

# THE MERSEY GATEWAY PROJECT

## DELIVERY PHASE

### 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 and Directive 2003/35/EEC) 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 Since the Orders ES was published the Town and Country Planning (Environmental Impact Assessment) Regulations 2011<sup>13</sup> were laid before Parliament as Statutory Instrument (SI) 1824 2011. The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (“EIA Regulations”) came into force on 25<sup>th</sup> August 2011 and replace the Town and Country Planning (EIA) (England & Wales) Regulations 1999 and the various amendments to these regulations.

3.1.3 The Department for Communities and Local Government (**DCLG**) have confirmed that, “it is intended to publish guidance shortly after the new Regulations come into force”, which will replace the advice in Department of the Environment, Transport and the Regions (DETR) Circular 02/99 for England. This has not occurred at the time of writing.

3.1.4 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”). As a consequence of the Proposals detailed in Chapter 2 an Environmental Impact Assessment (EIA) for the Further Applications is required in line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 under Schedules 2 and 3.

3.1.5 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 Further Applications ES, the competent authorities include:

- a. Halton Borough Council (“The Council”) as local planning authority in respect of the planning application and the listed building consent applications; and
- b. ~~The Secretary of State for Transport in respect of the application pursuant to the Transport and Works Act 1992.~~

~~3.1.6 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.~~

~~The text above has been deleted because the Further Application ES relates only to the Further Applications and not the Permission and Orders which have already been granted or made and not subject to amendment as part of the Further Applications.~~

**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 (the "RUCO") under Part III of the Transport Act 2000 to authorise the charging of tolls to use the Silver Jubilee Bridge.

- 3.1.7 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 [including the Proposals](#) and the means of mitigating negative effects and enhancing positive effects. The EIA in respect of the Project [including the Proposals](#) 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 [including the Proposals](#) are reported in this [Further Application ES](#).
- 3.1.8 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 [including the Proposals](#) 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.
- 3.1.9 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 including the Proposals](#) 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>                       |
- 3.1.10 Having established that the Project [including the Proposals](#) 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 [including the Proposals](#) 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.

- 3.1.11 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 development<sup>1</sup>, the location of the development (sensitivity and importance of receptors) and the characteristics of potential effects<sup>2</sup>. These factors were considered when determining the importance of receptors in the EIA.
- 3.1.12 The Government Circular 02/99 was prepared in the context of the 1999 EIA Regulations which have now been replaced. The Circular is therefore superseded in some places, however it remains the most up to date expression of government policy and has relevance where the provisions have been incorporated unamended in the 2011 EIA Regulations.
- 3.1.13 Government Circular 02/99 (Ref. 1)<sup>3</sup> 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.
- 3.1.14 The Project [including the Proposals](#) meets these criteria, requiring EIA, for the following reasons:
- a. The Project [including the Proposals](#) is of importance to the North West of England – it has an importance that is wider than local;
  - ~~b.~~ The Project [including the Proposals](#) 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 [including the Proposals](#) 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 [including the Proposals](#) has the potential to create environmental effects.

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

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

<sup>3</sup> It should be noted that Circular 02/99 (Ref. 1) (Environmental Impact Assessment) [has been replaced](#) ~~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. [Both of these documents referred to proposed amendments to circular 02/99 in 2006. Neither document was subsequently issued as a final document.](#)

