2. EIA METHODOLOGY

2.1 Introduction

2.1.1 This chapter sets out the scope and methodology adopted in the EIA. It explains the pre-planning consultation that was undertaken, including the scoping process, to identify the potentially significant environmental effects, the baseline assumptions, methods used to assess the environmental effects, and the general criteria used to evaluate their significance.

2.1.2 The specific methodologies and criteria applied to the assessment of each environmental topic are described in individual topic Chapters in Volume 1 of the ES (refer to Chapters 7 to 12), and in the relevant appendices in Volume 2 of the ES.

2.1.3 The environmental effects of the Development have been predicted for each relevant topic (e.g. socio-economics, landscape/townscape, visual amenity and built heritage, transport and access, noise, etc.) and compared to the baseline environmental conditions (i.e. those existing at present and without the Development). The environmental effects of the Development are predicted in relation to the effect upon, or change to, environmental receptors, including human beings (e.g. residents of adjacent dwellings.), built resources (e.g. buildings) and natural resources (e.g. sites of ecological interest).

2.2 General Approach to EIA

2.2.1 The EIA process has comprised the following stages:

- Review of the planning history and designations that apply to the Site;
- Consultation with the London Borough of Hillingdon (LBH) and other statutory and non-statutory consultees (refer to Table 2.1);
- Gathering of baseline data (for example for transport and access, noise and air quality), including data held by LBH and other statutory bodies;
- Visits to the site by the professional Project Team;

- Identification of existing sensitive receptors to effects from the Development, as well as any future potential receptors such as those introduced by planned developments in the area (e.g. those with planning consent or resolution to grant);

- Production of a Scoping Report to allow LBH and statutory consultees the opportunity to comment on the proposed EIA process and content, and for LBH to provide a Scoping Opinion;

- Assessment of the effects of the Development, by comparing the predicted conditions with the Development in place to the 'without Development' baseline;

- Identification of mitigation measures required to prevent, reduce or offset these effects;

- Identification of the residual effects of the proposals assuming that the identified mitigation measures and any further enhancements are implemented; and

- Preparation and submission of the ES with the planning application.

2.3 EIA Regulations

2.3.1 As described in Chapter 1, the ES has been prepared to comply with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011[1] (EIA Regulations) which implement Council Directive No. 85/337/EEC as amended by Council Directive No. 97/11/EC. Other good practice guidance documents have also been considered when undertaking the EIA including:

- Circular 02/99: Environmental Impact Assessment (DETR, 1999)[2];
- Note on EIA Directive for Local Planning Authorities (1999 EIA Regulations) (ODPM, July 2002)[3];
- Environmental Impact Assessment: A Guide to Good Practice and Procedures, A Consultation Paper (DCLG, 2006)[4];
- Guidelines for Environmental Impact Assessment: Institute of Environmental Management and Assessment (IEMA, September, 2004)[5];

- Special Report: The State of Environmental Impact Assessment Practice in the UK, Institute of Environmental Management and Assessment (IEMA, 2011)[6]; and
- Environmental Impact Assessment: A Guide to Procedures, Office of the Deputy Prime Minister (ODPM, 2001)[7].

2.4 Design and EIA Interface

2.4.1 The EIA has been undertaken in parallel with the design process through a series of specialist consultant workshops, consultation with statutory consultees and other key stakeholders (e.g. the public and other non-statutory consultees) and through the close working relationship between the architects and the EIA specialists. Further information is provided in Chapter 4: Alternatives and Design Evolution. This iterative process has enabled the Development to be shaped by environmental and sustainability considerations.

2.5 EIA Screening

2.5.1 The London Borough of Hillingdon adopted a formal Screening Opinion (1 November 2011), in accordance with Regulation (5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, confirming that the development proposals require an EIA. The Council's Screening Opinion highlighted the necessity to consider the cumulative effects of the Hillingdon Circus development alongside the adjacent Master Brewer proposals (ref: 4266/APP/2011/2034, and 4266/APP/2011/035), currently pending a decision.

