

Chapter 2: EIA Methodology

INTRODUCTION

- 2.1 This chapter of the ES sets out the overall approach to, and methodology for, undertaking the EIA for an outline planning application, as described in **ES Volume 1, Chapter 1: Introduction**. This ES chapter details the process for identifying the environmental issues (or 'topics') to be included in the EIA and the method of assessing the likely significant effects that have the potential to arise as a result of the Proposed Development, both during the demolition and construction works, and on completion and operation of the Proposed Development.
- 2.2 Further detail on how the assessment methodology is applied to each topic is presented within the respective technical chapters of this ES within **ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**.

OVERVIEW OF THE PLANNING APPLICATION

Format of the Planning Application

- 2.3 The Town and Country (Development Management Procedure) (England) Order 2015¹ ('DMPO') sets out requirements and guidance for outline planning applications. A parameters-based approach has been taken for the outline planning application (for example, with maximum parameters sought for approval defined by Parameter Plans), whereby the planning application reserves all matters (with the exception of the primary means of access into / out of the site) for future determination by the GBC through the submission of reserved matters applications ('RMA').
- 2.4 In accordance with the DMPO, the following matters are reserved for later approval in relation to the Proposed Development:
 - **Layout** – as defined in the DMPO - “the way in which buildings, routes and open spaces within the development are provided, situated and orientated in relation to each other” is reserved. Although reserved, the planning application seeks outline approval of parameters associated with the layout of the Proposed Development with regards to plot locations and land uses, including (but not limited to) defined 'built edges', site access and circulation, and public realm and park zones, as set out in the Parameter Plans submitted in support of the planning application. The exact amount of floorspace for each land use sought for approval is not provided at this stage. Instead, a defined maximum land use quantum proposed for each Use Class is provided, as set out in **ES Volume 1, Chapter 4: The Proposed Development**;
 - **Scale** – as defined in the DMPO - “the height, width and length of each building in relation to their surroundings” is reserved. However, the planning application does seek approval for the maximum scale of the buildings as shown on the Parameter Plans. For height parameters, this is defined in terms of metres Above Ordnance Datum (mAOD), whereby the width and length of buildings are defined with regards to a maximum building footprint within each plot area (Plots 1 to 19);
 - **Appearance** – as defined in the DMPO - “the aspects of a building or place within the development which determine the visual impression the building or place makes, including the external built form of the development, its architecture, materials, decoration, lighting, colour and texture” are reserved. The planning application does not seek approval for 'appearance' of the Proposed Development at this stage. Appearance is reserved for later approval by the GBC. However the principles in relation to the appearance of the buildings (as described in **ES Volume 1, Chapter 4: The Proposed Development**) are set out within the Design Code, which supports the planning application, with regards to defined Neighbourhood Character Areas which establish principles and/or a framework in relation to the appearance of the buildings;
 - **Landscaping** – as defined in the DMPO - “the treatment of land (other than buildings) for the purpose of enhancing or protecting the amenities of the site and the area in which it is situated and includes — (a) screening by fences, walls or other means; (b) the planting of trees, hedges, shrubs or grass; (c) the formation of banks, terraces or other earthworks; (d) the laying out or provision of gardens, courts, squares, water features, sculpture or public art; and (e) the provision of other amenity features” is

reserved. The Parameter Plans define the strategic landscaping zones across the site (park and public realm). The Design and Access Statement ('DAS') and Design Code set out the principles of all landscaping components with reference to the landscaping of an illustrative masterplan (the 'Illustrative Masterplan'), as described within **ES Volume 1, Chapter 4: The Proposed Development**; and

- **Means of Access** – as defined in the DMPO “means the accessibility to and within the site, for vehicles, cycles and pedestrians in terms of the positioning and treatment of access and circulation routes and how these fit into the surrounding access network” and is reserved in part. The planning application seeks approval for details pertaining to the primary means of access to the site via the A226 (to the south), B2175, Grove Road, Galley Hill Road (A226), Northfleet Industrial Estate, Lower Road and Seacon Terminals. The details of the primary means of access are provided within the Detailed Access Plans submitted in support of the planning application, with the locations of these primary access locations shown on the Highway Access Parameter Plan, and set out in **ES Volume 1, Chapter 4: The Proposed Development**. For the remainder of the access arrangements, parameters associated with secondary and tertiary access and circulation, adopted highways within the site, emergency vehicle routes and pedestrian and cycle routes, are set out in the Parameter Plans.

- 2.5 The outline elements of the planning application provide the Applicant with flexibility as to the layout, scale, appearance, landscaping and access that could be brought forward across the site, as discussed above.
- 2.6 An Illustrative Masterplan is provided within the DAS, which supports the planning application. The Illustrative Masterplan comprises one example of how the Proposed Development *could* come forward within the parameters sought for approval by the planning application, so approval is not sought for the Illustrative Masterplan itself through the outline planning application.
- 2.7 Further details of the Proposed Development sought for approval and assessed within this ES are presented within **ES Volume 1, Chapter 4: The Proposed Development**.

Basis of Assessment

- 2.8 The basis of assessment for the EIA comprises a number of documents, drawings and assumptions, as set out in this section. A number of key assumptions regarding the Proposed Development which inform the basis of assessments are presented in the 'Assumptions and Limitations' section of this ES chapter.

Outline Component

- 2.9 The assessments contained within **ES Volume 1, Chapters 6 to 15** and **ES Volume 2** are based on a set of documents that define and describe the Proposed Development.
- 2.10 These documents (known as 'Control Documents') define the outline parameters of the planning application and comprise the submitted Planning Statement, Parameter Plans and the Design Code.
- 2.11 These are documents and plans which describe the principal components of the outline elements of the Proposed Development, provide parameters that guide future RMA(s), and act as controls to limit development within the parameters set to secure a mechanism with regards to how the Proposed Development will come forward. Together, these Control Documents set out the information required to allow the impacts of the Proposed Development to be identified and assessed with sufficient certainty.
- 2.12 The Control Documents that comprise the planning application and for which outline planning permission is sought are as follows:
 - **Planning Statement** – describes and sets out each of the Parameter Plans (see below) and also defines the maximum land use quantum proposed for each Use Class that could come forward across the site, as well as minimum commitments (e.g. open space);
 - **Parameter Plans** – present outline parameters associated with the scale, layout, land use, access and movement, and public realm for the Proposed Development, comprising:
 - Demolition Plan (Drawing Reference: NFH-UNS-MAST-DR-1002);
 - Plots Plan (Drawing Reference: NFH-UNS-MAST-DR-1004);

¹ Town and Country Planning, England (2015). Available at: http://www.legislation.gov.uk/uksi/2015/595/pdfs/uksi_20150595_en.pdf

- Land Use Zones (levels 00, 01, 02, 03 and above, and top floor level) (Drawing References: NFH-UNS-MAST-DR-1005, NFH-UNS-MAST-DR-1006, NFH-UNS-MAST-DR-1007, NFH-UNS-MAST-DR-1008, and NFH-UNS-MAST-DR-1009);
 - Built Edge Deviation Plan (ground floor and podium levels, and upper floor levels) (Drawing References: NFH-UNS-MAST-DR-1010 and NFH-UNS-MAST-DR-1011);
 - Public Realm (Drawing Reference: NFH-UNS-MAST-DR-1012);
 - Maximum Building Heights (Drawing Reference: NFH-UNS-MAST-DR-1013);
 - Highway Access (Drawing Reference: NFH-UNS-MAST-DR-1014); and
 - Neighbourhoods Plan (Drawing Reference: NFH-UNS-MAST-DR-1018).
- **Design Code** – provides a set of design rules and principles to guide the vision, character and quality of the detailed design which will be sought for approval at the RMA stage. The guidelines within the Design Code include mandatory guidelines that will be followed in future RMAs, providing certainty with regards to the quality and character of the Proposed Development, and other guidelines which have a degree of flexibility so that alternative design solutions can be delivered with a high-quality outcome. The Design Code has also been informed by the findings of the environmental assessment work. This is to ensure that the detailed design incorporates the required or appropriate measures to render any residual effects relating to technical topics as not significant. Further detail is provided in **ES Volume 1, Chapter 3: Alternatives and Design Evolution and ES Volume 1, Chapter 4: The Proposed Development** as well as the technical chapters of this ES (**ES Volume 1, Chapters: 6 to 15 and ES Volume 2**).

2.13 The Planning Statement, Parameter Plans and Design Code submitted as part of the planning application provide the information to appropriately assess the potential environmental effects associated with the Proposed Development.

Access Details

- 2.14** Full details are submitted in connection with the primary means of access to the site via the A226 (to the south), B2175, Grove Road, Galley Hill Road (A226), Northfleet Industrial Estate, Lower Road and Seacon Terminals, as defined on the Highways Access Parameter Plan and the Detailed Access Plans.
- 2.15** The EIA uses this information, as relevant, as the basis of assessment (e.g., in relation to operational traffic routing).
- 2.16** Relevant information regarding the primary means of access are discussed in further detail in **ES Volume 1, Chapter 4: The Proposed Development**.

Illustrative Masterplan

- 2.17** The Illustrative Masterplan provides one example of how the Proposed Development could come forward within the parameters in terms of layout, scale, open space and landscaping. The Illustrative Masterplan is broadly used for informative purposes only but where relevant (such as **ES Volume 1, Chapter 6: Socio-Economics and Health**), has been used within technical assessments to inform the assessment of potential effects associated with how the Proposed Development could come forward. Of course, it is acknowledged that this is just one potential example of how the Proposed Development could come forward and the primary mode of assessment within this ES is based on a worst-case scenario where the Proposed Development is built out to maximum parameters. How the EIA considers the Illustrative Masterplan is provided below within this ES chapter and within the respective technical ES chapters.

Illustrative Phasing Plan

- 2.18** In addition, an Indicative Phasing Plan (Drawing Reference: NFH-UNS-MAST-DR-1016) has been submitted in support of the planning application. Whilst the plan is not sought for approval and as such does not form a Control Document, the indicative phasing plan, and resultant outline construction programme and development trajectory (as set out in **ES Volume 1, Chapter 5: Demolition and Construction**), has been developed to inform the basis of assessment. An interim assessment has been considered (as discussed further below) where relevant, which allows for the assessment of potential significant effects throughout the duration of the

construction programme and phased delivery of the Proposed Development. It has been developed based on the Parameter Plans and takes into consideration the phased delivery of the Proposed Development and the introduction of future residents that are expected to occupy the site prior to the full build of the Proposed Development by 2031.

Baseline Conditions

- 2.19** The purpose of the EIA is to predict how environmental conditions may change as a result of the Proposed Development. The assessment of the nature and scale of a predicted change is undertaken against a reference condition, known as the 'baseline'. In most cases, the baseline represents the environmental condition of the site being assessed and the surrounding area at the time of the assessment.
- 2.20** Baseline assessments utilise any existing and available information, as well as new information either collected through baseline surveys undertaken during the course of the EIA process, or additional information provided as part of pre-application consultation process. This information has been used in the ES to present within each of the individual technical ES chapters (**ES Volume 1, Chapters: 6 to 15 and ES Volume 2**) and an up to date description of the current baseline conditions of the site and surrounding area.
- 2.21** For most technical disciplines, the baseline has been taken as the existing conditions within the site and the surrounding area, at the time of assessment (i.e. in the assessment year of 2022), although in defining the baseline conditions, data from preceding years maybe used where the data remains relevant (e.g. with regards to air quality). However, in some cases it may be necessary to apply a 'future' baseline to ensure a meaningful assessment, particularly where certain conditions are expected to evolve to a notable degree between 2022 and either the peak construction year or the time at which the Proposed Development is complete and operational. In the case of the Proposed Development, the peak construction year is projected to occur once the Proposed Development is open but not yet completed and fully occupied. A future baseline is also used for when considering potential effects when the Proposed Development is complete and fully operational.
- 2.22** In all cases, the source of the baseline data and the justification for its use has been clearly described within the ES (**ES Volume 1, Chapters: 6 to 15 and ES Volume 2**).

