

**THE MERSEY GATEWAY PROJECT**

**DELIVERY PHASE**

**ENVIRONMENTAL MANAGEMENT PLAN**

**CHAPTER 23.0**

## ENVIRONMENTAL MANAGEMENT PLAN

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## 23. ENVIRONMENTAL MANAGEMENT PLAN

### 23.1 Introduction and Purpose

23.1.1 Environmental Management Plans (EMP) are documents relating to a particular project, operation or plan, designed to ensure that environmental issues are considered and managed during its implementation and operation. They can be used on construction projects or on operational sites, especially where there are complex interactions with the natural and built environment, where activities are being undertaken in sensitive environments or where the activities themselves have the potential to result in significant environmental effects. An EMP should cover the entire lifecycle of its subject. For this Project [including the Proposals](#), moving forward from this [Further Applications ES](#), this means the detailed design which will be completed by the ~~concessionaire~~ [Project Company](#), construction and operation phases and the various transfers ('handovers') between them.

23.1.2 In Europe there are two standards used for EMPs, the European Union (EU) Environmental Management Appraisal System (EMAS) scheme and the International Standards Organisation (ISO) 14001 system (known as "ISO14001"). They share many common elements. The biggest difference is that under EMAS the EMP is published. In this project, the EMP will be part of the measures use to secure mitigation for the Project [including the Proposals](#). As such, it will be imposed by planning condition and hence - ultimately – it will be published.

23.1.3 The aims of an EMP are to:

- a. Identify the extant minimum legislative requirements that need to be met;
- b. Identify other commitments which relate to the project/activity;
- c. Set out procedures to manage environmental effects;
- d. Set out emergency and contingency plans; and
- e. Identify the organisation which will be set up to manage environmental issues for the project/activity, and a co-ordination / management hierarchy for the delivery of the EMP.

23.1.4 The purpose of the EMP for the Project is as follows:

- a. To set out how statutory and contractual environmental requirements and Project commitments throughout the construction and operation of the Project [including the Proposals](#) will be demonstrated, controlled, assured and managed;
- b. To set out the main mechanism to demonstrate how the effects identified in this [Further Applications ES](#) will be managed and minimised, and the mitigation measures which have been recommended have been taken forward;
- c. To set out the environmental implications of design change following employment of the ~~concessionaire~~ [Project Company](#)/main contractor and any value engineering undertaken, and the mitigation measures employed to minimise or avoid these issues;
- d. To set out activities that may require consents or licences;
- e. To ensure that mitigation measures are included in the tender and resulting contract requirements;
- f. To ensure the implementation of mitigation measures is clear;
- g. To provide procedures for environmentally sensitive working; and
- h. To meet the requirements set out in this [Further Applications ES](#).

- 23.1.5 The EMP will be a 'live' document that will be reviewed and developed on a regular basis and as necessary, subject to specific environmental requirements.
- 23.1.6 ~~An EMP will be required for the detailed design, construction and operation of the Project i.e. moving forward from this ES.~~ The EMP will comprise three main elements. These are:
- a. The main EMP Documents;
  - b. A Construction Environmental Management Plan (CEMP); ~~and~~
  - c. [A Maintenance and Operation Environmental Management Plan \(MOEMP\);](#) and
  - d. A Handover Environmental Management Plan (HEMP).
- 23.1.7 The EMP will provide the framework for the life-span of the Project. [A CEMP will be produced prior to construction works commencing. The CEMP will focus upon the measures necessary to deliver the construction related requirements of the EMP. A range of specific set of management documents will additionally cover the construction phase management and monitoring plans will support the CEMP. These are known as the CEMP.](#)
- 23.1.8 Once construction is complete, the management documents and other environmental information ~~will be passed to the person responsible for operating the Project in what is called a HEMP~~ [will be used to inform a Maintenance and Operation Environmental Management Plan \(MOEMP\) for the Project Company Operation and Maintenance team. Parts of the Project are likely to be handed to the Council immediately after construction but other parts will be operated and maintained by the Project Company until the end of the concession period before being handed back to the Council. Those parts of the Project handed back to the Council will also be subject to the MOEMP. At the point of a handover to the Council of any or all of the Project including the Proposals, a Handover Environmental Management Plan \(HEMP\) will be prepared to ensure that any ongoing environmental requirements are met.](#)