2.5.2 The Screening Opinion stated that, having taken into account the selection criteria in Schedule 3 of the 2011 EIA Regulations, the development individually is unlikely to have significant effects on the environment, however cumulatively, there is potential for significant effects with the adjacent Master Brewer development. The Screening Opinion is provided in Appendix B, Volume 2 of the ES.

2.5.3 Typically the cumulative assessment for EIA only considers consented developments. Although not yet a consented development, the Master Brewer Development has been considered in the

cumulative assessment (refer to Chapter 13 for further detail), in light of the request for its consideration, in both the screening and scoping opinion.

2.6 EIA Scoping

2.6.1 In accordance with Regulation 13 of the EIA Regulations 2011 a Scoping Report was submitted to LBH on 21 December 2011, requesting a formal Scoping Opinion. The Scoping Report identified the topics that should be assessed during the EIA process and presented within the ES. It also provided the justification for scoping out certain topics of the EIA, because the Development would have either no influence on these environmental aspects, or the effects that might occur would be insignificant.

2.6.2 A Scoping Opinion was received on 30 January 2012. This highlighted that LBH was generally satisfied with the proposed content and approach to the assessment for the ES, as set out in the Scoping Report, subject to a number of comments to be addressed (refer to Table 2.1 below for further details). The Scoping Report and Scoping Opinion are provided in Appendix D.1, Volume 2 of the ES.

2.6.3 Further clarification was sought in relation to a number of matters in the Scoping Opinion, through further, informal correspondence with LBH between 21 to 26 March, summarised in Table 2.1 below

Table 2.1 – Summary of Clarification Sought in relation to the Scoping Opinion

Topic	Clarification Sought	LBH response	Location within ES
Landscape and Visual	Confirmation was sought (email correspondence dated 21 March 2012) as to whether Built Heritage should be considered in the detailed assessment, or if this could be scoped out from further assessment, based on the unlikely potential for visibility of the Development in views	LBH confirmed (email correspondence dated 22 March 2012) that the Landscape /Townscape and Visual Assessment should take account of, or make special mention of the Conservation Area and the SAMs. LBH also confirmed that no additional viewpoints, to those identified in the Scoping Opinion, were required as part of the	Section 8.7 and 8.8, Chapter 8: Landscape/ Townscape, Visual Amenity and Built Heritage. Confirms there would be no meaningful

Topic	Clarification Sought	LBH response	Location within ES
	from Ickenham Conservation Area and the nearby Scheduled Ancient Monuments(SAMs)- The Manor Farm Mote and Pynchester Moat and	consideration of these designated sites. The approach adopted for the Landscape and Visual Assessment (Chapter 8 of the ES) considers potential impacts on these designated sites, based on a series of photographs to show their context, and views from the designated sites (note these are be visualisations). The adopted approach was confirmed by English Heritage to be appropriate (refer Appendix D.2, Volume 2 of the ES).	impact on the nearby Conservation Area and that topography, vegetation and farm buildings would screen any intervisibility between the SAMs and the Development.
Socio-economic Assessment	Clarification on further information regarding the methodology of the socio-economic assessment, as requested in the Council's Scoping Opinion (email correspondence 23 March 2012).	The socio-economics assessment should reflect findings of the retail assessment and test all the parameters included (email correspondence dated 22March 2012)	Section 7.7, Chapter 7: Socio-economic
EIA Methodology/Scope	Approach for presenting non-significant issues in the ES, scoped-out from the detailed assessment).	LBH confirmed that archaeology, water resources, ground conditions and ecology, can to be scoped of the ES. LBH requested however that the ES describes the 'non-significant issues' scoped out of the EIA. LBH also requested that the ecology report and archaeology report be included in the ES Appendices, for ease of reference, acknowledging that the requirement for these reports are required to meet planning requirements, and not for the purpose of EIA (email correspondence dated 22 March 2012).	Section 2.6.2, Chapter 2: EIA Methodology The Ecological Appraisal is provided in Appendix F and the Archaeological desk-based study in Appendix E, Volume 2 of the ES.

