

THE MERSEY GATEWAY PROJECT

CONTENT AND APPROACH TO THE ENVIRONMENTAL IMPACT ASSESSMENT

CHAPTER 3.0

CONTENT AND APPROACH TO THE ENVIRONMENTAL IMPACT ASSESSMENT

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3. CONTENT AND APPROACH TO THE ENVIRONMENTAL IMPACT ASSESSMENT

3.1 Requirement for EIA

- 3.1.1 European Council Directive 85/337/EC ((as amended by EC Directive) 97/11/EC 1999) applies to the assessment of environmental effects likely to arise from certain types of public and private development projects, which are subject to a statutory requirement for development consent. Development consents include planning permissions, listed building consents and orders under the Transport and Works Act 1992. In respect of the town and country planning regime in England and Wales the Directive has been transposed into English Law by the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (the "EIA Regulations").
- 3.1.2 EIA is a systematic process during which potential significant environmental effects from a proposed development project are identified, assessed and the results of that assessment presented to the relevant decision maker (the "competent authority"). The medium for presenting these results is an environmental statement such as this ES.
- 3.1.3 In accordance with the EIA Regulations, the competent authority is required to have regard to an ES in deciding whether to grant, confirm or make a permission, consent or order that is a development consent. In the case of the Project the competent authorities include:
- The Council as local planning authority in respect of the planning application and the listed building consent applications; and
 - The Secretary of State for Transport in respect of the application pursuant to the Transport and Works Act 1992.
- 3.1.4 The Project requires authorisation pursuant to a wide range of orders and consents as set out in Table 3.1 below. Each of these has its own regime governing the way in which EIA is carried out. However, the requirements of these regimes are very similar. Consequently, for ease of reference the ES will only refer to the EIA Regulations. Care has been taken to ensure that its content complies with all relevant statutory requirements.

Table 3.1 – Orders and Consents required for the Project

Orders and Consents
s3(1)(b) of the Transport and Works Act 1992 for the New Bridge itself and ancillary matters (the "TWA Order"). This will also be accompanied by a request for a direction under section 90(2)(A) of the Town and Country Planning Act 1990.
Town and Country Planning Act 1990 for all works not comprised in the TWA Order that require planning permission, including works relating to the Silver Jubilee Bridge (the "Planning Applications").
Compulsory Purchase Order under the Highways Act 1980 (the "CPO") to acquire all land and interests required for the Project which are not comprised within the scope of the TWA Order.
Orders under s14 of the Highways Act 1980 to authorise the alteration, improvement or stopping-up of side roads as required for the purposes of the Project (the "Side Road Orders").
Listed Building Consent under the Planning (Listed Buildings and Conservation Area) Act 1990 for works to or affecting the setting of the Silver Jubilee Bridge, which is a listed building (as well as certain other listed buildings).
Road user charging scheme order under Part III of the Transport Act 2000 to authorise the charging of tolls to use the Silver Jubilee Bridge (the "RUCO").

3.1.5 The aim of an EIA is to collate information so as to provide the competent authority with the information necessary to consider potential environmental effects, to understand that these are acceptable; and to secure mitigation measures to minimise these effects prior to granting the relevant consents. The aim of EIA is to identify and assess the significant environmental effects of the Project and the means of mitigating negative effects and enhancing positive effects. The EIA in respect of the Project has assessed the potential environmental effects associated with the works to an appropriate level of detail for the statutory procedures which are required for the grant of development consent in accordance with European and national legislation. The findings of the EIA for the Project are reported in this ES.

3.1.6 The EIA Regulations set out a number of project types for which an EIA is required. An EIA is always required for those projects defined in the Regulations as “Schedule I” projects. The Project is not a Schedule I project because it could only conceivably fall within the heading of that schedule relating to roads. However, it is not significantly large - over 10km in continuous length - as to fall within that schedule.

3.1.7 An EIA is only required for “Schedule II” projects, which are not automatically to be the subject of EIA, if the project may result in significant environmental effects. In the case of Schedule II the Project would be included within the following project type.

Description of Development	<i>10(f) – Construction of roads (unless included in Schedule 1).</i>
Applicable Threshold and Criteria	<i>The area of the works exceeds 1 hectare.</i>

3.1.8 Having established that the Project falls within the definition of a development set out in Schedule II, before concluding whether EIA is required it is necessary to consider whether the Project is likely to have significant adverse effects. Schedule III to the EIA Regulations stipulates the considerations to have in mind, whilst Government guidance assists in interpreting these criteria.