## 3.2 Requirement for Appropriate Assessment - the Habitats and Species Regulations 2010

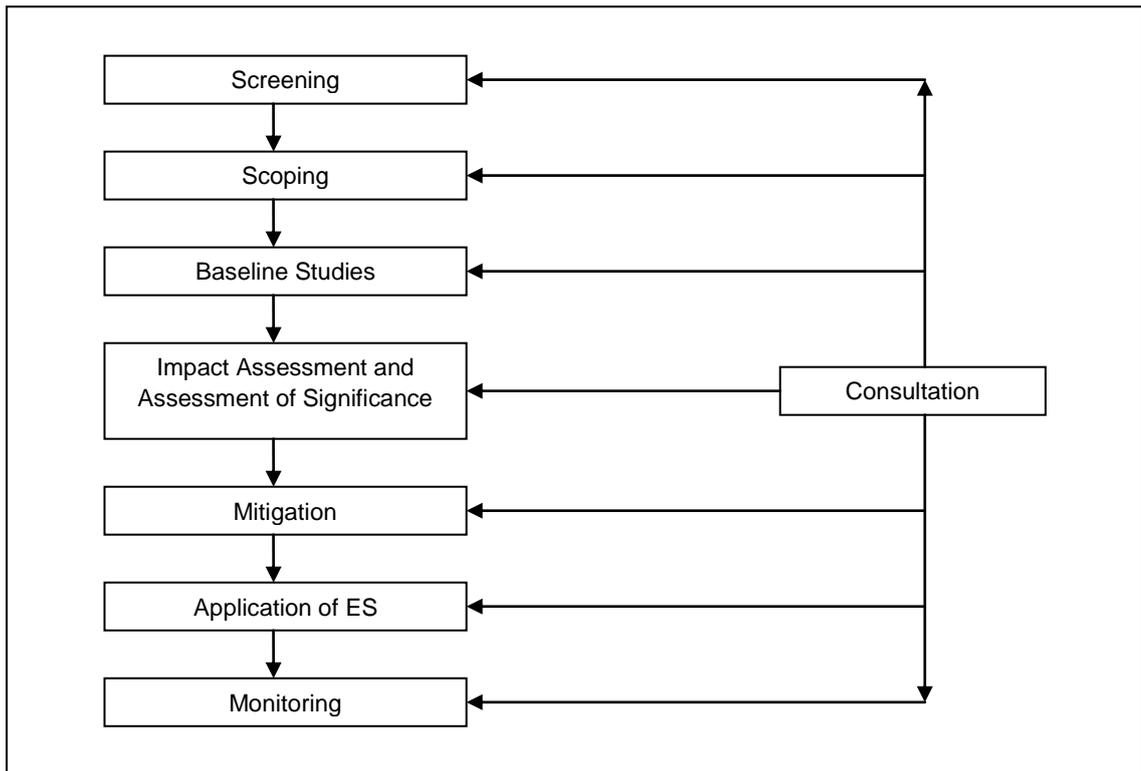
- 3.2.1 An Appropriate Assessment is also relevant in addition to the EIA for the Project including the Proposals due to its proximity to the Mersey Estuary SPA and Ramsar site, which are protected under the Conservation of Habitats and Species Regulations 2010 (the “Habitats Regulations”). Although the Project including the Proposals will not take place within the Mersey Estuary SPA and Ramsar Site ~~the site~~ it 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 Having taken account of the Inspector's comments at Inspector Report (IR) 11.3.5.1-11.3.5.10 and IR11.3.14.2, the Secretaries of State agree with the Inspector that the Mersey Gateway Bridge Project and the associated Proposals which comprise the Project would not adversely affect the integrity of the Middle Mersey Estuary Special Protection Area (IR11.3.5.10), and the Secretaries of State sees no reason to disagree with the Inspector's view (IR1.13) that there appears to be no need for an Appropriate Assessment under article 6(3) and (4) of the EC Habitats Directive 92/43/EEC.
- 3.2.3 Notwithstanding the Secretaries of State's findings this Further Application ES contains sufficient information to allow an appropriate assessment to be undertaken by the relevant competent authority. When making a decision on an application supported by this Further Application ES the competent Authority will be required to undertake an assessment of the Project including the Proposals upon the integrity of the European site based on the findings in this ES. The competent Authority is the Borough Council and it may review and rely on the Secretaries of State's findings following the Orders ES.
- 3.2.4 The Updated Reference Design is not expected to materially change the Reference Design in any way that would make it likely that the Secretary of State would come to a different conclusion than they did following the public inquiry. Accordingly an Appropriate Assessment will not be carried out. Further explanation is provided in Chapter 10.
- ~~3.2.5 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.~~
- ~~3.2.6 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.~~