2.6.1 Potentially Significant Effects

2.6.4 The Scoping exercise identified that the Development would have potentially significant effects on the following matters:

- Socio-economic (Chapter 7)
- Landscape/ Townscape, Visual Amenity and Built Heritage (Chapter 8)
- Transport and Access (Chapter 9)
- Noise and Vibration (refer to Chapter 10)
- Air Quality (Chapter 11)
- Ground Conditions (Chapter 12)

2.6.5 The Scoping Opinion highlighted, potential cumulative traffic generation, and associated air quality impacts of the Development with the adjacent Master Brewer proposals, as of significance, as the Site is located within an Air Quality Management Area (AQMA).

2.6.6 These topics were therefore identified for assessment and form their own topic chapters of this ES.

2.6.7 Other 'Context' Chapters presented within this ES include:

- Alternatives and Scheme Evolution (Chapter 4)
- Existing Land Uses and Activities (Chapter 3)
- Description of Proposed Development (Chapter 5)
- Development Programme and Construction (Chapter 6)

2.6.2 Non-Significant Issues

2.6.8 The scoping exercise, as outlined in the Scoping Report and Scoping Opinion, identified the following topics as unlikely to result in significant impacts and can therefore be scoped out from the detailed assessment. Whilst they are classified as non-significant issues in the context of EIA, reports for some topics are required for planning purposes. Certain reports have been provided

in the ES Appendices for ease of reference, as requested by LBH (refer to Appendix E and F). Other reports for planning, including the Energy Strategy and Sustainability Statement and Sunlight and Daylight Report, have been submitted as stand-alone reports:

- **Archaeology** - The Scoping Opinion confirms that there is no evidence to suggest that the impacts on the site are likely to be significant, and therefore that archaeology could be scoped out from further assessment in the EIA. A Desk-based Archaeological Assessment has nonetheless been undertaken to meet planning requirements and is provided in Appendix E (Volume 2 of the ES), as requested by LBH.

- **Water Resources** – The environmental sensitivity of the Site is low, as the site is underlain by deposits with very limited permeability, and is a considerable distance from the nearest watercourse. The Site is in National Flood Zone 1 (low risk of flooding from watercourses), as such the drainage strategy is considered central to the study. The Drainage Strategy and Flood Risk Assessment (FRA) are provided as standalone reports to support the planning application.

- **Ecology** - The redevelopment of the Site is unlikely to have significant ecological impact. The individual habitats recorded on site are of low nature conservation value in their own right and there was no evidence of bats on Site, as detailed in the Ecological Appraisal Report provided in Appendix F, Volume 2 of the ES.

- **Sustainability and Energy** - In accordance with GLA requirements the planning application is supported by a separate and standalone Energy Strategy and Sustainability Statement. The details of these documents are summarised in Chapter 5 of the ES (Description of Development). All technical assessments will inherently test all sustainable design features as part of the planning application which therefore removes the need for further sustainability and energy assessment within the ES.

- **Aviation –** The Development will comply with the requirements of National Air Traffic Services, the MoD and all the aerodromes in the vicinity. The Development will comply with the limitations set by Defence Estates in order that RAF Northolt is not significantly affected.

The redevelopment of the site will therefore not infringe RAF Northolt's obstacle limitation and radar safeguarding surfaces and will not interfere with the operation of the aerodrome.