Evolution of the Baseline

- 2.23** In accordance with the requirements of the EIA Regulations, consideration is given as to how the existing baseline condition may evolve in the future in the absence of the Proposed Development (i.e., the "Do Nothing Scenario" on-site). The EIA Regulations state that an ES should provide (Schedule 4(3)):
- "A description of the relevant 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."*
- 2.24** The evolved baseline is a baseline condition at an indeterminate point in the future and assumes that the site, has naturally evolved in the absence of the Proposed Development being implemented. In most cases this is a qualitative approach (professional opinion), but in some instances may be quantitative.
- 2.25** This requirement has been addressed in the ES within each of the individual technical ES Chapters (**ES Volume 1, Chapters: 6 to 15**) under the heading 'Evolution of the Baseline'. The description of the evolved baseline has been characterised by interpreting an indeterminate point in the future, for a scenario which assumes that all the cumulative schemes are built², and that the surrounding environment, including the site, has naturally evolved in the absence of the Proposed Development being implemented. In effect, the description is similar to the cumulative effects assessment (discussed later in this ES chapter), but excludes the Proposed Development. For the ecological impact assessment (**ES Volume 1, Chapter 14: Ecology and Biodiversity**), consideration has also been given to the natural evolution of relevant ecological features, though this is considered in the context of the existing uses (both on the site and in the surrounding area) and their likeliness to affect any natural evolution.
- 2.26** The likely evolution of the baseline conditions is based on available environmental information / scientific knowledge and is quantified where possible, or provided as a qualitative review. Where not possible, a qualitative review has been presented. The approach taken to providing an outline of the evolution of the baseline is described within each of the individual technical ES chapters (**ES Volume 1, Chapters: 6 to 15**).

² The approach adopts the rationale that if there are cumulative schemes identified (i.e. existing and/or approved projects) to come forward in the future, this would account for a 'natural change' to the baseline scenario.

Assessment Scenarios

General Assessment Scenarios

- 2.27 As the Proposed Development is phased, assessment scenarios have been considered within **ES Volume 1, Chapters: 6 to 15** and **ES Volume 2** to appropriately determine potential effects during the demolition and construction and operational phases of the Proposed Development. Further information with regards to the phased delivery of the Proposed Development is defined within **ES Volume 1, Chapter 5: Demolition and Construction**.
- 2.28 The following assessment scenarios are considered within the technical ES chapters where relevant:
- **Baseline Conditions (2022³):** reflecting the existing baseline conditions on the site and within the surrounding area;
 - **Demolition and Construction⁴:**
 - **Assessment Scenario 1 (2026):** an assessment of the **peak Phase 1 demolition and construction activities** associated with the Proposed Development against the baseline conditions upon surrounding and relevant existing on-site receptors within the Phase 2 site area;
 - **Assessment Scenario 2 (2029):** where appropriate, an assessment of the **peak Phase 2 construction activities** upon surrounding receptors and introduced (Phase 1) receptors to the site, in conjunction with operational effects associated with Phase 1; and
 - **Fully Complete and Operational (2031):** an assessment of potential effects when the entire Proposed Development is completed and operational / in use against the Future Baseline conditions.
- 2.29 For some technical assessments it is considered more appropriate and robust to follow alternative demolition and construction scenario assumptions – for example, the ecological impact assessment considers a single demolition and construction phase given that this would represent a reasonable worst-case upon Important Ecological Features (as set out within **ES Volume 1, Chapter 14: Ecology and Biodiversity**). The assessment scenarios considered by each technical topic are clearly set out within each technical assessment methodology (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).
- 2.30 As flexibility is being sought by the Applicant within the planning application, the EIA has determined appropriate assessment scenarios that have been applied to each of the technical aspects, on a topic-by-topic basis, to ensure that a reasonable and likely worst-case assessment is being undertaken and the likely significant environmental effects are identified and addressed.
- 2.31 The different testing scenarios are discussed in detail within each technical of the ES (**ES Volume 1, Chapters 6 to 15** and **ES Volume 2**).

Demolition for and Construction of the Proposed Development

- 2.32 Demolition and construction effects are determined by the maximum quantum of development and the indicative construction programme provided in **ES Volume 1, Chapter 5: Demolition and Construction**.
- 2.33 Where relevant, a peak Phase 2 construction year has been considered (Assessment Scenario 2) which comprises an assessment of the peak Phase 2 construction road traffic movements and / or peak construction activities, in conjunction with operational effects associated with Phase 1 of the Proposed Development, against the baseline conditions.

Completed and Operational Proposed Development

Maximum Scale of Development

- 2.34 The massing related technical studies of the EIA (wind microclimate; daylight, sunlight, overshadowing, solar glare and light pollution; and townscape and visual impact) provide an assessment of the likely environmental

effects of the maximum scale and layout parameters (including a 3D massing model) sought for approval, taking into consideration any controls specified within the Design Code.

- 2.35 The maximum scale and layout parameters reflect the maximum built form of development being sought for approval. The likely environmental effects of the Proposed Development are therefore assessed based on the maximum parameters in order to provide a reasonable worst-case assessment.
- 2.36 The maximum pile depth associated with the buildings has been determined as up to 30m below ground level, based on the professional judgement, as defined in **ES Volume 1, Chapter 5: Demolition and Construction**.

Maximum and Minimum Quantum of Development

- 2.37 The planning application seeks approval for both residential and non-residential land uses.
- 2.38 The EIA has assessed the potential effects associated with the flexible Use Class E land use as defined by assigned sub classes. This is set out within the relevant technical chapters of this ES (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).
- 2.39 In terms of traffic and transport (and the road traffic noise and air quality assessments), the EIA assesses the maximum amount of development across the entire Proposed Development - i.e. the maximum residential unit provision; 3,500 units, and the maximum non-residential provision (Gross External Area (GEA)). The upper limits on the amount of development sought for approval represents the worst case, as a greater amount of floorspace or number of residential units for example leads to a higher trip generation. Where flexible uses are proposed (i.e., Use Class E(c, d, e, f)) a worst-case approach has been adopted to define the trip generation which has informed the air quality and noise assessments; in this instance, the highest trip generating use associated with a local services use (Use Class E(c)) has been applied to these flexible uses so it is considered that a worst-case scenario has been accounted for. With regards to the stadium use (Sui Generis), a proportion of the retail and food & beverage for the Proposed Development will be provided within the stadium and this has been accounted for within the assessment. These assumptions are set out within **ES Volume 3, Appendix: Traffic and Transport – Annex 1**. This approach is considered a reasonable worst-case scenario and robust for the purposes of assessment and is further discussed in **ES Volume 1, Chapter 7: Traffic and Transport**.
- 2.40 In terms of socio-economics, the assessment considers the parameters that would generate reasonable worst-case effects. A minimum and maximum scenario for the provision of residential and non-residential floorspace has been assessed. For example, when assessing the effects of the Proposed Development on social infrastructure, the assessment considers the unit mix that would generate the highest number of residents. When assessing the effects of the Proposed Development on employment opportunities, the non-residential floorspaces/uses that would result in the minimum number of employees is considered.
- 2.41 The potential effects where the maximum population yield are considered include the increase in demand for local social infrastructure, such as schools, open spaces and primary healthcare facilities.
- 2.42 Where the Proposed Development, either via the residential population or non-residential use provision, has the potential to generate a beneficial impact on the surrounding environment, a reasonable minimum number of residential units and minimum non-residential floorspace that could be supported by the Proposed Development is considered. This includes the following:
- Creation of permanent employment opportunities;
 - Provision of new homes, plus the impact of this on local housing need; and
 - Provision of new retail and leisure floorspace.
- 2.43 The maximum number of residential units that could come forward is 3,500 units. To present a worst-case scenario for the assessment of effects associated with the provision of social infrastructure the maximum scenario assumes that all 3,500 residential units are delivered. The unit mix (including breakdown by tenure) is assumed to be the same as the Illustrative Masterplan which is a reasonable assumption given that the illustrative mix has been based on what can viably be achieved within the maximum parameters and the 3,500 residential units sought for approval, as set out in **ES Volume 1, Chapter 6: Socio-Economics and Health**.
- 2.44 As minimum parameters are not sought for approval by the planning application, the minimum scenario for residential accommodation provision and residential yield is based on the unit mix identified in the Illustrative

³ In terms of air quality, the year of meteorological data to be used in the dispersion model will be selected to match with the latest representative year of local monitoring data (2019).

⁴ As set out in **ES Volume 1, Chapter 5: Demolition and Construction**, the current expectation is that the demolition and construction works would take approximately 96 months (8 years) over 9 calendar years. Each phase (Phase 1 and Phase 2) is anticipated to take approximately 4 years to construct.

Masterplan, as set out in **ES Volume 1, Chapter 6: Socio-Economics and Health**. Given the uncertainty with respect to the exact quantum of residential units that would come forward, a 10% reduction has been applied to the population yield identified in the Illustrative Masterplan. This provides a conservative, yet reasonable, assessment, accounting for uncertainty.

- 2.45** The assessment of employment generation and commercial floorspaces assumes an indicative mix of uses where there is flexibility in the use class floorspace sought for approval (**ES Volume 1, Chapter 6: Socio-Economics and Health**). Similarly, a 10% reduction has been applied to the non-residential floorspaces for the purposes of assessment. This provides a conservative, yet reasonable, assessment, accounting for uncertainty.

Illustrative Masterplan

- 2.46** The Illustrative Masterplan has been created to represent and show one possible way the Proposed Development could be interpreted/achieved and developed in accordance with the principles set out within the Control Documents; it is not a design template, nor is it being submitted for planning approval. The Illustrative Masterplan provides an understanding of a more proportionate and realistic impact of the Proposed Development on the environment, in comparison to the reasonable worst-case scenarios tested for the flexible outline planning application in the EIA. The Illustrative Masterplan is presented within the DAS and details are provided within **ES Volume 1, Chapter 4: Proposed Development**.
- 2.47** An assessment of the Illustrative Masterplan is not required with respect to the EIA Regulations, given it only shows one way in which the Proposed Development could come forward under the permission that is being sought, however is included where relevant in the ES (for example with regards to illustrative landscaping for the wind microclimate assessment, as presented in **ES Volume 1, Chapter 11: Wind Microclimate**) to add context to the scale and significance of the effects presented.