- 3.2.7 *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*”.
- 3.2.8 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 [Further Applications ES](#). The potential for the Project [including the Proposals](#) 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.~~
- 3.2.9 ~~For the reasons presented in paragraph 3.2.2 above an Appropriate Assessment will not be undertaken as part of this Further Application and so the text provided below is no longer applicable. 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.~~
- ~~3.2.10 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.~~
- ~~3.2.11 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.~~
- ~~3.2.12 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 [including the Proposals](#) 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 [including the Proposals](#) 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 [Further Applications](#) 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.
- 3.3.3 [In October 2009 the Highways Agency issued a new Interim Advice Note, IAN 125/09 which had the effect of modifying the Design Manual for Roads and Bridges \(DMRB\). This advice note revised the layout of EIAs undertaken for Highways Agency projects splitting some of the former chapters up and introducing one new chapter.](#)
- 3.3.4 [The IAN outlined the combination of parts of two former chapters \(Vehicle Travellers and Pedestrians/cyclists/equestrians & Community Effects\) into a new chapter called "Part 8 Effects on all travellers". The new chapter that was introduced by the IAN was called "Waste and Materials" though to date no guidance has been released by the Highways Agency on the methodologies to be used in preparing this chapter.](#)
- 3.3.5 It is not proposed to integrate the effects of this IAN into the Further Applications ES for the following reasons:
- a. [The IAN changes the layout of Transport related EIA's but this would not readily allow the use of the "comparite" method that has been adopted for the Further Applications ES \(paragraph 6.3.2 refers\);](#)
  - b. [The IAN does not, in itself, change any of the methodologies that have been proposed, and so presenting the Further Applications ES in the formerly used layout will not compromise the technical methodologies being used or the scope of the assessments that are undertaken; and](#)
  - c. [The use of the new IAN for projects already underway is noted to be at the discretion of the promoter. Where projects have reached a stage where its use would result in significant additional costs, or introduce delay to the process, then the project promoter can decide not to adopt the IAN, so long as he records his decision.](#)

**Figure 3.1 – EIA Process**



**Screening**

3.3.6 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 including the Proposals.

**Scoping**

3.3.7 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.

3.3.8 For the Orders ES a A scoping exercise was undertaken to identify all potential significant environmental effects likely to be associated with the construction and operation of the Project including the Proposals. 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 Figure 3.1 above, it was possible to consult stakeholders as to the scope identified for the EIA in respect of the Project including the Proposals. For the purpose of the Further Applications ES this has been reviewed and updated where required.

3.3.9 The results of the scoping exercise for the Project [including the Proposals](#) were summarised in The Project Orders and Applications Environmental Impact Assessment Scoping Report. This document was published for consultation in ~~September 2007~~ [October 2011](#). This was issued to a wide range of statutory and non-statutory consultees as listed in Appendix 3.1 for their comments [and this has been updated for the Further Applications ES](#), ~~and was also made available to the public on the Mersey Gateway website [www.merseygateway.co.uk](http://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 [have been received from the consultees listed below](#) about the scoping report [and their comments](#) taken into consideration and have informed the EIA.

- a. [Natural England](#)
- b. [Environment Agency](#)
- c. [Halton Borough Council](#)

3.3.10 The list below summarises the main environmental receptors that were considered likely to be significantly affected by the Project [including the Proposals](#) following the scoping exercise. [These have not changed from those identified in the Orders ES](#).

- a. Upper Mersey Estuary and Middle Mersey Estuary Designated Sites (SPA, Ramsar, SSSI and ~~LWS 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.

3.3.11 For all the above environmental receptors it was considered that potentially significant environmental effects may occur during both the construction and operational phases.

- 3.3.12 Construction effects that were considered to require assessment comprised those arising from the activities required to construct the Project [including the Proposals](#), 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.
  - s. [Removal of tolls hence removal of toll offices/welfare facilities.](#)
- 3.3.13 Operational effects that were assessed included those arising from the permanent presence, operation and maintenance of the Project [including the Proposals](#) and its associated infrastructure.
- 3.3.14 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.
- 3.3.15 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 [including the Proposals](#) 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 [including the Proposals](#) in place along with all other proposed developments.

- 3.3.16 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 **including the Proposals** 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 ~~the 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 **including the Proposals** considers the changes it might cause to this trend.
- 3.3.17 For the purposes of this EIA the assessment year is defined as the opening year of the Project **including the Proposals** i.e. ~~2015~~ **2017**. 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 **including the Proposals** – ~~2030~~ **2032**. Unless specified in relevant methodologies all other technical assessments only consider the assessment year – ~~2015~~ **2017**.