- **Microclimate -** The potential height and scale of the Development is not expected to result in significant microclimatic impacts to surrounding areas. The design and layout of the scheme takes account of the prevailing and seasonal winds across the Site and has maximised daylight and sunlight to the Development without prejudicing the surrounding existing buildings. The nearest residential properties, are located >200m to the north and south of the site, and are separated from the Site by public highways. The land uses immediately surrounding the site are predominantly commercial in nature. A separate standalone Daylight and Sunlight Report has been submitted with the planning application for planning purposes.

- **Electromagnetic Radiation -** There are no current sources of significant electromagnetic radiation within or in proximity to the Site and the Development would not give rise to any uses which introduce any significant new sources. In addition, all new electrical plant equipment will be designed in accordance with current British Standards.

2.7 Consultations

2.7.1 LBH have duly informed both statutory and non-statutory consultees who have had input to the Scoping Opinion. Consultations were also undertaken by a number of Project Team members as appropriate to their specialist roles. Table 2.2 below provides a summary and the key matters raised during consultation with the key statutory consultees.

2.7.2 A Statement of Community Engagement (SCE) has also been undertaken to capture the views of non-statutory consultees, in accordance with LBH's Statement of Community Involvement (2006), and is submitted as a separate standalone report. The consultation programme was tailored by Optimisation Developments Ltd & Bride Hall Developments Ltd and Morrisons to meet the needs of local residents and business people, based around a two-day public exhibition.

Table 2.2 – Summary of Consultation with Key Statutory Consultees

Key Statutory Consultees	Consultation Date (meeting/ discussions)	Summary of Key Issues Raised	Design Response to Issues Raised
Natural England (NE)	Scoping Opinion (30 January 2012)	Local Landscape Character Areas should be mapped at scale appropriate to the development site and any relevant management plans or strategies pertaining to the area. Landscape and Visual Impacts should be assessed using the Landscape Character Area (LCA) methodology. Measures for the reinstatement and creation of existing footpaths should be encouraged. Relevant green infrastructure should be incorporated where appropriate. Protected Species and Habitat Survey surveys should be carried out within the area affected by the development.	Chapter 8: Landscape and Visual sets out the Landscape Character Area (LCA) methodology and provides a plan of the Local Landscape Character Areas. The residential and hotel buildings provide 2,250m^2 of biodiverse (brown) roofs. Planting is also incorporated into the residential podium level, along the interface between the private terraces and the central communal amenity space (refer to Section 5.2.7, Chapter 5 of the ES, for further detail). The Development includes improvements to the pedestrian environment on the public highway fronting the foodstore and the Hillingdon LUL station access (refer to Section 5.4.1, Chapter 5 of the ES). A Phase 1 Habitat Survey was undertaken in August 20122 and a Protected Species Bat Survey was undertaken in March 2012. These are incorporated into the Ecological Appraisal report in Appendix F, Volume 2 of the ES.
Environmental Agency (EA)	Scoping Opinion (30 January 2012) and Further correspondence (2 April 2012)	Allowable discharges on site should, where possible, be limited to Greenfield Run-Off but should be no more than 50% of the existing discharge.	A 60% reduction in discharge has been proposed in the Flood Risk Assessment which is a 'betterment' on the minimum requirement of 50%. This has been justified on the basis of the amount of excess excavation and spoil to be removed off site for extra attenuation being unsustainable and therefore far outweighing the sustainable benefits of providing

Key Statutory Consultees	Consultation Date (meeting/ discussions)	Summary of Key Issues Raised	Design Response to Issues Raised
		SUDS Hierarchy to be addressed in FRA	extra storage on site in the first place. The various different SUDS hierarchy have been discussed in the FRA noting that due to the lack of space, ponds, detention basins and swales are not feasible. Porous paving will not be feasible generally due to the majority of ground floor levels areas being above basement areas. Brown roofs will be shown as feasible to residential levels with the majority of SUDS being provided beneath the car park levels in the form of geocells.
Highways Agency	-	No feedback received.	-
Transport for London (TfL)	Meeting (11 April 2012)	Issues discussed included car parking, vehicle access, servicing and access by sustainable modes.	The proposed parking provisions for each of the proposed land-uses in the scheme are set out in Chapter 5 of the ES. The parking provisions have been assessed against the parking standards. A total of 5% of parking spaces will be for electric vehicles A total of 166 bicycle parking spaces will be provided for residents and 20 bicycle parking spaces for visitors to the Morrisons foodstore. Refer to Chapter 9 of the ES and the Transport Assessment for further detail.