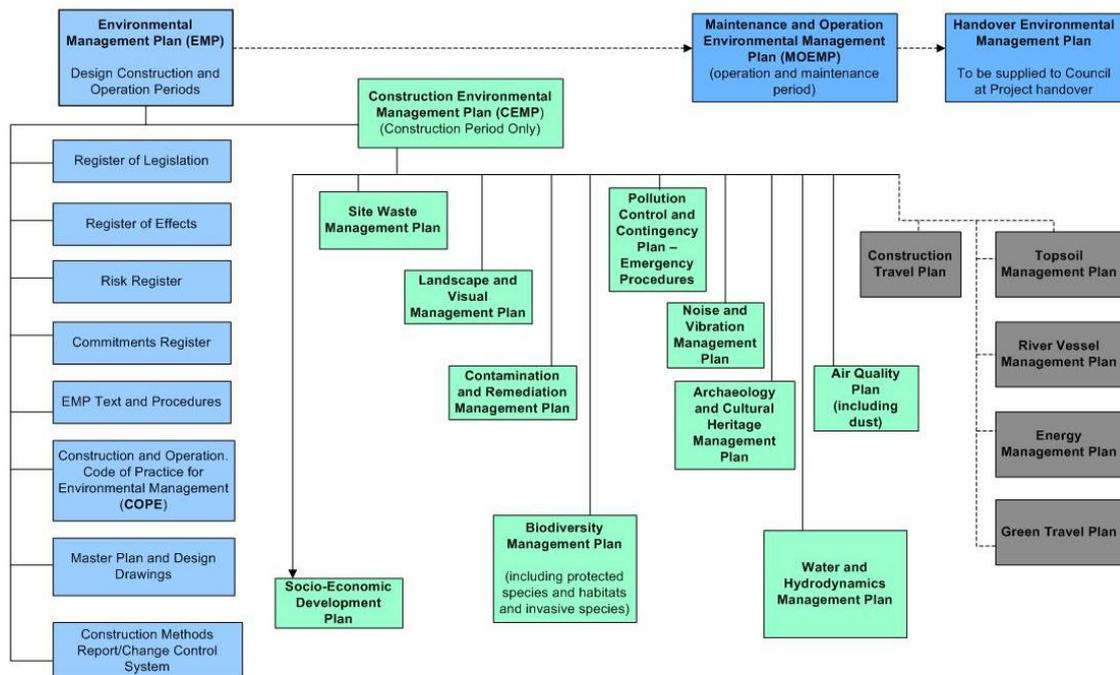
## 23.2 Requirement for EMP

- 23.2.1 As noted in Chapters 7 to 21 of this [Further Applications](#) ES, the Project [including the Proposals](#) lies adjacent to an environmentally sensitive location of international importance ([Ramsar/SPA/SSSI](#)), and is located in a position which presents many challenges and opportunities from an environmental perspective. In addition, the Project [including the Proposals](#) is complex with many activities taking place during the construction period. Individual aspects and combinations of activities could have significant effects on environmental and social receptors.
- 23.2.2 Interactions between construction and operational activities have the potential to affect sensitive environmental and social receptors. This requires considerable thought, both during the design process and in planning construction and post construction activities.
- 23.2.3 If legal and other commitments are to be met, and effects on the natural and built environmental are to be minimised, then a comprehensive set of management, monitoring, audit and feedback mechanisms as well as a defined management structure to cover environmental issues will be needed. This is best organised through an [overarching](#) EMP. In addition, mitigation measures set out in Chapters 7 to 21 require a framework for ensuring their delivery. As [explained in](#) Chapter 22 ~~explains~~, this framework ~~might include~~ [will need to take account of the existing Orders and Permissions together with any other](#) conditions, undertakings, contracts and statutory obligations. Whichever manifestation applies, a mechanism for collating and monitoring ~~these~~ is necessary and the EMP will fulfil this requirement.

### 23.3 EMP Contents

23.3.1 The structure of the proposed EMP is shown in Figure 23.1. It should be noted that this layout is conceptual and is likely to be modified prior to implementation of the Project. However, the intent and main elements of the final EMP will be similar in nature. It is proposed that the EMP be developed in accordance with the procedures set out in ISO14001.