3.1.9 The EIA Regulations also provide a number of criteria under Schedule III that can be used to determine whether a Schedule II development should be subject to EIA. These emphasise the importance of considering the characteristics of the development¹, the location of the development (sensitivity and importance of receptors) and the characteristics of potential effects². These factors were considered when determining the importance of receptors in the EIA.

3.1.10 Government Circular 02/99 (Ref. 1)³ sets out the tests to apply in determining the need for an EIA, as summarised below:

- a. Major developments which are of more than local importance;
- b. Developments which are proposed for particularly environmentally sensitive or vulnerable locations; and
- c. Developments with unusually complex and potentially hazardous environmental effects.

¹ Size, cumulative effects, use of natural resources, production of waste, pollution and nuisances and risk of accidents.

² The extent of effect, any transfrontier nature of effect, the magnitude and complexity of effect, the duration, frequency and reversibility of effect.

³ It should be noted that Circular 02/99 (Ref. 1) (Environmental Impact Assessment) is currently under review and subsequently *Consultation Papers* ‘Amended Circular on Environmental Impact Assessment’ (Ref. 2) and ‘Environmental Impact Assessment: A guide to good practice and procedures’ (Ref. 3) have also been considered to determine procedures for this EIA.

- 3.1.11 The Project meets these criteria, requiring EIA, for the following reasons:
- a. The Project is of importance to the North West of England – it has an importance that is wider than local;
 - b. The Project is located in an area close to the Mersey Estuary Special Protection Area (SPA) and Ramsar site, which is – or may be - ecologically sensitive;
 - c. Other sensitive features in the location of the Project include; residential and employment areas, community facilities, areas of cultural heritage interest, areas of contaminated land and important landscape feature areas; and
 - d. Disturbance to contaminated land as a result of the Project has the potential to create environmental effects.