Key Statutory Consultees	Consultation Date (meeting/ discussions)	Summary of Key Issues Raised	Design Response to Issues Raised
Greater London Authority	Correspondence (18 Nov 2011)	Preliminary drawings were presented and the initial scheme ideas discussed. Key issues raised included: • Access through and around the site; • Impact on local retailers; • Scheme layout; • Importance of creating a landmark through design; • Traffic impact; • Air quality & noise; and • Amount of amenity space.	Pedestrian access through the site was revised, providing dedicated cores for access to each element of the scheme. Access along Long Lane connecting the core shopping area with the public transport facilities was emphasised through the design. A full Retail Impact Assessment was undertaken to address the impact on local traders. The number of residential units was reduced significantly to address potential amenity issues. This allowed the housing mix to be revised in accordance with policy requirements. Affordable housing was retained within the scheme. Importantly, this allowed design revisions to reduce the overall bulk of the building by setting back residential units from the building perimeter as height increases, and using effective materials and soft landscaping to break up the overall appearance. The building fronts Hillingdon Circus junction, integrating itself with the core shopping area. Work on the transport assessment continued to ensure transport implications were appropriately addressed. Separate accesses were maintained for customers/commuters/residents and servicing/deliveries. In line with policy standards, sufficient private amenity, communal amenity and children's play space was incorporated into the scheme.
English Heritage	Scoping Opinion (30 January 2012)	LBH accepted the concerns of English Heritage but considers there is however no evidence to suggest that the archaeological impacts on the Site are likely to be significant, and that archaeology could therefore be scoped out from the further assessment in the EIA.	Refer to Scoping Opinion, provided in Appendix D.1, Volume 2 of the ES.

Key Statutory Consultees	Consultation Date (meeting/ discussions)	Summary of Key Issues Raised	Design Response to Issues Raised
	Correspondence (18 April 2012)	The approach to consider potential impacts of the Development on nearby designated sites (Conservation Areas and SAMs), based on a series of photographs from the designated sites (note these will not be visualisations) was agreed by English Heritage as a suitable approach.	refer to Appendix D.2, Volume 2 of the ES),

2.8 Spatial Scope

2.8.1 The geographical extent of the EIA is referred to as the 'spatial scope'. The spatial scope of the assessment varies depending on the particular environmental receptor. Certain environmental effects extend beyond the Site, such as effects on air quality, noise, transport and traffic, landscape and socio-economic conditions. The relevant spatial scope of the EIA assessments is set out in the respective assessment chapters, taking into account the following:

- The physical area of the proposed development and any ancillary works;
- The nature of the baseline environment; and
- The manner in which the effects are likely to be propagated.

2.9 Baseline and Temporal Scope

2.9.1 The EIA considers the effects from the site preparation, demolition, construction and occupation stages of the proposed development. The temporal scope used for the assessment assumes the construction works for the development will commence in 2013; the conditions are deemed unlikely to change from current conditions, and therefore the current year (2011) is considered to be the 'Baseline Year' for assessment purposes. Baseline studies have been undertaken for socio-economics, landscape and visual, transport and access, noise and vibration, air quality and ground conditions.

2.9.2 A general description of the baseline conditions and 'environmental receptors' within and around the Site is presented in Chapter 3: Existing Land Uses and Activities. Where specific or more distant receptors have been considered these are described in the relevant technical chapter.

2.9.3 It is anticipated that the proposed development will be fully built-out over approximately two years, and occupied by the last quarter of 2014. This year is therefore considered to be the 'Principal Assessment Year', or the 'opening Year'.

