES has assessed the

'worst-case scenario' that could result from the various permutations of 'flexible' land uses that could result. Once again, where relevant, details are provided within each technical Chapter of this ES (**Chapters 7** to **19**).

Means of Assessment

2.38 Taking account of the relevant baseline conditions described in each technical chapter of this ES, the Development, as summarised in **Chapter 5: The Proposed Development**, and the likely timescale and phasing of demolition, alteration, refurbishment and construction (refer to **Chapter 6: Development Programme, Demolition, Alternation, Refurbishment and Construction**), the likely significant environmental effects were predicted using models and reference to relevant standards and legislation, where available. Where it was not possible to precisely quantify effects, qualitative assessments were carried out, based on available knowledge and professional judgement. Any uncertainty as to the validity of an assessment is noted in the relevant technical Chapter. An evaluation of the likely duration, magnitude, and significance of the predicted likely effects on potential sensitive receptors is also set out.

2.39 Detailed methodologies for the assessment of each of the environmental topic areas scoped into this ES are provided within each technical Chapter of this ES (**Chapters 7** to **19**). However, in general terms, the content and extent of the ES is based upon the following:

- review of the current baseline situation, using various sources of existing information, data and reports;
- desktop studies;
- Site surveys;
- consideration of relevant legislation and planning policies (national, regional, and local);
- identification of likely environmental effects and an evaluation of their likely duration, magnitude and significance;
- consideration of potentially sensitive receptors;
- expert opinion;
- use of technical guidance and best practice; and
- specific consultations with appropriate organisations.

Evaluation of Significance and Significance Criteria

2.40 The EIA process aims to provide LBRuT with sufficient information with respect to the 'likely significant environmental effects' of the Development to aid the planning decision making process.

2.41 Likely significant environmental effects associated with the Development have been assessed with reference to definitive standards and legislation, where available. Where it was not possible to quantify the likely significant effects, qualitative assessments were carried out, based on available knowledge and professional judgement. Where professional judgement was used, or where uncertainty exists, this is noted in the relevant Chapter.

2.42 The significance of the predicted likely significant effects has been determined with reference to assessment criteria for each environmental topic considered. These criteria apply a common EIA approach of classifying effects according to whether they are major, moderate, minor, or

insignificant and whether the effects are adverse or beneficial. Unless otherwise stated within the technical chapters, minor, moderate, and major are all considered as 'significant' effects in accordance with the 2017 EIA Regulations.

2.43 Specific criteria for each environmental topic were developed, giving due regard to the following factors:

- extent and magnitude of the effect;
- duration of the effect (whether short, medium, or long-term);
- nature of the effect (whether direct or indirect, reversible, or irreversible);
- likelihood of the effect to occur;
- whether the effect occurs in isolation, is cumulative or interactive;
- performance against environmental quality standards or other relevant pollution control thresholds;
- sensitivity of the receptor; and
- compatibility with environmental policies.

2.44 To provide a consistent approach to expressing the outcomes of the various assessments undertaken as part of the EIA, the following terminology has been used throughout the ES. Effects have been expressed as either:

- **beneficial effect** of **major significance**;
- **beneficial effect** of **moderate significance**;
- **beneficial effect** of **minor significance**;
- **insignificant effect:** No significant effect (either adverse or beneficial) to an environmental resource or receptor;
- **adverse effect of minor significance**;
- **adverse effect of moderate significance**; and
- **adverse effect of major significance**.

2.45 In the ES the following terminology is used to define the temporal and spatial scale of the effects:

- **'short'** to **'medium-term'** effects are considered to be those associated with the Works;
- **'long-term'** effects are those associated with the completed and operational Development;
- **'local'** effects are those affecting neighbouring receptors;
- **'district'** effects are those which are likely to occur to receptors within the wider Borough of the London Borough of Richmond upon Thames (LBRuT);
- **'sub-regional'** effects are those affecting Boroughs adjacent to LBRuT;
- **'regional'** effects are those affecting receptors across Greater London; and
- **'national'** effects are those that affecting receptors within the UK.

2.46 Each of the technical Chapters outlines the criteria, including sources and justifications, for quantifying the different levels of effect. Where possible, this is based upon quantitative and accepted criteria together with the use of value judgements and expert interpretations, where necessary, to establish to what extent an effect is environmentally significant. Where specific

technical guidance on some of the environmental topics requires different terminology to the standard EIA significance criteria of effects set out above, this is justified within the relevant technical Chapter.

Reporting Structure of Volume 1 Technical Chapters

2.47 Each key environmental topic considered in the EIA has been assigned a separate chapter within the **ES Volume 1** (**Chapter 7** to **Chapter 19** inclusive). Within each of the ES Volume 1 technical chapters the assessments are presented and reported in the following format:

Introduction

2.48 This provides a brief introduction to the assessment and the issues considered in the chapter. It confirms the author and highlights relevant appendices which accompany the chapter.