3.2 Requirement for Appropriate Assessment - the Habitats Regulations

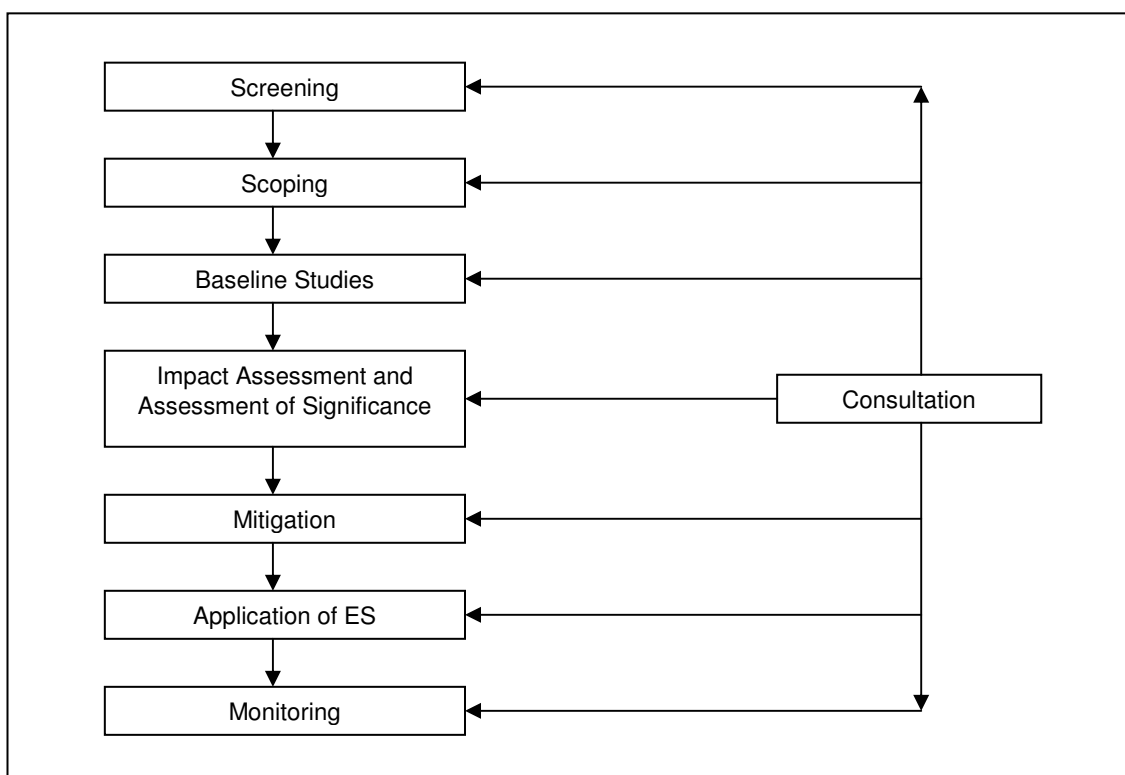
- 3.2.1 An Appropriate Assessment is also relevant in addition to the EIA for the Project due to its proximity to the Mersey Estuary SPA and Ramsar site, which are protected under the Conservation (Natural Habitats &c) Regulations 1994 (the “Habitats Regulations”). Although the Project will not take place within the Mersey Estuary SPA and Ramsar Site the site is conceivable that it may be affected, indirectly, as a result of the works. Accordingly, although an Appropriate Assessment is not required as a matter of strict interpretation, the relevant data is presented in this ES on a precautionary basis.
- 3.2.2 Appropriate Assessment is a separate assessment exercise to the EIA required for the purposes of the Habitats Regulations. It is performed by the competent authority based on data presented to it for the purpose, typically derived from or contained in the ES.
- 3.2.3 Natural England’s *Habitats Regulations Guidance Note 1: The Appropriate Assessment (Regulations 48)* (Ref. 4) describes how an Appropriate Assessment should be undertaken based on a series of nine steps, which are explained in detail. These steps include consultation, data collection, impact identification and assessment, recommendation of project modification and/or restriction, and reporting (Table 3.3). Appropriate Assessment is concerned with the potential for designated features of a site of European nature conservation interest to be adversely affected by development, either alone, or in combination with other plans and projects. The assessment is recorded in terms of the predicted effect on the integrity of a European designated site.
- 3.2.4 *Circular 06/05: Biodiversity and Geological Conservation – Statutory obligations and their impact with the planning system* (Ref. 5) provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the expression of national planning policy in *Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9)* (Ref. 6). Circular 06/05 defines the integrity of a European site as “*the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*”.
- 3.2.5 An adverse effect is likely to be one that prevents the site from maintaining the same contribution to “favourable conservation status” for the relevant feature(s) as it did when the site was designated. The favourable conservation status of the SPA is defined through its conservation objectives, which are further considered in Chapter 10 of this ES. The potential for the Project to affect the SPA should be judged against its potential to influence the ability of the site to meet these objectives. This judgement represents the Appropriate Assessment, and is made by the competent authority using information provided by the Applicant.

- 3.2.6 The scope and content of the information required in order to make an Appropriate Assessment will depend on the location, size and significance of the project. Natural England advises on the need for an appropriate assessment on a case-by-case basis and has provided such advice in this case, confirming that an Appropriate Assessment is needed.
- 3.2.7 Step 1 of Natural England's guidance is concerned with determining the need for Appropriate Assessment in the first instance, that is, considering the potential for the Project to have a significant effect on the European site. *[In this case, Natural England and the Environment Agency have indicated that in their opinion the potential exists for a significant effect on the designated status of the SPA to arise as a result of the Project.]* It should be noted that this opinion is not necessary probative.
- 3.2.8 The competent authorities (as defined in the Habitats Regulations) are responsible for the Appropriate Assessment itself, whilst the applicant for the development consent is responsible for providing the information required to inform that assessment. In the case of the Project the competent authorities include the Council in respect of the applications for planning permission and the Secretary of State for Transport in respect of the applications for a Transport and Works Act Order.
- 3.2.9 This ES provides the information necessary for the Council and the Secretary of State to make such an assessment. This ES addresses each of the steps identified in Natural England's guidance, save for step 9. Step 9 represents the Appropriate Assessment itself, that is, the judgement of the relevant competent authority in the context of the Habitats Regulations when considering consent for the Project, for example the Council in relation to the planning application, and the Secretary of State for Transport in respect of an application for Order under the Transport and Works Act 1992. The nine steps are considered in Chapter 10 of this ES, which also includes a recommended conclusion in respect of the appropriate assessment.