2.9.4 The temporal scope also takes into account the time of day during which construction works are likely to be undertaken, notably whether they are undertaken during daytime or night-time periods.

2.10 Structure and Approach to Technical Chapters

2.10.1 The structure of each of the chapters of the ES is set out below. All of the chapters follow the same general structure. Each of the technical ES chapters in Volume 1 (Chapters 7 to 12) and associated appendices (Volume 2 of ES) has been prepared by the respective consultants listed in Chapter 1: Introduction of the ES. Chapter 1 also includes an editorial overview provided by Quod. In the majority of cases, the chapters also refer to separate technical appendices which include supporting baseline data, figures and plans. Where relevant, chapters also cross refer to other chapters and/or their technical appendices.

2.10.1 Introduction

2.10.2 The introductory section to each chapter provides a brief summary of the environmental topic that has been assessed. Where appropriate, it describes the assumptions and limitations related to the assessment of that topic and any constraints to undertaking the assessment. It also identifies the relevant technical appendix which is provided in Volume 2 of the ES.

Scope and Objectives of Assessment

2.10.3 The section describes the extent of the scope and objectives to be achieved as part of the assessment methodology.

2.10.2 Legislation Policy and Guidance

2.10.4 This section summarises the legislation and planning policy documents (national, regional and local) that are relevant to the assessment of environmental effects. The planning statement which supports the application provides a full analysis of planning policy of relevance to the proposed development and Chapter 3 of this ES (refer to 'planning policy context' in Section 3.5) summarises the planning policy context for the application site as a whole. Policy sections of individual topic chapters therefore only identify policy that is specific to that topic.

2.10.3 Assessment Methodology

2.10.5 The general methodology used in undertaking the assessments is outlined in this chapter. However, the more detailed methodologies for particular technical assessments are described in the relevant chapter, with particular reference to published standards, guidelines, best practice and relevant significance criteria.

2.10.6 This Assessment and Methodology section in each chapter provides an explanation of methods used in undertaking the technical study and prediction of effects. References are made to published standards or legislation (e.g. British Standards, Environmental Protection Act), professional guidelines (e.g. Design Manual for Roads and Bridges, Institute of Ecology and Environmental Management guidelines), and best practice and guidance (e.g. Institute of Environmental management and Assessment and Institute of Waste Management guidance).

2.10.4 Significance Criteria

2.10.7 This section describes the application of any specific significance criteria to predicted environmental effects. An account of the common or generic significance criteria applied to the EIA is provided later in this chapter.

2.10.5 Baseline Environmental Characteristics

2.10.8 This section describes the environmental conditions that exist in the absence of the Development both now and in the future Principal Assessment year.

2.10.6 Assessment of Impacts

2.10.9 This section identifies and assesses the potential effects that are predicted to occur during construction and on completion of the proposed development. It describes:

- The source, magnitude and duration of the effect;
- The effect without mitigation and its significance;
- The mitigation that will be implemented to prevent, reduce and, where possible, offset any significant adverse effects of the proposed development; and
- The resultant, residual effect and its significance.

2.10.7 Mitigation and Enhancement

2.10.10 This section identifies the mitigation and/or enhancement measures that will be implemented to prevent, reduce and, where possible, offset any significant adverse effects of the Development.

2.10.11 Mitigation measures are separated into several types, as follows:

- 'Design Mitigation', which is incorporated into the scheme design;
- 'Environmental Management Controls', such as dust and noise suppression measures and Construction Environmental Management Plan (CEMP) for construction works; and,
- Other controls over the Development to be implemented through planning conditions or obligations.

2.10.12 Where significant potential adverse environmental effects have been identified, a commitment has been provided from the Applicant to implement the mitigation measures described in the relevant technical chapter.