EIA GUIDANCE AND PLANNING POLICY

- 2.48** The ES has been prepared in accordance with applicable legislation, guidance, and case law. Specifically, this ES has been undertaken in accordance with the Institute of Environmental Management and Assessment ('IEMA') Quality Mark indicator checklist and with due consideration to the following:
- At a European level, reference has been made to the European Commission's various EIA guidance documents: <http://ec.europa.eu/environment/eia/eia-support.html>;
 - At a domestic level, reference has been made to the Ministry of Housing, Communities and Local Government's overarching Planning Practice Guidance⁵ ('PPG');
 - In addition, the Highway England's Design Manual for Roads and Bridges 'Sustainability and Environment' – LA 104 (Environmental Assessment and Monitoring)⁶ has been referred to as applicable;
 - In relation to publications from professional bodies, reference has been made to IEMA publications as these include best practice/suggested improvements to the EIA process. This includes:
 - IEMA ES Review Criteria (COM3-6)⁷;
 - IEMA 'Guidelines for Environmental Impact Assessment' (2004)⁸
 - IEMA 'Special Report into the State Environmental Impact Assessment Practice in the UK' (2011)⁹;
 - IEMA 'Shaping Quality Development' (2015)¹⁰;
 - IEMA 'Delivering Quality Development' (2016)¹¹;
 - IEMA 'Delivering Proportionate EIA' (2017)¹²;
 - IEMA 'Guide to Materials & Waste in EIA' (2020)¹³;
 - IEMA 'Climate Change Resilience and Adaption' (2020)¹⁴;

- IEMA 'Major Accidents and Disasters Guidelines' (2020)¹⁵;
- IEMA 'Assessing Greenhouse Gas Emissions and Evaluating their Significance' (2017)¹⁶; and
- IEMA 'Environmental Assessment of Road Traffic' (1993)¹⁷.

- Whilst primarily written for major infrastructure projects, reference is also made to guidance/advice notes published by the Planning Inspectorate in relation to National Infrastructure Planning¹⁸ where appropriate, as these can include relevant/helpful information; and
- Applicable case law.

Planning Policy

- 2.49** The EIA has considered relevant legislation and national, regional and local planning policy guidance as summarised below.

National Planning Policy and Guidance

- 2.50** The EIA has regard to the National Planning Policy Framework ('NPPF')¹⁹. The NPPF sets out the Government's economic, environmental and social planning policies for England. The policies contained within the NPPF articulate the Government's vision of sustainable development, which are intended to be interpreted at a local level, to meet the requirements of local aspirations.
- 2.51** As relevant to the EIA, specifically to the scope, methodology and assessment of effects for the EIA's technical topics, the NPPF shall be considered throughout the EIA process and during the preparation of the ES.
- 2.52** The EIA will also refer to, as relevant to the EIA technical topics, the online Planning Practice Guidance (PPG), which is an online resource which adds further context to and should be read alongside the NPPF. The PPG aims to make planning guidance more accessible, and to ensure that the guidance is kept up to date.

Nutrient Neutrality

- 2.53** The Kent region contains a number of ecological sites which are designated for their wetland habitat. These habitats require stable and high-quality water levels in order to support a number of protected species and are particularly vulnerable to increases in nutrient levels such as nitrogen and phosphorus (i.e., 'eutrophication'). Discharge from wastewater treatment works contains high levels of these nutrients, which has a detrimental impact on wetland habitats and the species these support. Consequently, in affected areas, no new housing development can come forward unless it can be demonstrated, beyond a reasonable scientific doubt, that the development proposals will not exacerbate this issue. This is demonstrated through the preparation of an Appropriate Assessment and Nutrient Neutrality Assessment prepared in accordance with the Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations') and approved by Natural England.
- 2.54** A review of the affected catchments within Kent has been undertaken and it is confirmed that the site does not fall within any of these areas. As such, a Nutrient Neutrality Assessment is not required for this planning application.

Local Planning Policy and Guidance

- 2.55** Key local planning policy documents will be considered throughout the preparation of the ES as relevant. These include:
- Gravesham Local Plan First Review - Saved Policies²⁰ (adopted 1994 and saved 2007);
 - Gravesham Local Plan Core Strategy²¹ (adopted 2014); and

⁵ Gov.UK, Guidance Environmental Impact Assessment, <https://www.gov.uk/guidance/environmental-impact-assessment>

⁶ Highways England, 2020. Design Manual for Roads and Bridges 'Sustainability and Environment' – LA104 Environmental Assessment and Monitoring.

⁷ Institute of Environmental Management and Assessment, undated; EIA Quality Mark – ES Review Criteria COM 3-6.

⁸ Institute of Environmental Management and Assessment, 2004, Guidelines for Environmental Impact Assessment

⁹ Institute of Environmental Management and Assessment, 2011. The State of Environmental Impact Assessment Practice in the UK.

¹⁰ Institute of Environmental Management and Assessment, November 2015. Shaping Quality Development

¹¹ Institute of Environmental Management and Assessment, 2016; Delivering Quality Development

¹² Institute of Environmental Management and Assessment, 2017; Delivering Proportionate EIA

¹³ Institute of Environmental Management and Assessment, 2020; Guide to Materials and Waste in Environmental Impact Assessment

¹⁴ Institute of Environmental Management and Assessment, 2020; Climate Change Resilience and Adaption

¹⁵ Institute of Environmental Management and Assessment, 2020; Major Accidents and Disasters Guidelines

¹⁶ Institute of Environmental Management and Assessment, 2017, Assessing Greenhouse Gas Emissions and Evaluating their Significance

¹⁷ Institute of Environmental Management and Assessment, 1993 'Environmental Assessment of Road Traffic'

¹⁸ <https://infrastructure.planninginspectorate.gov.uk/>

¹⁹ Ministry of Housing, Communities and Local Government, 2021. National Planning Policy Framework.

²⁰ Gravesham Local Plan First Review Saved Policies - <https://www.gravesham.gov.uk/local-plan-policy/local-plan/2>

²¹ <https://www.gravesham.gov.uk/planning/local-plan>

- Kent Minerals and Waste Local Plan²² (as amended by the early partial review in September 2020 and the Kent Minerals and Waste Local Plan 2013 – 2030 Mineral Sites Plan (adopted September 2020)).

2.56 Under the statutory development plan, the site is subject to the following site-specific designations:

- Within the Northfleet Embankment and Swanscombe Peninsula East Opportunity Area²³;
- Partially within Crossrail and High Speed 1 Safeguarding Areas;
- Partially within Highways Safeguarding area;
- Part of the site is identified as Robins Wharf, an area to be safeguarded (Safeguarded Wharves and Rail Depots), both for Brett and Aggregate Land;
- Within a Mineral Safeguarding Area (Sub-Alluvial River Terrace Deposits);
- Gravesham Borough Council Urban Boundary / Village Confines; and
- Gravesham Borough Council Land Allocations.

Other Guidance

2.57 In addition to the statutory development plan, a number of planning guidance documents are of relevance, including:

- Kent County Council (KCC) Development Contributions Guide²⁴ (March 2007);
- Kent Design Guide²⁵ (except the supplementary guidance on residential parking);
- SPG1: Landscape Character (July 2006); and
- SPG4: Kent Vehicle Parking Standards (July 2006).

Emerging Policy

2.58 GBC undertook a Regulation 18 (Stage 2) consultation on the Partial Review of the Local Plan Core Strategy, Site Allocations and Development Management Policies Document between October and December 2021. This followed initial consultation in 2018.

2.59 Part 1 – Local Plan Core Strategy Partial Review and Site Allocations Document sets out housing, employment and retail considerations and proposed options as well as seeking comments on proposed allocations. Part 2 – Development Management Policies Document provides detailed policies applicable across the whole Borough.

2.60 In addition to any planning policies that inform the scope, methodology or assessment of effects, as relevant, the technical topic chapters of the ES (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**) present a summary of any pertinent recognised industry guidance documents.

EIA SCOPING AND CONSULTATION

Consultation

2.61 Consultation with the GBC and public engagement has helped inform the design of the Proposed Development. **ES Volume 1, Chapter 3: Alternatives and Design Evolution** provides a description of how the design of the Proposed Development has evolved, which have in part, been influenced by consultation with statutory bodies and interested parties.

2.62 The planning application is supported by a Statement of Community Engagement which summarises the wider consultation that has been undertaken with various consultees throughout the pre-application consultation process.

2.63 Where members of the project team involved in the preparation of the technical ES Chapters have approached and consulted with GBC Officers or any statutory consultee representatives regarding their respective assessments, a summary is presented within the introduction table of the corresponding technical ES chapter (under the sub heading of ‘Consultation’).

2.64 Further details in regard to consultation is provided within **ES Volume 1, Chapter 3: Design Evolution and Alternatives** as well as within relevant technical ES chapters.

EIA Scoping

2.65 Scoping forms one of the first stages of the EIA process and it is through EIA scoping that the Local Planning Authority (LPA) and other key statutory and non-statutory consultees are consulted on those environmental topics that should be included in the scope of the EIA. Regulation 18(4) of the EIA Regulations require the ES to be based on the most recent EIA scoping opinion.

2.66 The process of EIA scoping and consultation is important to the development of a comprehensive and balanced ES. Views of the GBC and consultees have helped to identify specific issues that require further investigation as part of the EIA process.

2.67 The main purposes of the EIA scoping process include:

- Definition of the approach to the EIA;
- Identification of the availability of existing baseline data and appropriate baseline surveys to be undertaken;
- Identification of sensitive receptors;
- Identification of potential environmental considerations and potential environmental effects;
- Identification of the topics to be included within the scope of the EIA;
- Identification of any topics that can be scoped out of the EIA, with justification provided as to why likely significant residual environmental effects are not anticipated;
- Definition of the methodology for the assessment of the likely significant environmental effects; and
- Identification of other development schemes to be considered within a cumulative effects assessment.

2.68 An EIA Scoping Opinion Request Report was validated by the GBC on 11th August 2022 (**ES Volume 2, Appendix: EIA Methodology – Annex 1**) to request an EIA Scoping Opinion from the LPA and statutory consultees regarding the scope of the EIA (‘EIA Scoping Opinion Request Report’). An EIA Scoping Opinion was received from the GBC on 16th September 2022 (**ES Volume 3, Appendix: EIA Methodology - Annex 2**) (‘Scoping Opinion’). This ES is based on that Scoping Opinion.

2.69 The EIA scoping process identified the environmental technical topics which are considered unlikely to give rise to significant environmental effects and, therefore, do not need to be assessed further as part of the EIA. Full justification for scoping these technical topics out of the EIA can be found within **ES Volume 3, Appendix: EIA Methodology – Annex 1**.

‘Scoped In’ Disciplines

2.70 The environmental disciplines which were identified during the EIA scoping process that could potentially give rise to likely significant effects and that have therefore been addressed by EIA are listed below:

- Socio-Economics and Health (ES Volume 1: Chapter 6);
- Traffic and Transport (ES Volume 1: Chapter 7);
- Air Quality (ES Volume 1: Chapter 8);
- Noise and Vibration (ES Volume 1: Chapter 9);

²² Kent County Council, Adopted 2020, Kent Minerals and Waste Local Plan

²³ Gravesham Local Plan Core Strategy (2014); page 56; <https://www.gravesham.gov.uk/planning/local-plan>

²⁴ Kent County Council, 2007, KCC Guide to Development Contributions and the Provision of Community Infrastructure - <https://democracy.kent.gov.uk/documents/s3003/Appendix%20-%20Guide.pdf>

²⁵ Kent County Council, Kent Design Guide - <https://www.kent.gov.uk/about-the-council/strategies-and-policies/regeneration-policies/kent-design-guide>

- Daylight, Sunlight, Overshadowing, Solar Glare and Light Intrusion (ES Volume 1: Chapter 10);
- Wind Microclimate (ES Volume 1: Chapter 11);
- Townscape and Visual Impact Assessment (ES Volume 2) (including Built Heritage Statement);
- Climate Change and Greenhouse Gas Assessment (ES Volume 1: Chapter 12);
- Archaeology (ES Volume 1: Chapter 13);
- Ecology and Biodiversity (ES Volume 1: Chapter 14);
- Water Resources, Flood Risk, Drainage and Ground Conditions²⁶ (ES Volume 1: Chapter 15);
- Waste and Materials; and
- Project Vulnerability, Major Accidents and Natural Hazards.