3.3 EIA Process

- 3.3.1 EIA has been displayed in the Project alongside technical and design considerations, and public consultation / involvement, to inform the decision-making process. EIA has enabled predicted effects of the project to be determined (scoped) and an assessment made of their significance through detailed studies and surveys of environmental, social and economic effects. It has also allowed appropriate mitigation measures to be determined. These measures can then be incorporated into the design of the Project during its evolution, to ensure that as many adverse environmental effects as possible are 'designed out' and as many positive effects as possible are enhanced. Effects associated with the chosen design (both positive and negative) are discussed in detail in the ES, and mitigation measures presented.
- 3.3.2 The EIA follows a series of well developed methodologies and techniques for the assessment of effects including those set out in the Department for Communities and Local Government's Circular 02/99, Consultation Papers on amendments to the EIA Circular (Ref. 2) and EIA: A guide to good practice and procedures (Ref. 3) and the Institute of Environmental Management and Assessment's Guidelines (Ref. 7) for EIA. Endeavours have also been made to follow the principles contained within other specific guidance produced by professional bodies, such as the Design Manual for Roads and Bridges (Ref. 8) and the Institute of Ecological and Environmental Management's (Ref. 9) guidance on ecological impact assessment where appropriate. The EIA process is outlined below and shown in Figure 3.1. It can be seen that consultation forms a key element of the EIA process feeding into all stages.

Figure 3.1 – EIA Process



Screening

- 3.3.3 Screening is the process by which it is decided if an EIA is required for a proposed development project. Section 3.1 above sets out the reasons for the requirement of an EIA for the Project.

Scoping

- 3.3.4 Scoping is the process of determining the context and extent of matters to be covered by the EIA and reported in the ES. Scoping provides a mechanism for the remit of the EIA to be agreed with regulators, stakeholders and other interested parties.

- 3.3.5 A scoping exercise was undertaken to identify all potential significant environmental effects likely to be associated with the construction and operation of the Project. In determining the scope of the EIA Schedule 4 of the EIA Regulations specifies that “a description of aspects of the environment likely to be significantly affected by the development including, in particular, population, fauna, flora, soil, water, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors” are to be considered. This then enables the areas and interests likely to be affected to be identified by the consultant team carrying out the EIA. Then, as set out in Table 3.1 above, it was possible to consult stakeholders as to the scope identified for the EIA in respect of the Project.

- 3.3.6 The results of the scoping exercise for the Project were summarised in The Project Orders and Applications Environmental Impact Assessment Scoping Report. This document was published for consultation in September 2007. This was issued to a wide range of statutory and non-statutory consultees as listed in Appendix 3.1 for their comments and was also made available to the public on the Mersey Gateway website www.merseygateway.co.uk. This sought to ensure that the EIA focused on all potentially significant environmental effects including areas of particular concern to stakeholders. The consultation provided consultees with the opportunity to comment on the scope of the EIA at an early stage in the process. Comments received from consultees about the scoping report have been taken into consideration and have informed the EIA.
- 3.3.7 The list below summarises the main environmental receptors that were considered likely to be significantly affected by the Project following the scoping exercise.
- a. Upper Mersey Estuary Designated Sites (SPA, Ramsar, SSSI and SINC);
 - b. Protected species of terrestrial flora and fauna (including birds);
 - c. Protected species of aquatic fauna and flora;
 - d. Surface water features (canals, brooks and the Estuary);
 - e. Groundwater;
 - f. Humans;
 - g. Features of cultural heritage importance;
 - h. Construction workers;
 - i. Waste facility capacity;
 - j. Local and inter-urban transport and public transport;
 - k. Pedestrians and cyclists;
 - l. Liverpool John Lennon Airport;
 - m. Users of waterways; and
 - n. Employers and businesses.
- 3.3.8 For all the above environmental receptors it was considered that potentially significant environmental effects may occur during both the construction and operational phases.
- 3.3.9 Construction effects that were considered to require assessment comprised those arising from the activities required to construct the Project, including those activities and effects listed below.
- a. Temporary land take;
 - b. Temporary diversions of rights of way;
 - c. Stopping up of rights of way;
 - d. Land Drainage;
 - e. Temporary discharge for cofferdam de-watering;
 - f. Possessions of Network Rail's railway network;
 - g. Haul routes;
 - h. Temporary road traffic management;
 - i. Contractors compound;
 - j. Temporary storage areas (for material and excavated spoils);
 - k. Contaminated waste quarantine areas;
 - l. Emergency vehicle recovery facilities;
 - m. Batching plant(s);
 - n. Fuel storage;
 - o. Water storage;
 - p. Site office / welfare facilities;
 - q. Workers accommodation; and
 - r. Temporary balancing ponds.