2.10.8 Cumulative Impacts

2.10.13 Any effect that arises as a result of incremental changes caused by other sources which are present or reasonably foreseeable future sources in combination with the effects of the Development, or the area's effect on a receptor of a combination of effects, are known as cumulative effects.

2.10.14 The developments identified for consideration in the cumulative assessment are the Former Master Brewer site, Freezeland Way (ref: 4266/APP/2011/2034), an additional outline application on Master Brewer site (ref: 4266/APP/2011/2035), and RAF Uxbridge, Hillingdon Road (ref: 585/APP/2009/2752).

2.10.15 Each technical chapter of this ES will provide a discussion of the likely cumulative effects anticipated for the particular technical assessment. In some cases, cumulative effects are not anticipated and where this is the case, full justification has been provided. A summary of the cumulative effects for each technical topic is provided in Chapter 13: Cumulative Effects.

2.10.9 Residual Impacts

2.10.16 This section summarises the resultant residual effect and its significance, post-mitigation. In some chapters, a summary table of identified potential effects, the measures proposed to mitigate these effects and the residual impact is provided.

2.10.10Summary and Conclusions

2.10.17 This section provides a brief summary of the chapter's findings and typically includes;

- Compliance of the Development with relevant plans/legislation;
- Methodology or assessment model used;
- Key features of the baseline conditions;

- Any significant residual effects identified, for both construction phase and the completed development; and,
- A summary of identified potential effects, the measures proposed to mitigate these effects and the residual impact.

2.11 Identification of Sensitive Receptors

2.11.1 As part of the EIA process, the environmental effects of a given development or scheme are typically predicted in relation to sensitive receptors, including human beings (e.g. residents of adjacent dwellings), built resources (e.g. buildings) and natural resources (e.g. sensitive ecology, controlled waters, etc). The identified sensitive receptors on Site are summarised in Table 3.0 of Chapter 3: Existing Land Uses and Activities.

2.11.2 The criteria used for identifying potentially sensitive receptors include:

- Sensitivity of the receptor to environmental effects;
- Proximity to the site;
- Extent and duration of potential exposure to environmental effects;
- Number of individual receptors; and
- The receptors ability to respond to change.

2.12 Nature of the Impact

2.12.1 For consistency, the findings of the various studies undertaken as part of the EIA adopt the following terminology to express the nature of the impact:

- **Adverse:** Detrimental or negative effect to an environmental resource or receptor;
- **Negligible:** No significant effect to an environmental resource or receptor; and
- **Beneficial:** Advantageous or positive effect to an environmental resource or receptor.

2.12.2 Following their identification, significant beneficial or adverse effects have been classified on the basis of their nature and duration as follows:

- **Temporary:** Effects that persist for a limited period only (due, for example, to particular activities taking place for a short period of time);
- **Permanent:** Effects that result from an irreversible change to the baseline environment (e.g. land-take) or which will persist for the foreseeable future (e.g. noise from regular or continuous operations or activities);
- **Direct:** Effects that arise from the effect of activities that form an integral part of the scheme (e.g. direct employment and income generation);
- **Indirect:** Effects that arise from the effect of activities that do not explicitly form part of the scheme (e.g. off-site infrastructure upgrades to accommodate the development);
- **Secondary:** Effects that arise as a consequence of an initial effect of the scheme (e.g. induced employment elsewhere);
- **Cumulative:** Effects that can arise from a combination of different effects at a specific location or the interaction of different effects over different periods of time.

2.12.3 In the context of the Development, short to medium term effects are generally determined to be those associated with construction activities, and the long term effects are those associated with the completed and occupied Development.

2.12.4 Local effects are those effects affecting receptors within and in close proximity to the Site, whilst effects on receptors in the wider study area are considered to be at a district level. Sub-regional effects are those affecting adjacent boroughs, whilst effects on London are considered to be at a regional level.

