

**THE MERSEY GATEWAY PROJECT**  
**MITIGATION AND ENHANCEMENT MEASURES**  
**CHAPTER 22.0**

## MITIGATION AND ENHANCEMENT MEASURES

### CONTENTS

<b>22.</b>	<b>MITIGATION AND ENHANCEMENT MEASURES.....</b>	<b>22.3</b>
22.1	Introduction .....	22.3
22.2	Mitigation Measures Presented in this ES.....	22.3
22.3	Development of Mitigation .....	22.5
22.4	Delivery of Mitigation.....	22.5
22.5	References.....	22.6

**22. MITIGATION AND ENHANCEMENT MEASURES**

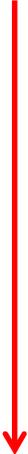
**22.1 Introduction**

22.1.1 Section IV of Part I of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (the “EIA Regulations”) sets out the requirement for ‘a description of measures envisaged to prevent, reduce and, where possible, offset any significant adverse effects on the environment’ to be presented in the Environmental Statement (ES). Essentially this entails identifying mitigation and compensation measure where appropriate.

22.1.2 The principles established by the ‘mitigation hierarchy’ produced by the Department for the Environment Transport and the Regions (Ref. 1) and the consultation document EIA: A guide to good practice and procedures (Ref. 2) produced by the Department for Communities and Local Government (DCLG) were used to consider options for mitigation measures, in accordance with the mitigation hierarchy (see to Table 22.1 below). The hierarchy is aimed at ensuring consideration of environmental effects during project design rather than their consideration once the design has been fixed.

**Table 22.1 - The Mitigation Hierarchy (DCLG, 2006)**

<b>Mitigation Hierarchy</b>
<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.



**22.2 Mitigation Measures Presented in this ES**

22.2.1 In accordance with this approach, chapters 7 to 21 of this ES set out a range of appropriate mitigation, enhancement and compensation measures according to the specific effects predicted to occur, their significance, and the solutions available to mitigate them. In all instances, care has been taken to ensure that the mitigation measures proposed are both deliverable (in terms of practical, logistical and financial parameters), and acceptable in terms of stakeholder agreement and ongoing consultation with key stakeholders and regulatory bodies.

22.2.2 Mitigation measures falling into the top category of Table 22.1, ‘Avoidance’, are not explicitly discussed in the individual chapters of this ES because the effects that they address have been considered in the development of the design of the Project which is the subject of the EIA and this ES. Therefore, their consideration here would amount to duplication. However, the Design and Access Statement, which also accompanies the applications and orders, sets out key aspects of the design that have been influenced by environmental considerations and the EIA process.

- 22.2.3 Environmental effects that have been avoided through scheme selection are discussed in Chapter 5 of this ES, which presents a summary of the alternative solutions, route options and construction methods considered in the development of the current Project.
- 22.2.4 Collectively, the mitigation measures incorporated into the Project as a result of the EIA process fall into the following categories:
- a. Measures included in the Project's design during its development in tandem with the EIA process (see para. 22.2.2 above);
  - b. Physical measures identified during the EIA to prevent or reduce effects, as set out in this ES;
  - c. Management measures – which are measures focussing on management and control of key processes, both during the construction and operational phases;
  - d. Measures to provide compensation where adverse effects are predicted to occur, and such effects cannot be dealt with higher up the mitigation heirachy (Table 22.1); and
  - e. Construction controls, management and procedures that are beyond standard regulatory compliance and good practice (which is assumed to be the baseline in terms of management of these processes).
- 22.2.5 Further explanations of each of the above points are provided below. In all instances, the discussion of mitigation measures and the principals behind the development of appropriate measures applies equally to both the construction and operational phases of the Project.

#### ***Measures Included in the Design***

- 22.2.6 Environmental considerations have been part of the development of the design for the Project from the very earliest evaluation of crossing options, through the route selection and the evolution of Route 3A. Details of this process are set out in Chapter 5. A further discussion of the design elements of the Project in respect of mitigation of environmental effects is set out in the Design and Access Statement

#### ***Physical and Direct Measures set out in this ES***

- 22.2.7 The EIA process has identified several instances where physical measures (engineered solutions) can be applied to avoid environmental effects altogether, or reduce their significance. Where such measures have been identified, they are described in the relevant chapter of the ES. All such measures are directly related to the effect described.

#### ***Management Measures***

- 22.2.8 Several mitigation measures are based around management techniques – special procedures which will be adopted to respond to particular environmental constraints or to avoid specific effects. Where such measures are set out, as well as presenting them in the ES, it will be necessary to include them in the Environmental Management Plan for the project. Further explanation is given in Chapter 23.

#### ***Measures to Provide Compensation***

- 22.2.9 In some instances, it is not possible to mitigate negative environmental effects directly through avoidance or reduction alone. In such instances, compensation to offset the effects described has been set out. It is important to note the difference between compensation and mitigation – compensation does not seek to prevent an impact occurring, hence its location below the avoidance and reduction in the mitigation heirachy. However, it does provide an effective means to achieve a net outcome where avoidance and reduction on their own are not achievable. Where compensation is presented, this is described in the relevant chapter (for example, Chapter 10, Terrestrial and Avian Ecology).

## **Construction Controls, Management and Procedures**

22.2.10 The consideration of the approach to construction and mitigation measures to be considered throughout the construction process is set out in the 'Construction Phase' effect assessment in each of chapters 7 to 21. The Construction Methods Report (Appendix 2.1, Chapter 2) sets out the construction processes assumed for the purposes of the EIA in each of the construction areas (defined in that report) in order to build the Project. Chapter 23, which describes the principals of Environmental Management which will require to be applied throughout the project's lifecycle also introduces the Construction Environmental Management Plan, a key aspect of the management and mitigation of adverse effects arising from construction.

### **22.3 Development of Mitigation**

22.3.1 In developing the mitigation measures set out in Chapters 7 to 21, the Project design, procurement, environmental and client teams have worked together to ensure that the measures proposed meet the following criteria:

- a. They are technically achievable within the design for the Project;
- b. Where their delivery is reliant upon land-take, the project boundaries reflect this;
- c. They are acceptable in terms of the logistics of their delivery (for example integration into the build and ongoing maintenance);
- d. Unless such an approach is unavoidable, they do not unduly constrain a future concessionaire to one solution to achieve the required outcomes;
- e. They do not compromise other environmental topics' abilities to mitigate their own effects; and
- f. They do not lead to a worsening of other effects, or lead to significant negative environmental effects of their own.

22.3.2 In addition to discussions within the project team, mitigation and compensation measures were discussed with stakeholders and regulators throughout the EIA process. Discussions will continue following the submission of the applications to allow specific subjects to be resolved and mitigation secured.

### **22.4 Delivery of Mitigation**

22.4.1 The mitigation measures are all deliverable within the remit of the Project, and all of the mitigation measures described in this ES form part of the applications and orders, and it is expected that the key vehicle for ensuring their delivery will be through planning conditions and provisions of an order under the Transport and Works Act 1992.

22.4.2 The mitigation measures listed will be developed into a register of commitments which will be updated as negotiations continue through the planning process and which will form the framework for the development of planning conditions or legal agreements.

22.4.3 For the purposes of their consideration within the ES, all mitigation measures should be considered as commitments and the applicant, the Council, offers its full support to this approach.

## 22.5 References

- Ref 1        DETR, 1997. Mitigation Measures in the Environmental Statements. Department for the Environment Transport and the Regions, TSO, London
- Ref 2        Department for Communities and Local Government, 2006. Environmental Impact Assessment: A guide to good practice and procedures.