Assessment Methodology and Significance Criteria

2.49 This section of each assessment sets out the methods used in undertaking the technical study, together with an explanation of the approach to defining the significance of likely environmental effects with reference to published standard guidelines, best practice, and defined significance criteria. The limitations and assumptions of the assessment are also defined, together with any specific consultation undertaken to agree upon the scope or methodology in the assessment.

Baseline Conditions

2.50 To assess the likely significant effects of the Development, it is necessary to establish the environmental conditions that currently exist on and surrounding the Site, in the absence of the Development. These are known as baseline conditions. The baseline conditions relevant to each environmental issue are set out in this section. As outlined earlier in this chapter, for the purposes of the EIA, the baseline conditions have been taken as the existing conditions when surveys were undertaken or when latest relevant baseline data were available, as described in each assessment. On the basis that the permissions for the current temporary uses on the Site are due to expire in June 2022, the EIA has considered the baseline conditions for the Site as without these uses, that is a vacant site. The short-term temporary uses are described in **Chapter 3: Existing Land Uses and Activities**.

Likely Significant Effects

2.51 This section of each chapter presents the assessment of the likely significant effects of the Development during demolition, refurbishment, and construction, and once the Development is completed and operational. The assessments were carried out in relation to the relevant baseline conditions. An evaluation of the significance of the likely effect is given in accordance with relevant criteria as defined earlier in the assessment.

Mitigation Measures and Likely Residual Effects

2.52 One of the principal aims of the EIA is to identify, and so assist in developing, mitigation measures to prevent, reduce and where possible, offset significant adverse effects of a development. An iterative approach was adopted towards the design of the Development, which evolved in parallel

with the EIA process. This enabled many mitigation measures to be effectively designed into the Development, thereby reducing the need for further mitigation.

Cumulative Effects

2.53 In line with the 2017 EIA Regulations, an EIA must consider the cumulative effects or interaction of effects of a development. Cumulative effects are those which result from incremental changes caused by other existing or approved projects in the local area, in combination with the Development.

2.54 As set out earlier in this Chapter, a review of schemes within the 1km of the Site was undertaken to determine whether there were any other developments within the area that could have the potential to materially affect the significance of cumulative effects in combination with the Development on potential receptors. No cumulative schemes were identified (refer to **Appendix 2.7**) and therefore the cumulative assessment will only assess in-combination cumulative effects. In-combination cumulative effects are the combined effects of individual effects resultant from the Development up a set of defined receptors, for example noise, dust, and visual intrusion. In-combination cumulative effects will be qualitatively assessed in line with the construction programme and taking account of all assessments scoped into the ES (refer to **Chapter 20: Cumulative Effects**).

Assumptions and Limitations

2.55 The principal assumptions that have been made, and any limitations that have been identified in undertaking the EIA, are set out as follows:

- information received from third parties is accurate, complete, and up to date;
- all assessments are based upon the Parameter Plans, detailed planning application drawings, floorspace schedules, accommodation schedules, Design Code, and landscape proposals submitted for approval;
- the assessment of likely significant effects associated with the Works is based upon the indicative demolition and construction timetable and methodologies as provided by the project team and agreed by the Applicant (refer to **Chapter 6: Development Programme, Demolition, Alteration, Refurbishment and Construction**);
- the relevant baseline conditions have been established from a variety of sources, including surveys, historical data, and best available information at the time of undertaking the EIA. The short-term temporary uses currently on the Site have not been assessed on the basis that the Site will be vacated by June 2022;
- the design, construction and completed Development would satisfy environmental standards consistent with contemporary legislation, practice, and knowledge as a minimum, but would also strive to achieve best practice at the time of the works;
- where relevant, each technical discipline has accounted for the influence of coronavirus on their assessments and provided description within their respective chapters;
- a Site-specific Construction Environmental Management Plan (CEMP) to control construction activities would be agreed with LBRuT after the planning application is determined. This CEMP would be enforced and monitored during all key stages of construction.

2.56 Where relevant, assumptions specifically relevant to each topic area included within the ES are noted in **Chapters 7 to 19** inclusive of this ES.

References

1 HMSO (2017); Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

2 Public Health England (July 2017), Health and Environmental Impact Assessment: A Briefing for Public Health Teams in England.

3 IEMA (May 2017), Health in Environmental Impact Assessment – A Primer for a Proportionate Approach.

4 IAIA (December 2020), Human health: Ensuring a high level of protection.

5 Health and Safety Executive (2015); Public information on establishments subject to COMAH 2015. Available online at: https://notifications.hse.gov.uk/COMAH2015/Search.aspx

6 The Coal Authority, 2021. Interactive Map [Online]. Available at: http://mapapps2.bgs.ac.uk/coalauthority/home.html