**Figure 23.1 - EMP Structure, Including CEMP and HEMP**



23.3.2 The EMP will comprise a number of documents that will provide a framework for the environmental management of the construction and operation of the Project including the Proposals. These documents will either comprise new documents prepared prior to commencement of the works, or stem from documents originally developed by the Council and its partners during the Planning and Public Inquiry stages. These documents are likely to include:

- a. A register of appropriate legislation;
- b. A Register of significant Effects: This is likely to be developed from this ES;
- c. A Risk Register: This will be developed by the concessionaire Project Company using data from the Council;
- d. A Commitments Register: This will be developed by the concessionaire Project Company using data provided by the Council and presented in the ES (see Chapter 22);
- e. A register of ongoing environmental monitoring programmes and procedures. This is likely to be based on information contained within this ES;
- f. A Construction and Operation Code of Practice for Environmental Management (COPE): This will elaborate on the mitigation proposals set out within this Further Applications ES and set out the code of practice for the construction and operation of the Project. It will form the basis for the overall EMP;
- g. EMP text and procedures: These will include reporting and monitoring mechanisms and management procedures, roles and responsibilities, change

- control and continuous improvement programmes, method statements, maintenance programmes and procedures;
- h. Masterplan drawings: A master set of drawings illustrating all environmental effects and information; and
  - i. Method Reports/Method Statements which describe the method of construction.

## 23.4 Environmental and System Monitoring

- 23.4.1 The EMP will set out control measures necessary to minimise the construction and operational effects of the Project including the Proposals on the environment drawing from the Further Applications ES, to ensure that the level of effects predicted in the ES is either achieved or reduced. It will provide a framework to summarise environmental effects and risks highlighted by the EIA and provide procedures for the implementation of adequate environmental compliance, management and monitoring.
- 23.4.2 One of the main elements of the EMP will be the development and implementation of a monitoring programme. This will be a key mechanism which the concessionaire Project Company will use to ensure compliance with relevant legislation, standards and commitments, as well as ensuring that the residual effects which occur on the ground are the same or better than those predicted within the Further Applications ES. The monitoring plan will include details of:
- a. What monitoring will be undertaken (e.g. air, surface/ground water, soils, contamination, noise and vibration, archaeology, dust, traffic movements, audits (construction site and compounds));
  - b. Monitoring frequency;
  - c. Monitoring location;
  - d. Methods for monitoring and sampling;
  - e. Sampling protocols and chain of custody;
  - f. Analysis procedures; and
  - g. Emergency monitoring.
- 23.4.3 Reporting and feedback mechanisms for the monitoring plan will be important and will be linked into the site management programme to ensure corrective actions are identified and actioned to prevent non-compliance occurring.

## **23.5 The COPE**

- 23.5.1 The purpose of the COPE is to define the measures required to mitigate and monitor the construction and operation of the Project including the Proposals so as to protect the environment.
- 23.5.2 The COPE sets out provisions for the management, mitigation and monitoring of environmental effects during the construction and operational phases of the Project's implementation. It elaborates upon the mitigation proposals set out in the Further Applications ES and covers specific regulatory and best practice requirements.
- 23.5.3 It also outlines provisions for auditing, reporting and action to be taken to rectify any breaches to the COPE during construction and operation.
- 23.5.4 The provisions of the COPE will be secured through the imposition and implementation of planning conditions and incorporated into the contract(s) for the construction and operation of the Project. Because the Council will not build and operate the Project, any Project Company that it appoints to design, build and operate the Project, is likely to be responsible for discharge of these responsibilities.
- 23.5.5 The COPE has been produced as part of the Further Applications and is included as Appendix 23.2. It identifies the key mitigation measures and commitments agreed for the Project and will be passed forward in the EMP.
- 23.5.6 The COPE identifies various pre construction baseline monitoring and where this is requested before financial close then it will be undertaken by the Council. The results will then be brought forward to the Project Company when construction starts.