2.13 Evaluation of Significance

2.13.1 The prediction of environmental effects has been undertaken in accordance with definitive standards and legislation where such material is available. In cases where it is not possible to quantify effects, qualitative assessments have been carried out and are based on the available knowledge of the Site and potential effect, alongside professional judgement. Where uncertainty exists, this is detailed in the relevant chapter.

2.13.2 Each technical chapter provides the specific criteria, including sources and justifications, for quantifying the level of effect significance. Where possible, this has been based upon quantitative and accepted criteria, together with the use of value judgements and expert interpretations to establish to what extent an effect is significant.

2.13.3 There is no statutory definition of what constitutes a significant effect and guidance is of a generic nature. However, it is widely recognised that 'significance' reflects the relationship between the magnitude of an impact and the sensitivity (or value) of the affected resource or receptor. Statutory designations and any potential breaches of environmental law take precedence in determining significance because the protection afforded to a particular receptor or resource has already been established as a matter of law, rather than requiring a project or site-specific evaluation. Thus, effects resulting in unacceptable risks to human health and safety, the pollution of controlled waters or harm to protected species cannot be permitted.

2.13.4 Where effects have been identified which are adverse or beneficial, these have generally been assessed against the scale set out in Table 2.3.

2.13.1 Magnitude

Table 2.3 – Description of the Level of Significance of Environmental Effects.

Level of Significance	Description
Substantial	Major effects (by extent, duration or magnitude) and/or a highly pronounced change in environmental conditions. Effects, both adverse and beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving regional or borough wide objectives, or, could result in exceedance of statutory objectives and/or breaches of legislation.
Moderate	Intermediate effects (by extent, duration or magnitude) and/or pronounced change in environmental conditions. Effect that is likely to be an important consideration at a local level.
Minor	Noticeable but small effect or change in environmental conditions. These effects may be raised as local issues but are unlikely to be of importance in the decision making process.
Negligible	No discernable change or neutral effect on environmental conditions. An effect that is likely to have a negligible influence, irrespective of other effects.

2.13.5 The following matrix (Table 2.4) has generally been applied throughout this ES to determine the scale or magnitude of effects. Where different assessment criteria have been used, this is clearly stated within the relevant chapter.

Table 2.4 – Significance Matrix.

Sensitivity/ value of receptor	Magnitude of Effects			
	High	**Medium**	**Low**	**Negligible**
High	Substantial	Substantial	Moderate	Minor
Medium	Substantial	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible

2.13.6 Specific criteria for the assessment of each potential effect have been developed giving due regard to the following:

- Extent and magnitude of the effect;
- Effect duration (whether short, medium or long term);
- Nature of effect (whether direct or indirect, reversible or irreversible);
- Performance against environmental quality standards;
- Whether the effect occurs in isolation, is cumulative or interactive;
- Sensitivity of the receptor; and
- Compatibility with environmental policies.

2.13.7 In instances where definitive quality standards do not exist, significance has been based on the following:

- Local, district, regional or national scale of value of the resource and/or receptor affected;
- Number of receptors affected;
- Sensitivity of those receptors; and
- Duration of effect.

References

[1]ODPM (2011). The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011. The Stationery Office.

[2]DETR (1999). Circular 02/99: *Environmental Impact Assessment.* The Stationery Office.

[3]ODPM (2002). *Note on EIA Directive for Local Planning Authorities* (EIA Regulations, 1999).

[4]DCLG (2006). Environmental Impact Assessment: A Guide to Good Practice and Procedures. A Consultation Paper. DCLG.

[5]IEMA (September, 2004) *Guidelines for Environmental Impact Assessment:* Institute of Environmental Management and Assessment.

[6]IEMA (2011). *Special Report: The State of Environmental Impact Assessment Practice in the UK*, Institute of Environmental Management and Assessment; and

[7]ODPM (2001). *Environmental Impact Assessment: A Guide to Procedures.* Office of the Deputy Prime Minister.