- 3.3.10 Operational effects that were assessed included those arising from the permanent presence, operation and maintenance of the Project and its associated infrastructure.
- 3.3.11 Although generally construction effects tend to be temporary in nature and operational effects permanent, it is acknowledged that both temporary and permanent effects can occur during either phase of development. An example of a temporary construction phase effect would be the generation of noise as a result of construction activities. An example of a permanent construction effect would be the permanent loss of ecological habitat in the areas of the proposed New Bridge piers and towers.
- 3.3.12 The current 'baseline', the future 'do-minimum' (or do nothing as appropriate – see paragraph 3.3.13) and the 'with scheme' scenarios were assessed by the EIA. For the purposes of this assessment the 'do-minimum' scenario was defined as what would occur in the assessment year without the Project but with all other proposed developments in place (as detailed in the Cumulative Effects Assessment – Chapter 21) and the 'with scheme' scenario as the assessment year with the Project in place along with all other proposed developments.
- 3.3.13 It is necessary to be consistent with the methodologies employed and the results presented elsewhere in this ES, particularly in relation to transport. Chapters 16, 17 and 19 of this ES have considered the 'do minimum' scenario as the basis for assessment of the effects of the Project instead of 'do nothing'. The do minimum scenario is an extension of the current baseline, extrapolated to present the situation in a future year, taking account of routine and essential works to maintain network performance and accommodate National Road Traffic Forecast growth, but excluding substantive capital works. The 'do nothing' scenario has been considered by all other chapters that are not reliant on traffic data. It assumes that the baseline and trends within it will continue to the assessment year. The assessment of the effects of the Project considers the changes it might cause to this trend.
- 3.3.14 For the purposes of this EIA the assessment year is defined as the opening year of the Project i.e. 2015. In line with the Transport Assessment (Chapter 16), Chapters 17 and 19 also provide an assessment of the 'design' year i.e. 15 years following the opening of the Project - 2030. Unless specified in relevant methodologies all other technical assessments only consider the assessment year - 2015.

Baseline Studies

- 3.3.15 Baseline information was collected for those subjects likely to be affected and identified as a result of the scoping exercise as being likely to report or identify a significant effect. This set the context and benchmark for the assessment of each environmental topic as reported in Chapters 7 to 20. This baseline information was collected through a variety of methods, including collation of existing third party data, field surveys and investigations, consultations and desk based assessments.

Effect Assessment and Assessment of Significance

- 3.3.16 Effect⁴ assessment refers to the change that is predicted to take place to the existing environment (the baseline / receptors) as a result of the impact of the Project. The EIA Regulations require that an EIA should assess all potentially significant effects on receptors due to a development, be they direct, indirect, secondary, cumulative, short, medium or long-term (relating to the sensitivity of the receptor), permanent and temporary, positive or negative. The assessment should examine results in respect of and arising from:
- a. The existence of the development;
 - b. The use of natural and other resources; and
 - c. The emission of pollutants, the creation of nuisances and the elimination of waste.
- 3.3.17 As part of the EIA process, all potential effects likely to occur as a result of the impact of the Project were identified and characterised. This characterisation of effects was based on a number of factors as summarised below:
- a. Positive or Negative;
 - b. Short, medium or long term;
 - c. Permanent or temporary (reversible or irreversible);
 - d. Direct or indirect; and
 - e. Magnitude – high, moderate or low.
- 3.3.18 The ‘receptors’, or receiving environments, for each effect were identified and their sensitivity determined. Both the identification and characterisation of effects and receptors were informed by the scoping and baseline studies. The characterisation of effects provided a means to compare different effects in terms of their ‘significance’ so that an informed decision could be made as to the material importance of each identified effect in the EIA process.
- 3.3.19 One of the challenges in presenting the results of an assessment of effects conducted in the manner described above is that the assessment of the relative significance of one effect compared with another is different for each environmental topic. This is largely due to the different assessment methodologies deployed within each topic. So far as appropriate, effects have been assessed quantitatively using definitive standards, legislation and guidance applicable to each topic. Where quantitative assessment has not been possible, qualitative evaluation of significance based on professional judgement has been applied. As far as possible, the same terminology for assessing and recording the significance of an effect was used throughout the EIA and this ES. Significance was judged by comparing the *extent* of the change against relevant legislative requirements, standards, best practice, technical judgement and criteria outlined below relevant to a particular environmental topic (Ref. 10).
- 3.3.20 The significance of an effect was based on a function of the *character* and *magnitude* of the effect and the *sensitivity* and *importance* of the receptor. Methodologies for defining significance environmental effects are not prescribed by law. Therefore, unless any professional body stipulates measures, the decision on whether a specific effect is significant or not, and the degree of significance assigned to each effect, has been based on professional judgement and best practice on the part of the technical authors of the ES, the EIA co-ordinator and responses from stakeholders, regulators and other consultees to the consultation process undertaken throughout the EIA.