## 23.6 The CEMP

23.6.1 The CEMP will form a more specific element of the management of environmental issues concentrating on the construction phase. It will utilise the main documents in the EMP and will comprise a number of ~~sub-plans~~ **management and monitoring plans** designed to reflect the requirements specified within the mitigation and enhancement sections of this **Further Applications** ES ~~commitments made during the planning and Public Inquiry phases, and requirements imposed by any other means. This ES will therefore provide key inputs to the CEMP.~~ The ~~sub-plans~~ **management and monitoring plans** will set out specific environmental requirements and will include the following:

- a. Pollution Control and Contingency Plan – emergency procedures;
- b. **Site** Waste and Resource Management Plan, including a Site Waste Management Plan (SWMP);
- c. Contamination and Remediation Management Plan;
- d. Archaeological and Cultural Heritage Management Plan;
- e. Noise and Vibration Management Plan;
- f. Air Quality Plan;
- g. ~~Surface Water Quality Management Plan (Surface and Groundwater);~~  
~~Ground Water Quality Management Plan;~~
- h. Hydrodynamics Management Plan;
- i. ~~Ecological (terrestrial, aquatic and avian)~~ **Biodiversity** Management Plan (BDMP);
- j. Socio-Economic Development Plan;
- k. **Topsoil Management Plan;**
- l. River Vessel Management Plan;
- m. Energy Management Plan;
- n. ~~Materials management Plan;~~
- o. Landscape and Visual Management Plan;
- p. **Construction** Traffic Management Plan; and
- q. Green Travel Plan.

23.6.2 ~~Each plan will be implemented at an appropriate stage of the Project's development. A number of the plans have already been prepared and are included in the COPE, they will be developed by the Project Company at the appropriate stage.~~ A framework will therefore be drawn up to outline timeframes for implementation of each plan under the umbrella of the EMP.

23.6.3 It is proposed that the requirements for the EMP will be issued with tender documentation and ~~potential contractors / concessionaires~~ **the Project Company** will be required to indicate how they will comply with environmental management measures detailed in the EMP, provide method statements and indicate their approach for implementation of mitigation measures including monitoring.

- 23.6.4 It will be necessary to appoint an Environmental Manager and an Environmental Co-ordinator for Project [including the Proposals](#). They will have the following responsibilities:
- a. To develop the EMP document and systems and maintain it as a working document, undertaking reviews and updates;
  - b. To monitor compliance during the design and construction phases of the Project; and
  - c. Periodically to provide review reports, including monitoring data where appropriate, to consultees. These reports will indicate compliance and non-compliance with the EMP and will provide assurance that a high standard of environmental protection is being maintained, as well as identifying the implications of failure to meet standards of mitigation, the reasons for this and remedial actions to be taken.
- 23.6.5 [In order to provide continuity there will be an Environmental Manager and Coordinator during the procurement stage and the role will then pass to the Project Company once they are appointed.](#)
- 23.6.6 The Environmental Manager will have primary responsibility for environmental issues throughout the construction and operation phases. The Environmental Co-ordinator will assist during the final design process and will manage the environmental aspects of the design.

## 23.7 Implementation and Management

- 23.7.1 The EMP will be maintained and updated through the tender, detailed design, construction and operational phases of the Project including the Proposals with a final handover by the ~~concessionaire~~ Project Company at the end of the concession period.
- 23.7.2 Once construction is complete, an MOEMP will set out the environmental management requirements for the Project Company Operation and Maintenance team.
- 23.7.3 Operation of all or some of the Project including the Proposals will eventually be passed back to the Council. It is necessary to ensure that environmental issues are understood and appropriate management put into place. It is therefore proposed to provide a HEMP to the Council at the relevant stage of handover of all, or any part, of the Project including the Proposals. ~~The handover will require the production of a HEMP. The HEMP which~~ will set out ongoing environmental requirements which must be implemented and monitored throughout the lifecycle of the Project. This will seek to accommodate future changes to environmental best practice and legislation to ensure currency and compliance. ~~At some point, operation of some or all of the Project will pass back to the Council and either be managed by them, or retendered for an additional period. In either case, it is necessary to ensure that environmental issues are understood and appropriate management put into place. It is therefore proposed to provide a HEMP to the Council at the relevant stage.~~ This will comprise an annotated and updated set of EMP documents, which are likely to be accompanied with the environmental and landscape maintenance procedures, results of monitoring and copies of any non-compliance sheets/enforcement actions.
- 23.7.4 The EMP will be implemented via a requirement in the tender documents and also imposed by planning condition.