Response to the Scoping Opinion

Waste and Materials

- 2.71** The operational strategy has been appended to the ES in response to the Scoping Opinion stating that Waste should be scoped into the EIA. Waste and Materials does not form a standalone technical chapter of the ES, which is a common approach in EIA given that there is considered to be no potential likely significant effects.
- 2.72** Construction waste arisings and materials are considered as relevant within ES Volume 1: **ES Chapter 5: Demolition and Construction** and **ES Volume 1: Chapter 18: Environmental Management Mitigation and Monitoring**. Furthermore, mitigation measures to be captured as part of future detailed Construction Environmental Management Plans (CEMPs) are captured within the Outline CEMP (**ES Volume 3, Appendix: Demolition and Construction – Annex 1**). In addition to this, the Applicant will commit to the preparation of a Site Waste Management Plan which will include a number of measures to forecast the predicted excavation, demolition, and construction waste arisings, set out ways to minimise and manage this waste and outline waste minimisation and management measures and performance targets for the construction phase. The sourcing of materials will be undertaken adhering to a defined Procurement Strategy in accordance with The Green Guide to Specification²⁷ to be secured by condition). It is therefore considered that significant adverse effects associated with construction of the Proposed Development on materials are unlikely.
- 2.73** With regards to operational waste, an Outline Operational Waste and Recycling Management Strategy has been appended to this ES (**ES Volume 3, Appendix: Outline Operational Waste and Recycling Management Strategy**). In keeping with national, regional (KCC) and local (GBC) policy, the Strategy demonstrates how the Proposed Development will continue to promote sustainable waste and recycling management methods. In following the Waste Hierarchy, the Proposed Development will promote resource efficiency to help reduce potential environmental impacts as a result. The Strategy has firstly looked to prevent waste, reuse resources where possible and recycle materials, minimising the generation of waste.
- 2.74** The Proposed Development includes sufficient space to enable best practice recycling methods and flexibility in the future. This Strategy shows how the Proposed Development has segregated and provided space for Recycling, Food and Residual streams. Alongside striving towards local policy objectives, this Strategy can help achieve wider district goals such as reaching recycling targets (65% of municipal waste) alongside providing adequate, flexible, and easily accessible bin store to support recyclables and Food waste.
- 2.75** The total residual waste arising that the Proposed Development would generate is 31,344 m³ per annum. This represents approximately 0.2% when compared to the available landfill capacity i.e., 15,190,479 m³ in the Kent and South London Region. The impacts of this type of waste will therefore be minimal. In addition, the management measures proposed within the Strategy will also act as further mitigation to any residual effects (if any) from the Proposed Development. A summary of this report is provided within **ES Volume 1, Chapter 4: The Proposed Development**. Considering the waste management infrastructure available capacity within the region, the impacts of the waste arising from the Proposed Development will be **minimal** and will not result in likely significant effects upon waste infrastructure once operational.

Project Vulnerability, Major Accidents and Natural Accidents

- 2.76** The Scoping Opinion stated that Project Vulnerability, Major Accidents and Natural Hazards also required scoping into the Environmental Statement. This topic was originally scoped out of the ES on the basis that IEMA guidance and many of the events listed in the Kent Community Risk Register²⁸ (e.g. accidents and system failures such as bridge closure or collapse, prolonged disruption to border controls, industrial action by workers providing critical services etc.) are not considered relevant when considered in the context of the Environmental Impact Assessment.
- 2.77** There are however items within the Kent Community Risk Register which are directly relevant to the Proposed Development, including severe weather such as high winds and flooding, poor air quality and maritime and inland water and freshwater pollution incidents. Whilst a standalone ES chapter has not been provided as a result of the very broad nature of the topic, Project Vulnerability, Major Accidents and Natural Accidents, has been considered throughout the ES as relevant, in particular with regards to the following topics:
- **Chapter 8 Air Quality** which assesses the impact of the Proposed Development on Air Quality during both its construction and once operational;
 - **Chapter 10: Daylight, Sunlight, Overshadowing, Solar Glare and Light Intrusion** which assesses the potential for solar glare to adjacent rail and road users;
 - **Chapter 11: Wind Microclimate** which has considered the Proposed Development causing a risk to pedestrian safety due to strong winds either on-site or in the surrounding area during construction works and once completed;
 - **Chapter 15: Water Resources, Flood Risk, Drainage and Ground Conditions** which considers flood risk (a full Flood Risk Assessment is appended to the Environmental Statement: **ES Volume 3, Appendix: Water Resources, Flood Risk, Drainage and Ground Conditions - Annex 3**), an assessment of the potential for unexploded Ordnance (UXO) to be present on site, the consideration of pollution incidents including contamination of both ground and surface water and the HSE licensed explosives site at Port of Tilbury London Ltd.
- 2.78** The above ES chapters conclude that no significant effects are expected in relation to solar glare, pedestrian safety due to strong winds, flood risk, the potential for UXO and pollution incidents to ground and surface water provided the necessary mitigation outlined within each respective ES chapter and **ES Volume 1: Chapter 18: Environmental Management Mitigation and Monitoring** are adhered to and therefore, with regards to Project Vulnerability, Major Accidents and Natural Accidents no likely significant impacts are likely to arise.
- 2.79** In addition to the above-mentioned measures, the planning application process also presents an opportunity for local authorities and government agencies/bodies to comment on the proposals and address any vulnerabilities (e.g. consultation with the police on security matters, including Secure by Design accreditation).
- 2.80** The stadium design will be subject to regulatory and legislative framework for sports ground and stadia safety to ensure the safety of its users. Risk of fire is also managed outside of the EIA process is subject to its own regulatory control. These are, however, design matters and therefore not relevant to the EIA.
- 2.81** The Scoping Opinion also references comments from HSE and Thurrock Borough Council with regards to the development location within the safeguarding zone of an HSE licensed explosives site at Port of Tilbury London Ltd, which could potentially increase the vulnerability of the Proposed Development. The HSE licensed explosives facility is subject to strict controls and regulations to ensure safe operation and whilst this is not within the domain of the EIA to assess, the HSE licensed explosives site is considered as relevant within **ES Volume 1, Chapter 15: Water Resources, Flood Risk, Drainage, and Ground Conditions**, and the licence holder will be consulted to discuss any potential impact on the license with the HSE. Furthermore, the Proposed Development site is located more than 1.5km from the Port of Tilbury London Ltd and separated by the River Thames, however the closest residential development is located within Tilbury approximately 250m north east of the Port of Tilbury London Ltd. The site is also located in the Northfleet Embankment and Swanscombe Peninsula East Opportunity Area which is designated to provide a range of high-quality housing, jobs and recreational spaces.

²⁶ Note that this ES chapter considers potential effects to water quality.

²⁷ BRE, (2009); The Green Guide to Specification, Fourth Edition.

²⁸ <https://www.kentprepared.org.uk/kent-and-medway-community-risk-regi>

Health

- 2.82** Health has been scoped into the ES and whilst an ES chapter has not been provided, (which is not in accordance with the Scoping Opinion), a summary of the health impact assessment is provided within **ES Volume 1: Chapter 6: Socio-Economics and Health**. Furthermore, the significant uplift in the Proposed Development's increased demand for medical facilities has fully been considered within **Chapter 6: Socio-Economics and Health** in accordance with the Scoping Opinion. Health is also inherently considered throughout the ES in the various technical topics as relevant, such as Noise and Vibration, Air Quality, Water Resources, Flood Risk, Drainage and Ground Conditions which assesses impacts of the Proposed Development on these topics both during construction and once the Proposed Development is operational. It is therefore considered that Health is appropriately addressed within this ES.

Water Resources, Flood Risk and Drainage

- 2.83** In response to the comments raised, Flood Risk and Drainage has been scoped into the ES. Flood Risk and drainage are assessed in **ES Volume 1, Chapter 15: Water Resources, Flood Risk, Drainage and Ground Conditions**, and within the Flood Risk Assessment (FRA) and Drainage Strategy (**ES Volume 3, Appendix: Water Resources, Flood Risk, Drainage and Ground Conditions - Annex 3**). The previously proposed 'Ground Conditions and Land Contamination' ES chapter, which considers a number of potential hydrological/hydrogeological effects, has been expanded in scope to also summarise the findings and potential for likely significant effects relating to flood risk and drainage. The revised ES chapter has been titled 'Water Resources, Flood Risk, Drainage and Ground Conditions'.

Built Heritage

- 2.84** In response to the comments raised by Historic England, a built heritage assessment has been prepared as a stand-alone assessment and is both appended to and also summarised within the Townscape, Visual Impact Assessment (**ES Volume 2**), concluding that there are no likely significant associated with the Proposed Development upon built heritage assets. The study area for built heritage has also been expanded in response to Historic England's comments. The Archaeology ES chapter has also been expanded in scope in response to the Scoping Opinion to consider both an "above" and "below" ground assessment of the Aspdin's Kiln asset.

Cumulative Impact Assessment

- 2.85** In response to the Scoping Opinion, the list of cumulative schemes considered and assessed within the ES (as presented in this ES chapter) has been reviewed and updated.
- 2.86** Whilst the initial search for cumulative schemes considered a 1km search radius from the site boundary (given that this is appropriate for a number of technical topics), relevant cumulative schemes greater than 1km in distance from the site that have the potential to result in in-combination effects with regards to certain technical topics (e.g. traffic and transport, townscape and visual, etc.) have been considered within the ES. Each technical chapter of the ES clearly defines those cumulative schemes that are of relevance to their respective technical cumulative assessment (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).
- 2.87** The cumulative schemes suggested by Ebbsfleet Development Corporation (EDC) and Thurrock have been considered and added to the cumulative impact assessment where relevant (including consideration of Ebbsfleet Central East as a Tier 2 cumulative scheme). Where the schemes are not considered relevant to the cumulative impact assessment this will be justified within the ES.
- 2.88** It should be noted that the Lower Thames Crossing (LTC) scheme is unlikely to result in significant in-combination effects with the Proposed Development. However, in response to the Scoping Opinion, the LTC scheme has been considered qualitatively by **ES Volume 1, Chapter 7: Traffic and Transport** as a Tier 2 cumulative scheme with regards to the potential in-combination effects relating to key highways links (e.g. the A2 and the M25/A282 Dartford Crossing).
- 2.89** Allocations within the adopted Local Plan Core Strategy have not been considered within the cumulative impact assessment unless a relevant planning application (considering the cumulative scheme thresholds set out within the EIA Scoping Report, e.g. with regards to scale of development) is approved, pending approval, or forms part of a relevant major local scheme at the pre-planning stage (as considered within the Tier 2

cumulative assessment). This is considered appropriate and robust for the purposes of a proportionate cumulative impact assessment.

'Scoped Out' Disciplines

- 2.90** In response the Scoping Opinion, a number of technical topics / disciplines that were suggested during the EIA scoping process to be scoped out of (i.e., excluded from) the EIA (on the basis that significant environmental effects are not considered likely) have been subsequently 'scoped in' to the EIA, as discussed previously.
- 2.91** A Daylight and Sunlight internal assessment, i.e., considering new receptors within the Proposed Development, remains to be 'scoped out' as per the EIA Scoping Report. Internal daylight and sunlight amenity within the site is a design issue and was therefore scoped out of the EIA. This matter is considered in a standalone document accompanying the planning application. Detailed internal daylight and sunlight assessment of residential blocks will be undertaken at the RMA stage.
- 2.92** The EIA Scoping Report can be found for reference in **ES Volume 3, Appendix: EIA Methodology – Annex 1**.
- 2.93** EIA scoping is a consultative and iterative process and as such, a number of EIA scoping points were discussed between the Applicant's EIA team and the GBC during the EIA scoping process. Where clarifications required additions or variations to the assessment scope set out within the Scoping Report, these have been addressed where relevant as part of the ES. The introduction of each of the technical chapters included within this ES provides an overview of relevant consultation correspondence undertaken as part of the EIA, as well as context (if needed) for points raised during the EIA scoping process.

ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

- 2.94** Detailed methodologies for the assessment of each of the environmental topic areas 'scoped in' to the EIA are provided within each technical ES chapter (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**), however, in general terms, the assessments have been based upon:
- Desk-top studies;
 - Site surveys;
 - Consideration of relevant legislation;
 - Consideration of relevant planning policies (national, regional and local);
 - Consideration of potentially sensitive receptors that could be affected by the Proposed Development;
 - Identification of likely environmental impacts, with an evaluation of their likely magnitude, and resultant effects in terms of their nature, scale, geographic extent, duration and whether they are direct or indirect;
 - Consideration of the requirement for any specific mitigation;
 - Expert opinion;
 - The use of technical guidance and best practice; and
 - Specific consultations with appropriate organisations.
- 2.95** How the Proposed Development might affect the environment relies on predictions about what impact a certain action will have. Some predictions can be made using mathematical or simulation models (i.e. quantitative assessment). Other impacts are less easy to predict in quantitative terms, and in such cases, the EIA attempts to quantify the anticipated scale of impact using professional judgement (i.e. qualitative assessment).
- 2.96** As part of the EIA, an iterative approach has been adopted where significant environmental effects have been identified and avoided where possible in the first instance through consideration of alternative development parameters, as reported upon within **ES Volume 1, Chapter 3: Alternatives and Design Evolution**. Where able, opportunities to reduce or control impacts and effects have been identified and incorporated into the Proposed Development (i.e. primary mitigation²⁹). In addition, the design process seeks to promote

²⁹ IEMA July 2016, *Environmental Impact Assessment Guide to: Developing Quality Development*
<https://www.iema.net/assets/newbuild/documents/Delivering%20Quality%20Development.pdf>.

opportunities to enhance the beneficial environmental effects of the Proposed Development.

- 2.97** Mitigation is the term used to refer to the process of avoiding where possible and, if not, minimising, controlling and/or off-setting potentially significant adverse effects of a development. Mitigation measures can relate to the masterplanning stage; detailed design stage; the construction stage; or the activities associated with the operation of the completed Proposed Development. Where mitigation has been embedded within the outline development parameters for the Proposed Development to avoid or reduce potentially significant effect, this is described within **ES Volume 1, Chapter 4: The Proposed Development**. Where relevant, these measures are also described within the technical ES Chapters (**ES Volume 1, Chapters: 6 to 15**).
- 2.98** In accordance with the EIA Regulations³⁰, the method behind the EIA process generally considers the existing conditions of the area into which the development is being introduced (the **baseline**), providing a **future baseline** in some cases where the area around the site is undergoing extensive, planned, change and is evolving rapidly, and makes reasonable predictions of the likely change (the **impact** – in terms of magnitude) that may occur, during both its construction and when the development is completed and operating as proposed. The predicted impact is considered in terms of key environmental and social aspects (**receptors**) found within the surrounding area, and based on their sensitivity to change, the scale of the resulting change experienced by the receptor / resource (the **effect**) is then determined along with a statement on whether the effect is significant or not.
- 2.99** Any mitigation measures required to reduce or eliminate adverse effects are then considered and assessed, with the resulting residual effect scale being determined as significant or not. Effects resulting from a combination of the Proposed Development and other surrounding schemes (**cumulative schemes**) are also assessed. All the likely effects of the development are reported (within an **environmental statement** – this document (ES Volume 1) in addition to ES Volumes 2 and 3 and the NTS) and the likely significant effects are specifically highlighted.

Potentially Sensitive Receptors

- 2.100** When undertaking an EIA, it is important to identify key potential receptors from the surrounding baseline context which may be impacted by the Proposed Development and may need to be considered as part of the assessment. The EIA process has included the identification and assessment of impacts to and effects on potentially sensitive receptors resulting from demolition and construction activities and from the completed and operational Proposed Development.
- 2.101** Within each of the technical ES chapters (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**), a list of sensitive receptors is presented which are considered to have the potential to be affected by the Proposed Development.
- 2.102** The sensitive receptors identified within the technical ES chapters have been identified from a review of the available information collected as part of the description of the surrounding environmental and socio-economic context, as well as from historic and currently available information relating to the site itself (presented as part of the '**Baseline**' description within the respective ES chapters). Potentially sensitive receptors have also been identified from a review of the description of the Proposed Development sought for approval (see **ES Volume 1, Chapter 4: The Proposed Development**) and the potential impacts and resultant effects which may occur as a result of the Proposed Development.

Identification of Impacts, Effects and Effect Significance

Terminology and Definitions

Reference to 'Impact' and 'Effect'

- 2.103** It is noted that the terms 'impact' and 'effect' are distinctly different. Having gained an understanding of the likely impact it is then important to know whether the change in environmental or socio-economic conditions results in a significant environmental effect. The impacts of the Proposed Development may or may not result in significant effects on the environment, depending on the sensitivity of the resource or receptor and potentially

other factors (such as duration). The assessment of the likely significant effects of the Proposed Development is a requirement identified by Schedule 4 of the EIA Regulations.

Receptor Sensitivity and Magnitude of Impact

- 2.104** To achieve a consistent approach across the different technical disciplines addressed within the ES (**Volume 1** and **Volume 2**), assessments have broadly defined the sensitivity of the receptors that could be affected by the Proposed Development and the magnitude of impact or change from the baseline conditions to derive the resultant effect. Technical specialists have used their own approach, or amended the approach stated below, based on what is appropriate for their assessments. The approach to assessment is clearly presented within each technical chapter (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).
- 2.105** Terminology available to describe the sensitivity of receptors and magnitude of impact or change from the baseline conditions is broadly as follows:
- High;
 - Medium;
 - Low;
 - Negligible; and
 - No Impact (in relation to magnitude of impact or change only).
- 2.106** Where there is no impact/change, no assessment will be required due to there being no potential for significant effects.
- 2.107** Each of the technical assessments (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**) provide further detail on the definition of each of the above terms specific to the topic in question and provide the criteria, including sources and justifications, for quantifying the different levels of receptor sensitivity and 'impact magnitude'. Where possible, this is based upon quantitative and accepted criteria (for example, national standards for air quality and noise), together with the use of value judgement and expert interpretation.
- 2.108** Alternatively, some technical ES chapters differ in the terminology adopted to describe the magnitude of impact or change from the baseline conditions. Where this occurs, the alternative terminology adopted has been clearly set out within the individual ES chapter.

Likely Significant Effects

Identification of a Resultant Effect

- 2.109** The basis for determining the resultant scale of effect generally takes into account the sensitivity of the receptor and magnitude of impact or change from the baseline / evolved baseline / future baseline conditions. A generic matrix that combines the sensitivity of the receptor and the magnitude of impact to identify the resultant effect is shown in **Table 2.1** – where this differs for a technical topic, this has been clearly stated in the topic's assessment methodology (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).

Table 2.1 Resultant Effects

Receptor Sensitivity	Magnitude of Impact			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

- 2.110** **Table 2.2** provides the broad definition of the 'scale' of the resultant effect, i.e. definitions of Major, Moderate, Minor and Negligible effects. The definitions in **Table 2.2** may be adjusted to suit the technical topic in question;

³⁰ Her Majesty's Stationery Office (HMSO) 2017. *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017*. The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018. The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2020.

where this is the case revised definitions of effect scale are presented in the technical ES chapters (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).

2.111 Where there is 'No Effect' this is stated.

Table 2.2 Broad Definitions of the Scale of the Effect

Scale of Effect	Description
Major	These effects may represent key factors in the decision-making process. Potentially associated with sites and features of national importance or could be important considerations at a regional or district scale. Major effects may also relate to resources or features which are unique to a receptor and which, if lost, cannot be replaced or relocated.
Moderate	These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision-making.
Minor	These effects may be raised as local issues and may be of relevance in the detailed design of the project but, are unlikely to be critical in the decision-making process.
Negligible	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision-making, irrespective of other effects.

Effect Nature

2.112 Table 2.3 provides a definition of the 'nature' of the resultant minor, moderate or major effect³¹, i.e. through definitions of Adverse, Beneficial and Neutral³².

Table 2.3 Definition of the Nature of the Effect

Nature of Effect	Description
Adverse	Detrimental or negative effects to an environmental / socio-economic resource or receptor. The quality of the environment is diminished or harmed.
Neutral	The quality of the environment is preserved or sustained or where there is an equal balance of benefit and harm.
Beneficial	Advantageous or positive effect to an environmental / socio-economic resource or receptor. The quality of the environment is enhanced.

Geographic Extent of Effect

2.113 The ES (**Volume 1** and **Volume 2**) identifies the geographic extent of the identified effects. Generally, at a spatial level, 'site' or 'local' effects are those affecting the site and neighbouring receptors, while effects upon receptors in the wider area / district, beyond the vicinity of the site and its neighbours, are at a 'district / borough' level. Effects affecting Kent are considered to be at a 'regional' level, whilst those which affect different parts of the country, or England as a whole, are at a 'national' level. Should any of the technical assessments that comprise this ES differ in approach, this is set out within the topic specific ES chapter (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).

Effect Duration

2.114 For the purposes of the ES, effects that are generated as a result of the demolition and construction works (i.e. those that last for this set period of time) are classed as 'temporary'; these may be further classified as either 'short term' or 'medium-term' effects depending on the duration of the demolition and construction works that generate the effect in question. Effects that result from the completed and operational Proposed Development are classed as 'permanent' or 'long-term' effects.

Direct and Indirect Effects

2.115 The ES identifies whether the effect is 'direct' (i.e. resulting without any intervening factors) or 'indirect' or 'secondary' (i.e. not directly caused or resulting from something else).

Significance of Effect

2.116 Following identification of an effect and the implementation of mitigation measures, the residual effect's scale, nature, geographic extent and duration and whether the effects are direct or indirect, using the above summarised terminology, has been summarised in a clear statement within the ES (**Volume 1** and **Volume 2**) and used to ascertain as to whether the residual effect is significant or not significant. Each technical assessment determines at what scale an effect is deemed to be significant, as this varies depending on the topic.

2.117 As a general rule, the following applies:

- 'Moderate' or 'major' effects are deemed to be 'significant';
- 'Minor' effects are 'not significant', although they may be a matter of local concern; and
- 'Negligible' effects are 'not significant' and not a matter of local concern.

2.118 Where this differs for a particular technical assessment, an explanation is provided within the methodology section of the relevant technical ES chapter.

2.119 Where mitigation measures are identified to either eliminate or reduce likely significant adverse effects, these have been incorporated into the ES, for example through the design, outline parameters and Design Code, or have been translated into demolition and construction commitments, or operational or managerial standards / procedures. It should be noted that mitigation is not required for effects that are deemed to be negligible as the effect will be imperceptible.

2.120 The ES then highlights the 'residual' effects (those effects which remain following the implementation of suitable mitigation measures) and classifies these in accordance with the terminology defined above.