⁴ For the purposes of this ES an “impact” is the process of change brought about by the Project and an “effect” is the consequences of this impact for a receptor.

- 3.3.21 Cumulative effects i.e. the effects of the Project in combination with other developments have been assessed as part of the EIA process through a Cumulative Effects Assessment (CEA reported on in Chapter 21).
- 3.3.22 The transport modelling undertaken for the Project required information on future developments to model future traffic flows. In order to rationalise which planning applications should be included in the CEA, and to ensure consistency with the transport modelling, it was decided that the developments included as part of this modelling would be used to inform the CEA.
- 3.3.23 In order to obtain information on future developments for the transport modelling, meetings were held with a number of authorities, as listed below, to gather full information on all projects. In general, residential developments of fewer than 50 units were not considered significant on an individual basis as the overall traffic growth model could reflect these relatively small-scale developments. For non-residential development or redevelopment no cut-off was applied as all of these sites may be considered significant. Planning applications for material change of use were not considered.
- 3.3.24 Although specific developments were identified for the purposes of the CEA, certain parts of the EIA did not use this technique. Transport Assessments and other disciplines relying on transport data (e.g. noise and air quality) relied upon traffic growth factors that were determined having regard to these specific developments but also to the national road traffic forecasting growth factors. These growth factors include likely development and network growth and accordingly reflect the specific proposals by that means.
- 3.3.25 The following local authorities were consulted in order to gather information on proposed developments for the transport modelling:
- a. Cheshire County Council;
 - b. Halton Borough Council;
 - c. Knowsley Metropolitan Borough Council;
 - d. Liverpool City Council;
 - e. St Helens Metropolitan Borough Council;
 - f. Sefton Metropolitan Borough Council;
 - g. Warrington Borough Council; and
 - h. Wirral Borough Council.
- 3.3.26 The following regional bodies were also consulted in order to verify the information:
- a. North West Regional Assembly;
 - b. Highways Agency;
 - c. Government Office North West; and
 - d. North West Development Agency.

Mitigation

- 3.3.27 Schedule IV Part I of the Town and Country Planning (EIA) (England and Wales) Regulations 1999 requires the ES to provide 'a description of measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment'. Mitigation measures were therefore explored for all significant, negative effects where it was technically and environmentally possible to deliver reliable and effective mitigation measures.

- 3.3.28 The principles established by the 'mitigation hierarchy' produced by the Department for the Environment Transport and the Regions (Ref. 11) and the consultation document EIA: A guide to good practice and procedures (Ref. 3) were used to consider options for mitigation measures (refer to Table 3.2). The hierarchy drives the consideration of environmental effects during project design rather than their consideration once the design has been fixed.

Table 3.2 - The Mitigation Hierarchy (CLG, 2006)

Mitigation Hierarchy
Avoidance – making changes to the project's design (or potential location) to avoid adverse effects on an environmental feature. This is considered to be the most acceptable form of mitigation.
Reduction – where avoidance is not possible, adverse effects can be reduced through sensitive environmental treatments/design.
Compensation – where avoidance or reduction measures are not available, it may be appropriate to provide compensatory measures. It should be noted that compensatory measures do not eliminate the original adverse effect, they merely seek to offset it with a comparable positive one.
Remediation – where adverse effects are unavoidable management measures can be introduced to limit their influence.
Enhancement – projects can have positive effects as well as negative ones, and the project preparation stage presents an opportunity to enhance these positive features through innovative design.