### **Baseline Studies**

- 3.3.18 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.
- 3.3.19 **As part of the Orders ES various studies were undertaken; these covered both areas generic to the Project and specific disciplines. The outputs of these studies will inform and/or be used in the EIA process. Where necessary further studies and/or investigations needed to assess the Project including the Proposals has been included in the Further Applications EIA to augment the existing data.**

### **Effect Assessment and Assessment of Significance**

- 3.3.20 **The Further Applications ES will review all of the effects identified in the Orders ES together with any new effects that have been identified as a result of the Project including the Proposals.**
- 3.3.21 Effect<sup>4</sup> 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 **including the Proposals**. 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.

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<sup>4</sup> 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.

- 3.3.22 As part of the EIA process, all potential effects likely to occur as a result of the impact of the Project [including the Proposals](#) 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.
- 3.3.23 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.
- 3.3.24 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).
- 3.3.25 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.
- 3.3.26 Cumulative effects i.e. the effects of the Project [including the Proposals](#) 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).
- 3.3.27 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.
- 3.3.28 [The Mersey Gateway Traffic Model \(MGM\) was used to inform the Orders ES assessments. No further work was undertaken on the development of the MGM for the Further Applications ES, although traffic flow forecasts were updated based upon the April 2011 revised guidance from the DfT. Paragraphs 3.3.29-3.3.32 outlines the consultation undertaken on future development required to inform the MGM. The MGM has formed the basis of the assessments for both the Orders ES and Further Application ES.](#)

- 3.3.29 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.
- 3.3.30 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.
- 3.3.31 The following local authorities were consulted in order to gather information on proposed developments for the transport modelling:
- a. Cheshire East Borough Council;
  - b. Cheshire West and Chester Council;
  - c. Halton Borough Council;
  - d. Knowsley Metropolitan Borough Council;
  - e. Liverpool City Council;
  - f. St Helens Metropolitan Borough Council;
  - g. Sefton Metropolitan Borough Council;
  - h. Warrington Borough Council; and
  - i. Wirral Borough Council.
- 3.3.32 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**

- 3.3.33 Schedule IV Part I of the Town and Country Planning (EIA) (England and Wales) Regulations ~~1999~~ 2011 requires the [Further Application](#) 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.
- 3.3.34 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
<b>Avoidance</b> – 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.
<b>Reduction</b> – where avoidance is not possible, adverse effects can be reduced through sensitive environmental treatments/design.
<b>Compensation</b> – 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.
<b>Remediation</b> – where adverse effects are unavoidable management measures can be introduced to limit their influence.
<b>Enhancement</b> – 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.



- 3.3.35 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 [Further Applications ES](#).
- 3.3.36 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 [including the Proposals](#) and appear as the last stage of the Mitigation Hierarchy.
- 3.3.37 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 [including the Proposals](#).
- 3.3.38 Effect summary tables have been provided within each of the technical chapters of this [Further Applications 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.
- 3.3.39 As part of this [Further Application ES](#), a [Construction and Operation Code of Practice For Environmental Management \(COPE\)](#) has been developed to outline the measures required to mitigate the significant effects of the Project [including the Proposals](#) and monitor the construction and operation of the Scheme. Furthermore the COPE outlines the provision for auditing, reporting and action to be taken to rectify breaches to the COPE during construction and operation phases.

## 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 (1999/2011).

### **Technical Consultations**

- 3.4.2 For the Further Applications ES details of technical consultation, as required, can be found within the baseline section for each individual chapter. ~~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 Consultation for the Further Applications ES was undertaken in accordance with Halton Borough Council Social Community Involvement policy. This included manned public exhibitions, leaflets drops and local broadcasts. ~~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 including the Proposals. 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 for the Orders ES.

- 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 part of Ramboll - 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.

3.5.2 The following technical specialists have been involved in this Further Applications ES:

- a. ABP Mer - Hydrodynamics;
- b. APEM Limited - Aquatic Ecology and Surface Water Quality
- c. Halton Borough Council - Terrestrial and Avian Ecology;
- d. Gillespies LLP - Landscape and Visual Amenity;
- e. Bureau Veritas - Noise and Air Quality;
- f. Collingwood Environmental Planning – Socio-economics;
- g. Gifford – technical specialists and lead EIA co-ordinator
- h. Grimley - Planning;
- i. Martin Knight Associates – Architect;

### 3.6 References

- Ref 1 ~~Department for Communities and Local Government, 1999. Circular 02/99: Environmental Impact Assessment.~~
- Ref 13 [Town and Country Planning \(Environmental Impact Assessment\) Regulations 2011](#)
- 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](http://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