COVID-19

2.121 During the preparation of the ES, COVID-19 restrictions impacted upon the data collected within the years preceding the baseline year of 2022, for example with regards to air quality data. Wherever possible, data has been used when COVID-19 restrictions were not in place to present 'typical' baseline conditions, however in instances where this is not possible this is highlighted within the relevant ES chapters under the 'Assumptions and Limitations' section.

Impact Assessment – General Methodology

2.122 Impact assessments are undertaken for the following stages of the Proposed Development:

- During the demolition and construction works (assuming two peaks for Phase 1 and Phase 2 of the Proposed Development respectively); and
- Once the Proposed Development is complete and occupied.

Demolition and Construction Effects

2.123 **ES Volume 1, Chapter 5: Demolition and Construction** provides an outline of the anticipated demolition and construction programme, as well as a description of the related activities and aspects (i.e. indicative phasing, demolition and enabling works, excavation works, substructure (foundation) works, superstructure works etc., demolition waste volumes and construction material quantities, heavy goods vehicle (HGV) movements and HGV routing). In addition, standard environmental controls required under legislation and best practice guidance relevant to the Proposed Development (including relevant codes of construction practice or environmental management plans) are presented. Construction assumptions have been developed based on the maximum quantum of development, and the outline parameters relating to the layout and scale of the development in combination with professional judgment at this stage. HGV movements associated with the peak periods of daily construction activity along with annual averages have also been presented.

³¹ As negligible effects are defined as being imperceptible, the nature of the effect is not relevant. However, where a technical author considers that applying a nature to a negligible / imperceptible effect would benefit the assessment, this has been done in the relevant technical chapters.

³² Note, 'neutral' effects are relevant to the townscape and visual impact assessment, as presented in **ES Volume 2**.

- 2.124** The indicative demolition and construction programme presented in **ES Volume 1, Chapter 5: Demolition and Construction** is based on reasonable assumptions in terms of the sequencing of the works and site logistics that will be implemented. The indicative programme is considered achievable based on the current level of demolition and construction planning and anticipates the period of construction works are continuous albeit with two peaks, one per phase. The indicative programme presents an overlap of construction activities with earlier completed and operational plots (as set out in the assessment scenarios above), and therefore due consideration is given (as relevant) within the assessments of potential effects upon both surrounding existing and introduced on-site receptors as appropriate. It is also assumed that impacts of a higher magnitude over a shorter duration are considered to be potentially greater in terms of the likely effect on a receptor, than an impact of lower magnitude spread over a longer duration. The EIA, therefore (where relevant), assesses the worst-case effects (in terms of magnitude of impact) as a result of multiple construction activities occurring on-site at any particular time upon both existing and introduced receptors.
- 2.125** The information presented has informed the demolition and construction impact assessments of each technical ES chapters (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).
- 2.126** The assessment of the potential for likely significant effects arising during the demolition and construction works is addressed within each of the individual technical ES chapters. Where the demolition and construction assessments presented within the technical ES chapters identify the need for any additional or bespoke environmental management or mitigation measures in order to avoid, prevent, reduce or off-set any significant adverse effects, this is clearly presented. In addition, consideration is made with regard to phasing of works and the related impacts on the introduced receptors (i.e., parts of the Proposed Development which maybe operational/occupied while other development plots are still undergoing construction).
- 2.127** Within the construction impact assessments, the assumption has been made that standard environmental controls required under legislation and best practice guidance are met as a matter of course (i.e. have been assumed to be embedded mitigation) and any controls are clearly presented within the respective technical ES chapter with an explanation provided as to how they are accounted for within the corresponding assessment. The controls are then presented within **ES Volume 1, Chapter 18: Environmental Mitigation and Monitoring Schedule**.
- 2.128** Where relevant and required, a description of any proposed monitoring arrangements has also been presented and defines (where appropriate) the procedures regarding the monitoring of any relevant significant adverse effects; the types of parameters to be monitored and the monitoring duration.
- 2.129** All the mitigation and monitoring measures proposed within the technical ES chapters have been compiled and presented in a mitigation and monitoring schedule for ease of reference in **ES Volume 1, Chapter 18: Environmental Mitigation and Monitoring Schedule**.
- 2.130** The required demolition and construction related environmental management / mitigation and monitoring measures identified within the ES would be secured and controlled through an appropriate Construction Environmental Management Plan ('CEMP') (or equivalent) and it is proposed that the requirement for this document be secured by means of suitably worded planning conditions attached to the permission or (where appropriate) via a planning obligation. Key mitigation and management controls that would later form part of a detailed CEMP(s) are presented in the **ES Volume 1, Chapter 18: Environmental Mitigation and Monitoring Schedule** and the Outline CEMP (**ES Volume 3, Appendix: Demolition and Construction – Annex 1**), to help define the policies, procedures and management framework for the implementation of any identified specific environmental management and mitigation controls and monitoring.

Completed and Operational Effects

- 2.131** The ES presents a description of the Proposed Development in **ES Volume 1, Chapter 4: The Proposed Development** to provide suitable context to enable the assessment of potential and likely significant environmental effects. The impact assessment of the Proposed Development is based on the information contained within the Control Documents (as defined previously in this ES chapter) and as described in **ES Volume 1, Chapter 4: The Proposed Development**.
- 2.132** Enough information on the Proposed Development, in terms of the key physical and operational aspects, has been presented to allow an understanding of the development being proposed, to enable the assessment of potential and likely significant effects of the completed and operational development in each of the technical ES chapters. Any assumptions made are clearly presented in the narrative.

- 2.133** The assessment of the nature and scale of a predicted change is undertaken against the baseline. In most cases, the baseline represents the environmental condition of the site and the surrounding area at the time of the assessment (as described within this ES chapter). The specific methodology for assessment of the Proposed Development (including the parameters assessed to predict a reasonable worst-case assumption) has been set out within each technical chapter or assessment presented in **ES Volume 1** and **ES Volume 2**.

Cumulative Effects and Effect Interactions

- 2.134** The EIA Regulations require that, in assessing the effects of a particular development proposal, consideration should also be given to the likely significant effects arising from the "*cumulation with other existing and/or approved projects*" (Schedule 4, 5(e)). There are no legislative or policy requirements which set out how a cumulative impact assessment should be undertaken, however consideration has been given to Planning Advice Note 17 Cumulative Effects Assessment³³.
- 2.135** Cumulative effects can occur as interactions between the effects associated with a number of projects in an area which may, on an individual basis be insignificant, but together (i.e. cumulatively), result in a significant effect. Cumulative effects arising from the Proposed Development in combination with development schemes ('cumulative schemes') has been considered throughout the ES. Two tiers of cumulative scheme are identified and described below and the potential for cumulative effects arising during the demolition and construction works, and once the Proposed Development is complete and operational are considered. A two-tiered cumulative assessment approach has been taken in order to differentiate between those schemes that are currently within the planning system (i.e., have full planning permission, a resolution to grant permission, or have been submitted (but not yet permitted) where considered appropriate) and those schemes that are not yet submitted for approval, or have been withdrawn, but represent major local schemes at varying stages of the pre-application stage which are considered to have the potential to have significant in-combination effects with the Proposed Development.
- 2.136** Each individual technical ES chapter presents an assessment of the cumulative effects of the Proposed Development coming forward alongside other surrounding cumulative schemes as relevant within the 'Assessment of the Future Environment' section.

Cumulative Effects with Other Developments

Tier 1 Cumulative Schemes

- 2.137** Generally, the 'Tier 1' cumulative schemes that are included within the cumulative effects assessment fall under one (or more) of the following criteria:
- Schemes that will produce an uplift of more than 10,000m² (Gross External Area (GEA) of mixed-use floorspace), or any office to residential conversions (granted under the General Permitted Development Order) giving rise to more than 150 residential units, whereby they:
 - have full planning permission, a resolution to grant permission; OR
 - have been submitted (but not yet permitted), where considered appropriate.
- 2.138** Schemes that are directly adjacent to the site are also considered on a site-by-site basis. Where a site is subject to more than one permission, the most recent application is assessed.
- 2.139** These parameters have been set to allow all the schemes coming forward within the area of the site to be subject to an initial screening exercise to determine the schemes that, based on the scale of redevelopment (amount and mix of uses), could potentially have a cumulative effect with the Proposed Development and should be considered further within the cumulative effects assessment of the EIA. By applying these parameters, the cumulative effects assessment of the EIA becomes more focused on the larger schemes (i.e. those with the potential to interact in a cumulative manner). Where there are schemes of a smaller scale located within proximity of the site, these are addressed as deemed necessary.
- 2.140** Generally, cumulative schemes considered within the cumulative effects assessment are located within 1km of the site as this represents an appropriate area for the majority of technical topics / disciplines where significant in-combination effects could occur. However, as detailed previously in this ES chapter, relevant cumulative schemes greater than 1km in distance from the site that have the potential to result in in-combination effects with regards to certain technical topics (e.g. traffic and transport, townscape and visual,

³³ The Planning Inspectorate: Planning Advice Note 17 'Cumulative Effects Assessment'(August 2019)

etc.) have been considered. For example, whilst cumulative schemes 2, 4, 5b, 6, 7, 8, 9 and 10 (see **Table 2.4**) are located over 1km from the site (cumulative scheme 2 is located the furthest away at approximately 4.2km east of the site), these schemes were recognised as significant local schemes, and as such these Tier 1 schemes have been considered where relevant within the cumulative effects assessment.

2.141 In response to the EIA Scoping Opinion (**ES Volume 3, Appendix: EIA Methodology - Annex 2**), specifically the consultee response from the EDC, Tier 1 schemes 7, 8 and 9 (as presented in **Table 2.4** and shown in **Figure 2.1**) have been added to the list of cumulative schemes considered within this ES where relevant. The 'Construction and operation of a cementitious products manufacturing facility' located at berth 40A, Tilbury Freeport (Thurrock reference 22/00466/FUL) raised in the Scoping Opinion by Thurrock has also been considered where relevant (e.g., within **ES Volume 1, Chapter 8: Air Quality** and **ES Volume 1, Chapter 9: Noise and Vibration**) as a Tier 1 cumulative scheme.

2.142 It should be noted that some of the schemes suggested for inclusion within the cumulative effects assessment by the EDC were not considered relevant, either due to their status or scale. For example, the 'Ebbsfleet International Car Park D (HMRC Inland Border Facility)' scheme suggested by the EDC is already in use as an inland border facility as of 1 January 2021 for 24 months³⁴, whereby the site was subject to construction and operational management plans which have now been approved. This scheme therefore is considered within the baseline and does not form a cumulative scheme for assessment. Also, the 'Rod End Estate' scheme (EDC/19/0069) comprises an uplift in Gross Internal Area (GIA) of 5,190m², and is therefore not considered to warrant inclusion within the cumulative assessment given that significant in-combination effects would not be anticipated at this scale.

Tier 2 Cumulative Schemes

2.143 'Tier 2' cumulative schemes are defined (for the purposes of assessment) as relevant major local schemes which have the potential to result in significant in-combination effects when considered alongside the Proposed Development. Tier 2 schemes considered by this ES (as presented in **Table 2.4** and shown in **Figure 2.1**) have predominantly been informed by consultation (e.g. via the EIA scoping process), and are at varying pre-application stages, or are schemes previously submitted for approval and subsequently withdrawn, but where it is known that there is a future aspiration to submit a planning application for a similar development.