- 3.3.29 Options for mitigation from as high up the hierarchy as possibly (i.e. avoidance) were first considered, working down the hierarchy (to enhancement) until some form of successful mitigation was achieved. This was undertaken for effects created during all stages of the project development (construction and operation). In some cases mitigation measures themselves were found to create effects, which were assessed in the EIA and are reported in this ES.
- 3.3.30 Enhancement measures were suggested where it was technically and environmentally possible to deliver them reliably and effectively. These were designed to enhance positive effects created by the Project and appear as the last stage of the Mitigation Hierarchy.
- 3.3.31 Residual effects that are likely to occur, or remain, following mitigation were also assessed, and it is these residual effects, both positive and negative, which represent the environmental changes likely to result from the Project.
- 3.3.32 Effect summary tables have been provided within each of the technical chapters of this ES. These tables summarise effects, mitigation and enhancement measures and residual effects. Where effects are considered to not be significant, the rows are shaded in grey to highlight this.

3.4 EIA Consultation

- 3.4.1 A vital part of the EIA process was consultation. This ensured that technical information necessary for a comprehensive EIA was obtained and allowed consultees (both statutory and non statutory) to make formal representations on the content of the EIA. In managing the consultation process, attention was paid to ensuring that stakeholders were provided with the opportunity to respond and, where reasonable, responses were pursued as part of the EIA process. This was important to ensure a comprehensive EIA which fulfilled the requirements of the EIA Regulations (1999).

Technical Consultations

- 3.4.2 Statutory consultees (as listed in Appendix 3.1) were consulted on specific environmental issues throughout the process. This consultation was undertaken via face to face meetings, telephone calls and the issue of technical documents for comment.

Social Research

- 3.4.3 In addition to statutory and technical consultation, the wider community was also consulted. This informed the socio-economic assessment that is part of this EIA and found at Chapter 20. This consultation exercise targeted key, vulnerable groups and individuals likely to be particularly affected by social factors associated with the construction and operation of the Project. This consultation involved a number of different consultation techniques including focus groups and face to face interviews.

3.5 Expertise

- 3.5.1 The following technical specialists have been involved in the production of this EIA.

- a. ABP Mer - Hydrodynamics;
- b. APEM Limited - Aquatic Ecology;
- c. Amion - Economics;
- d. Andrew Ward - Terrestrial and Avian Ecology;
- e. Bertram Hyde Limited - Landscape and Visual Amenity;
- f. Bureau Veritas - Noise and Air Quality;
- g. Collingwood Environmental Planning – Socio-economics;
- h. Danish Hydraulic Institute - Hydrodynamics;
- i. Donaldsons - Economics;
- j. Ecological Research & Advisory Partnership (ERAP) - Terrestrial and Avian Ecology;
- k. Gifford - lead EIA co-ordinator;
- l. GVA Grimley - Planning;
- m. Martin Knight Associates - Landscape and Visual Amenity;
- n. Mott McDonalds - Transportation;
- o. MVA Consultancy - Social Research;
- p. RSK - Contamination; and
- q. University College London - Hydrodynamics.

3.6 References

- Ref 1 Department for Communities and Local Government, 1999. Circular 02/99: Environmental Impact Assessment.
- Ref 2 Department for Communities and Local Government, 2006. Circular on Environmental Impact Assessment.
- Ref 3 Department for Communities and Local Government, 2006. Environmental Impact Assessment: A guide to good practice and procedures.
- Ref 4 Natural England, 1994. Habitats Regulations Guidance Note 1: The Appropriate Assessment (Regulations 48). The Conservation (Natural Habitats &c) Regulations.
- Ref 5 Department for Communities and Local Government, 2005. Circular 06/05: Biodiversity and Geological Conservation. Statutory Obligations and their Impact Within the Planning System.
- Ref 6 Department for Communities and Local Government, 2005. Planning Policy Statement 9: Biodiversity and Geological Conservation.
- Ref 7 Institute of Ecological and Environmental Management, 2006, Guidance on Ecological Impact Assessment.
- Ref 8 Design Manual for Roads and Bridges,
www.standardsforhighways.co.uk/dmrb/index.htm
- Ref 9 Institute of Environmental Management and Assessment, 2004. Guidelines for Environmental Impact Assessment. IEMA
- Ref 10 Carroll, B & Turpin, T, 2002. Environmental Impact Assessment Handbook. A practical guide for planners, developers and communities. Thomas Telford Publishing.
- Ref 11 DETR, 1997. Mitigation Measures in the Environmental Statements. Department for the Environment Transport and the Regions, TSO, London