2.144 The proposed London Resort scheme³⁵ located to the north-west of the site is a major infrastructure scheme for which the planning application has been withdrawn. Notwithstanding this, given the potential for cumulative effects to occur were this scheme to be progressed again in the future (in light of its scale and proximity to the site), this scheme is considered as a Tier 2 cumulative scheme. It has been announced that a revised planning application will be submitted for this scheme following the submission of the planning application for the Proposed Development.

2.145 The planning application for the 'Land Adjacent to Northfleet Harbour' (Application Ref. EDC/21/0102) cumulative scheme, included as a Tier 1 scheme within the EIA Scoping Opinion Request Report (**ES Volume 3, Appendix: EIA Methodology - Annex 1**), was withdrawn in August 2022. In response to the request from the EDC as part of the Scoping Opinion, this cumulative scheme has been included within the cumulative effects assessment as relevant, as a Tier 2 scheme (as opposed to a Tier 1 scheme as presented in the Scoping Report).

2.146 In response to the Scoping Opinion, the 'Ebbsfleet Central East' scheme raised in the Scoping Opinion has been considered where relevant as a Tier 2 cumulative scheme. Furthermore, in response to the Scoping Opinion, the Lower Thames Crossing (LTC) scheme has been considered qualitatively by **ES Volume 1, Chapter 7: Traffic and Transport** with regards to the potential in-combination effects relating to key highways links (e.g. the A2 and the M25/A282 Dartford Crossing). Due to the changing nature of the proposals and lack of final scheme information for the Tier 2 schemes, which are at varying pre-application stages or yet to be re-submitted for planning, a qualitative assessment has been undertaken where relevant with regards to these cumulative schemes. The qualitative assessments take into consideration the respective status within the planning system, the information freely available on the schemes and any resulting potential material changes to the effects established as a result of the Proposed Development in combination with the Tier 1 cumulative schemes set out above. The list of cumulative schemes which have been considered by the EIA is presented in **Table 2.4** and shown in **Figure 2.1**. Each technical chapter of the ES clearly defines those cumulative schemes (Tier 1 and Tier 2) that are of relevance to their respective technical cumulative assessment (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).

Effect Interactions

2.147 Effect interactions comprise a secondary aspect to cumulative assessment and pertain to interactions between effects associated with just one project, i.e. the combination of individual effects arising as a result of the Proposed Development, for example effects in relation to noise, airborne dust or traffic on a single receptor.

2.148 Effect Interactions from the Proposed Development itself on receptors at the site and within the surrounds are considered during the demolition and construction works and also once the Proposed Development is completed and operational. Dependent on the relevant sensitive receptors, the assessment focuses either on key individual receptors or on groups considered to be most sensitive to potential effect interactions.

2.149 Based on the definitions of what negligible effects comprise for each of the technical assessments, these do not warrant further consideration in relation to cumulative effects. Only residual effects described as minor and above will therefore be considered in the assessment of effect interactions.

2.150 There is no established methodology for assessing the significance of effect interactions on a particular receptor. The interaction of a combination of individual effects has however been determined to be either 'not significant' or 'significant', but a scale (minor, moderate or major) has not been applied to the effect interaction. Generally, if one of the individual effects is significant the combination of effects is regarded as 'significant'. If none of the individual effects are significant, consideration will be given as to whether or not the combination of many not significant effects could result in a combined significant effect, based on professional opinion.

2.151 Further information on the methodology and the results of the effect interactions assessment are presented within the **ES Volume 1, Chapter 16: Effect Interactions**.

STRUCTURE OF TECHNICAL ASSESSMENTS

2.152 This ES reports on the potential (before mitigation) and residual (after mitigation) environmental effects of the Proposed Development during the demolition and construction works and on subsequent completion and operation. The ES also concludes with a summary of the likely significant beneficial, neutral and adverse environmental effects of the Proposed Development (**ES Volume 1, Chapter 17: Likely Significant Effects and Conclusions**).

2.153 Each of the environmental topics considered in the EIA has been assigned a separate chapter in **ES Volume 1 (Chapters 6 to 15 inclusive)**. Within each of the technical ES chapters the assessment is presented and reported in the following format:

- An Introductory Table - setting out the author of the technical topic assessment, identification of relevant appendices, key topic related considerations and consultation;
- Assessment Methodology – an explanation of the approach to defining the baseline and evolved conditions, the approach to undertaking the impact assessment (demolition and construction and operation, and any key assumptions made and/or limitations) and the definitions of the nature and scale of effects and what effects are deemed to be significant;
- Baseline Conditions – a description of the baseline conditions of the site and surrounding area (as relevant to the technical topic in question – may include / be based upon a future baseline);
- Receptors and receptor sensitivity – identification of the existing and introduced (new) receptors on the site and in the surrounding area that may be affected by the Proposed Development and identification of their sensitivity;
- Potential Effects – an assessment of the likely significant effects of the Proposed Development during demolition and construction and on completion and operation/occupation, setting out the impacts and effects associated with each aspect of the assessment and an evaluation of their significance against defined criteria without the implementation of mitigation;
- Site Suitability – a description of any site suitability assessments undertaken for the Proposed Development, where relevant to the technical topic;

³⁴ https://inlandborderfacilities.uk/?page_id=57

³⁵ <https://londonresort.info/>

Table 2.4 Cumulative Schemes List

Ref	Address	Application Reference	Description of Development	Status <i>As per desk-based review</i>
Tier 1 Schemes				
1	Land North of Hive Lane Northfleet Embankment West The Shore Northfleet Gravesend Kent DA11 9AN	EDC/21/0081	Reserved matters application (access, layout, scale, appearance and landscaping) pursuant to condition 2 of outline planning permission reference no. EDC/16/0004 for land north of Hive Lane (Phase 1B) comprising the erection of 121 dwellings together with associated infrastructure including details relating to finished floor and site levels, noise attenuation measures, ecological mitigation and enhancement strategy, and schedule of public open spaces (condition 9), renewable energy, water conservation and carbon reduction technologies (Condition 11), design and maintenance of the public realm and other areas with a public amenity function, provision of and timetable for installation of public art and heritage interpretation (condition 15). This scheme is also known as 'Harbour Village'.	Approved January 2022
2	Albion Waterside Canal Basin, Gravesend, Kent, DA12 2RN	20210270	Hybrid planning application comprising: Part A - Full planning application for demolition of existing buildings and structures, construction of a mixed use development comprising C3 and C2 Residential Uses and commercial floorspace (Use Class E), a new river wall, works to Swing Bridge, highway junction improvements at Milton Road and Ordnance Road, associated new public open spaces and public realm improvements, car and cycle parking, landscaping, infrastructure and earthworks and ancillary works; and Part B - Outline planning application with all matters reserved (apart from access) for demolition of all existing buildings and structures and the construction of a mixed use development comprising C3 Uses and commercial floorspace (Use Class E) with associated vehicular access, car parking, landscaping, associated infrastructure and earthworks and ancillary works. (The proposed development would consist of up to 1,500 homes and up to 4,500m ² (GIA) of commercial floorspace). DEPARTURE: Application does not fully accord with the provisions of the Development Plan (Core Strategy Policy CS04)	Pending Decision (<i>Recommendation to Grant</i>)
3	Land At Former Northfleet Cement Works The Shore Northfleet Gravesend Kent DA11 9AN	EDC/16/0004	Outline application for a mixed development and comprising: up to 532 Homes, related car parking and landscaping (C3); up to 46,000m ² Employment Floorspace, related car parking, servicing and landscaping (B1/B2/B8); Mixed Use Neighbourhood Centre comprising mix of: up to 850m ² retail/cafe/takeaway floor space (A1/A2/A3/A5); residential uses (C3); community centre (D1) and related car parking and landscaping; Riverside Food and Drink Uses comprising up to 500m ² of pub or food and drink uses (A3/A4); Public Open Space including riverside promenade, public park with equipped play areas and playing field with shared public/school use, multi-use games area and wildlife corridors; Fastrack Link to provide a segregated link across the site along with Fastrack stops; Street and Footpath Network to provide access to development and maintain and enhance existing public rights of way, including a bridge link between Hive Lane and Factory Road; Access Improvement to Grove Road/The Creek and The Shore/Crete Hall Road and associated highway improvements; Supporting Services and Infrastructure including new utilities, enhanced flood defences and providing for access to cliffs and tunnels; Ground re-grading to create efficient development and open space platforms and to raise land to address flood risk ; and Other Minor Works and development ancillary to the main proposals including the demolition of existing buildings and the retention of tunnels and facing walls adjacent to Lawn Road.	Approved June 2018
4	Northfleet Embankment East Crete Hall Road Northfleet Gravesend Kent	EDC/17/0038	Hybrid planning application (part full and part outline) comprising: (1) full planning application for the erection of 598 residential dwellings including affordable housing; retail floorspace (Use Classes A1, A2 and/or A3); amendments to existing highway accesses and realignment of Crete Hall Road; demolition of rear of WT Henley Building; provision of open spaces, equipped areas of play and landscaping; and associated internal accesses/roads, parking, infrastructure, attenuation features and earthworks; and (2) outline planning application (with all matters except access reserved) for a two form entry primary school and for the refurbishment, change of use (for Use Classes A1/A2/A3/B1(a)/C3/D1) and demolition of the boundary wall and rear portion of the WT Henley Building.	Approved March 2019
5a	Land West Of Springhead Road (Phase 2B) Springhead Road Northfleet Gravesend Kent	EDC/17/0049	Application for the approval of reserved matters pursuant to outline planning permission reference number 20150155 being the development of land at Ebbsfleet for mixed use up to 789,550m ² gross floorspace comprising employment, residential, hotel and leisure uses, supporting retail and community facilities and provision of car parking, open space, roads and infrastructure; relating to erection of 126 residential dwellings in Phase 2B of Springhead Quarter including access, appearance, landscaping, layout and scale, and amendment to Phase 1B in respect of rear gardens and rear boundary treatment.	Approved August 2017
5b	Land West of Springhead Road (Springhead Park Phase 3) Springhead Road Northfleet Gravesend Kent	EDC/18/0009	Application for the approval of Reserved Matters pursuant to outline planning permission reference number 20150155 relating to the erection of 172 residential dwellings in Phase 3 of Springhead Quarter including access, appearance, landscaping, layout and scale, along with associated changes to existing ground levels, the provision of car parking, servicing, utilities, and open space (including allotments, play space and extension of Linear Park).	Approved June 2018
6	Former Northfleet West Sub Station Southfleet Road Swanscombe Kent	EDC/18/0170	Submission of Reserved Matters of siting, design, external appearance and landscaping pursuant to Conditions 2, 19, 20, 26, 36 and 43 of the outline planning permission EDC/16/0045 for Phase 2C development of 126 residential units (C3) and including details of streets, buildings, structures, materials, open space, landscaping, car parking, noise and drainage.	Approved August 2021
		EDC/19/0125	Submission of Reserved Matters of siting, design, external appearance and landscaping, pursuant to Conditions 2, 19, 26, 36 and 43 of outline planning permission EDC/16/0045 for Phase 4 development of 133 residential units including details of streets, buildings and structures, materials, open space, car parking, noise and drainage.	Approved March 2020
7	Whitecliffe (Eastern Quarry)	EDC/17/0048	Mixed-use development of up to 6,250 dwellings and up to 231,000 square metres of non-residential floorspace with associated infrastructure and open space	Under Construction
8	Ebbsfleet Green (former Northfleet West Grid Substation)	DA/05/00308/OUT varied by EDC/16/0045	Mixed-use development of up to 950 dwellings and non-residential floorspace for shopping, food and drink, hotel use; community, health, education and cultural uses	Under Construction
9	Former Croxton & Garry Site	EDC/17/0110 varied by EDC/19/0161	Residential development of up to 221 dwellings including new vehicular access	Under Construction
10	Berth 40A Tilbury Freeport Tilbury Essex RM18 7EH	22/00466/FUL	Construction and operation of a cementitious products manufacturing facility	Pending Decision

Ref	Address	Application Reference	Description of Development	Status <i>As per desk-based review</i>
Tier 2 Schemes				
A	Swanscombe Peninsula and land adjacent to Ebbsfleet Station (the 'London Resort' scheme)	BC080001	Global entertainment resort with a Leisure Core (comprising a range of events spaces, themed rides and attractions, entertainment venues split over two gates), public areas outside the two gates (offering a range of retail, commercial, dining and entertainment facilities), hotels, 'Conference' Centre, Coliseum, back of house areas, related housing, access road from the A2(T) (including junction works), people mover, river transport infrastructure at both Swanscombe Peninsula and Port of Tilbury, car parking, energy centre, waste water treatment works, land remediation and terrain modelling, flood defence and drainage works, habitat creation and all associated works. Referred to as: The London Resort scheme.	Withdrawn March 2022
B	Ebbsfleet Central East	-	Major outline planning application for mixed use development at Ebbsfleet Central East ³⁶ . This site is owned by EDC and will be submitted by EDC. Ebbsfleet Central East is c.37 hectares in area and is located to the south of the site, to the opposite side of the North Kent Railway Line, and crosses the boundary between Gravesham and Dartford.	Not yet submitted <i>Application is expected to be submitted by EDC in September 2022</i>
C	Land Adj To Northfleet Harbour Grove Road Northfleet Gravesend Kent	EDC/21/0102	Outline planning application (with all matters reserved) for residential-led mixed-use development comprising demolition of existing buildings and structures and provision of residential (Class C3), flexible commercial use (Class E), non-residential institutions (Class F.1), community use (Class F2, E), hard and soft landscaping, public open spaces, car parking, pedestrian and vehicular access and other associated infrastructure works	Withdrawn August 2022
D	Blue Lake, Thames Way, Northfleet, Gravesham	EDC/21/0114	Partial infilling of Sawyer's Lake, to allow for a residential-led development (up to 1,300 homes) and non-residential uses ³⁷ .	Not yet submitted
E	Lower Thames Crossing	-	The construction and operation of a new crossing of the River Thames. The project would comprise the longest road tunnel in the UK, stretching 2.6miles, including 14.3miles of new road connecting the M2/A2, A13 and M25 with around 50 new bridges and viaducts ³⁸ .	Not yet submitted <i>Application is expected to be submitted to the Planning Inspectorate Autumn 2022³⁹</i>

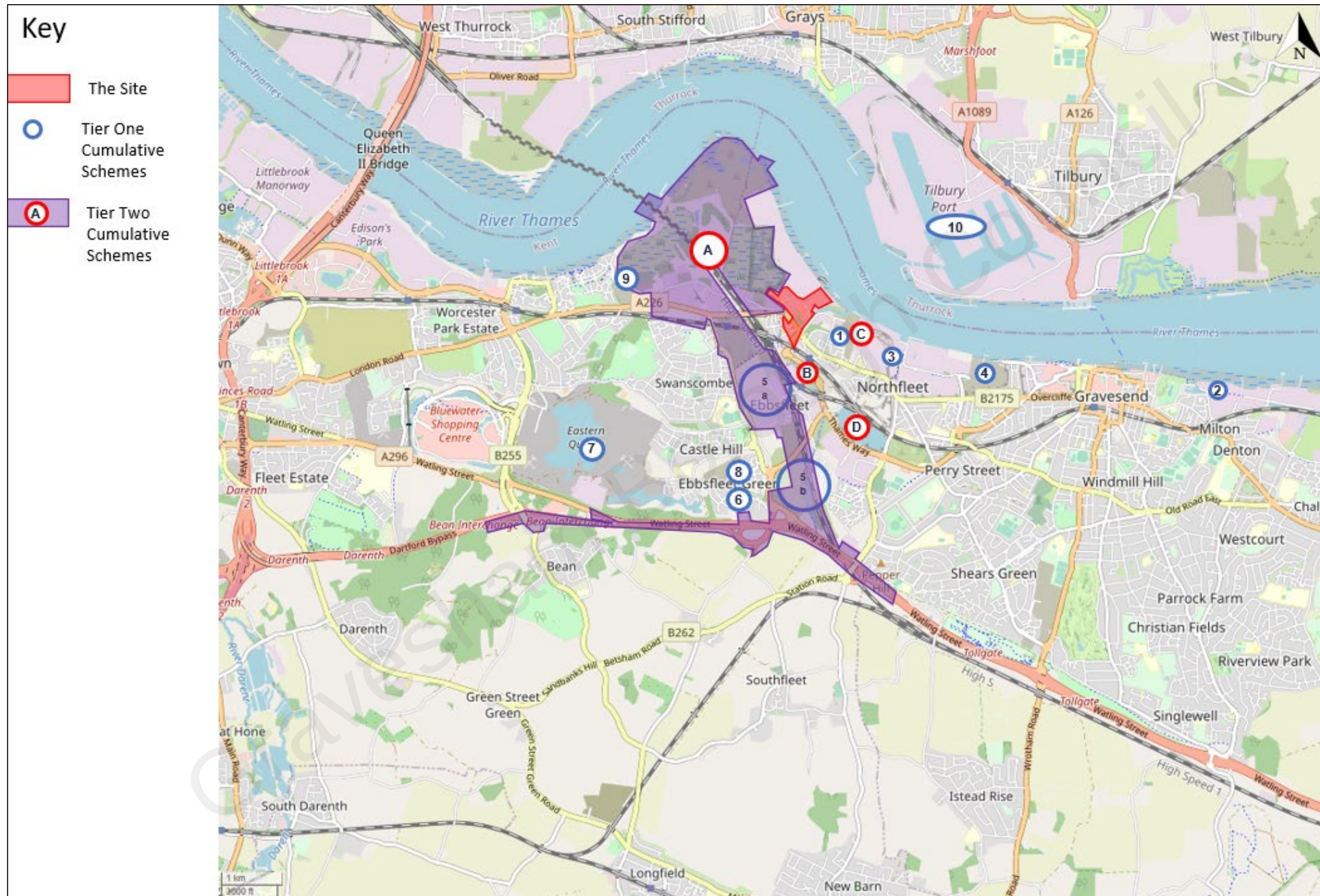
³⁶ <https://ebbsfleetcentral.commonplace.is/proposals/introduction-and-vision/step1>

³⁷ <https://www.kentonline.co.uk/gravesend/news/plans-to-infill-lake-with-thousands-of-homes-267302/> and <http://applications.ebbsfleetdc.org.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=QV5IARUA00U00>

³⁸ <https://nationalhighways.co.uk/our-roads/lower-thames-crossing/>

³⁹ <https://infrastructure.planninginspectorate.gov.uk/projects/south-east/lower-thames-crossing/>

Figure 2.1 **Cumulative Schemes⁴⁰**



⁴⁰ Note, the LTC scheme (Tier 2 cumulative scheme E) is located approximately 6km east of the site at its closest point, and is not visible on this figure.

- Mitigation Measures, Monitoring and Residual Effects - a description of the mitigation measures that are being committed to and a summary of the residual effects of the Proposed Development following the adoption of the mitigation measures and /or monitoring protocols;
- Assessment of Future Environment – a description of the likely evolution of the baseline (as relevant) and an assessment of the likely significant effects of the Proposed Development in relation any 'in combination' effects with the identified cumulative schemes; and
- Likely Significant Effects – a short statement confirming which residual effects are considered to be significant.

2.154 ES Volume 2, which comprises the Townscape and Visual Impact Assessment (including the Built Heritage Statement), follows its own bespoke format.

ASSUMPTIONS AND LIMITATIONS

2.155 The principal assumptions that have been made, and any limitations that have been identified, in undertaking the EIA are set out below. Assumptions specifically relevant to each technical topic have been set out, as relevant, within each technical ES chapter:

- Baseline conditions have been established from a variety of sources, including historical data. Due to the dynamic nature of certain aspects of the environment and conditions at the site and surrounding area, land uses may change over time.
- It is assumed that information received from third parties is accurate, complete and up to date.
- Due to existing active industrial operations on-site, access to the full site was not possible to undertake a number of baseline surveys, including intrusive surveys. The limitations associated with access restrictions is discussed, as relevant, within each technical assessment (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**). Justification is provided where relevant as to how an appropriate level of site assessment has been undertaken for the purposes of this EIA given this limitation. For example, where access was not possible for ecological surveys, other methods such as assessing habitats from publicly accessible locations using binoculars, or reviewing aerial photography, was utilised. A 'precautionary principle' approach has then been taken to ensure that a reasonable worst-case assessment is made.
- It should be noted that some proposed minor highways works fall outside of the site redline boundary, as detailed in **ES Volume 1, Chapter 4: The Proposed Development**. Whilst these works are not sought for approval by this planning application (they will be subject to their own permission with the relevant authorities, whereby it is anticipated that these works will be linked to this application by Grampian style condition), they are considered as part of the Proposed Development considered in this EIA, and therefore assessed as appropriate.
- The Applicant is in active discussions with all existing landowners on-site. It is expected that the Council will use Compulsory Purchase Order (CPO) powers to assist in the delivery of Proposed Development if required.
- The assessment of residual effects contained within each of the technical chapters of the ES (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**) are based on the assumption that the identified embedded mitigation measures are implemented – be it as set out in application drawings, through regulatory regimes or via the mitigation and management controls, described within **ES Volume 1, Chapter 4: The Proposed Development** and **ES Volume 1, Chapter 5: Demolition and Construction**, and **ES Volume 1, Chapter 18: Environmental Mitigation and Monitoring Schedule**.
- Demolition and construction work across the site would take place substantially in accordance with the indicative programme of works described in **ES Volume 1, Chapter 5: Demolition and Construction**.
- Where quantitative impact assessment is not possible, the limitations and justification are identified within the relevant technical ES chapter and as appropriate, qualitative assessment is presented.
- The basis of assessment, as set out within this ES chapter, considers the upper limits on the amount of development sought for approval where appropriate. As minimum parameters are not sought for approval by the planning application, where appropriate the Illustrative Masterplan has been utilised for

the purposes understanding a reasonable scenario for the purposes of assessment. Each technical ES chapter clearly sets out the respective approach to assessment (**ES Volume 1, Chapters: 6 to 15** and **ES Volume 2**).

- Whilst the overall retail provision is expressed as a total figure, the Proposed Development has been assessed on the basis of predominantly comparison retailing, with small-scale convenience to support the local population. Unit sizes will be restricted through condition, which will deliver a development that accords with the assessment undertaken and prohibit alternative forms of retailing such as large-scale convenience (i.e. supermarkets).
- The aim of the EIA is not to assess the Proposed Development's compliance / performance against planning policy, as this is considered within the Planning Statement that is submitted in support of the planning application. Instead, reference is made to relevant national, regional and local policy and guidance to inform the scope of the assessment, the assessment methodologies applied, and the existence of any sensitive receptors to be considered.
- Where detailed design information is not available, reasonable assumptions have been made, and have been clearly set out, based on the professional experience of the author of the ES chapter and this may be based on other developments of similar type or scale for example, to enable assessment of likely significant effects.
- Cumulative schemes identified are assumed to be implemented in accordance with the information that is publicly available and subject to the same regulatory regimes and good practice management controls as identified for the Proposed Development.