

22



# Environmental management plans

## 22 Environmental management plans

The identified impacts and mitigation measures outlined in the chapters of this EIS and the accompanying technical reports, inform the actions contained in the Project EMP and the Dredging EMP. These documents contain the mechanisms for implementation of the Project EIS commitments which aim to ensure the potential environmental impacts of the Project are avoided, mitigated and/or offset.

The Project EMP and Dredging EMP will be amended during the post EIS environmental approvals process, and the detailed design and dredging contractor tendering phases of the Project. During the review and amendment process for these Project documents, the consultation and management arrangements with regulatory agencies and the community will be reviewed.

In order to facilitate the effective implementation of these management measures, the Project's activity components have been divided into two categories and two subsequent EMPs. Non-dredging components of the Project have been included under the scope of the Project EMP and components relating to capital dredging activities have been included within the scope of the Dredging EMP. The Project activities included in the EMPs are summarised below.

### ■ Project EMP

- Construction of the WBE reclamation area and bund walls, including transport of quarry material for construction of the bund walls
- Construction of the BUF, including placement of sheet piles (or similar earth retaining structure) and transport of quarry material and fill
- Environmental management of the WBE reclamation area prior to dredging
- Removal and installation of new navigational aids in the Port of Gladstone
- Stabilisation and maintenance activities on the WBE reclamation area post dredging

### ■ Dredging EMP

- Initial dredging works to establish the barge access channel
- Duplication of the Gatcombe and Golding Cutting shipping channels
- Dredged material unloading, transport and placement in the WB and WBE reclamation areas
- Dewatering of the dredged material within the WB and WBE reclamation areas, and licenced discharge into the Port.

The environmental management of the quarry operation for the construction of the WBE reclamation area and a BUF is not included in the scope of the Project EMP and potential environmental impacts will be managed by the quarry operator.

The Project EMP and Dredging EMP are intended to be working management documents to be implemented during the Project. They provide a structured program for the management of the works for GPC and relevant contractors to follow in order to best achieve desired environmental outcomes. They aim to ensure that all reasonable and practicable measures will be implemented within an adaptive management framework to prevent and/or minimise the likelihood of environmental harm being caused during the works.

In order to fulfil the objectives of the Project EMP and Dredging EMP, the following information is included in the plans:

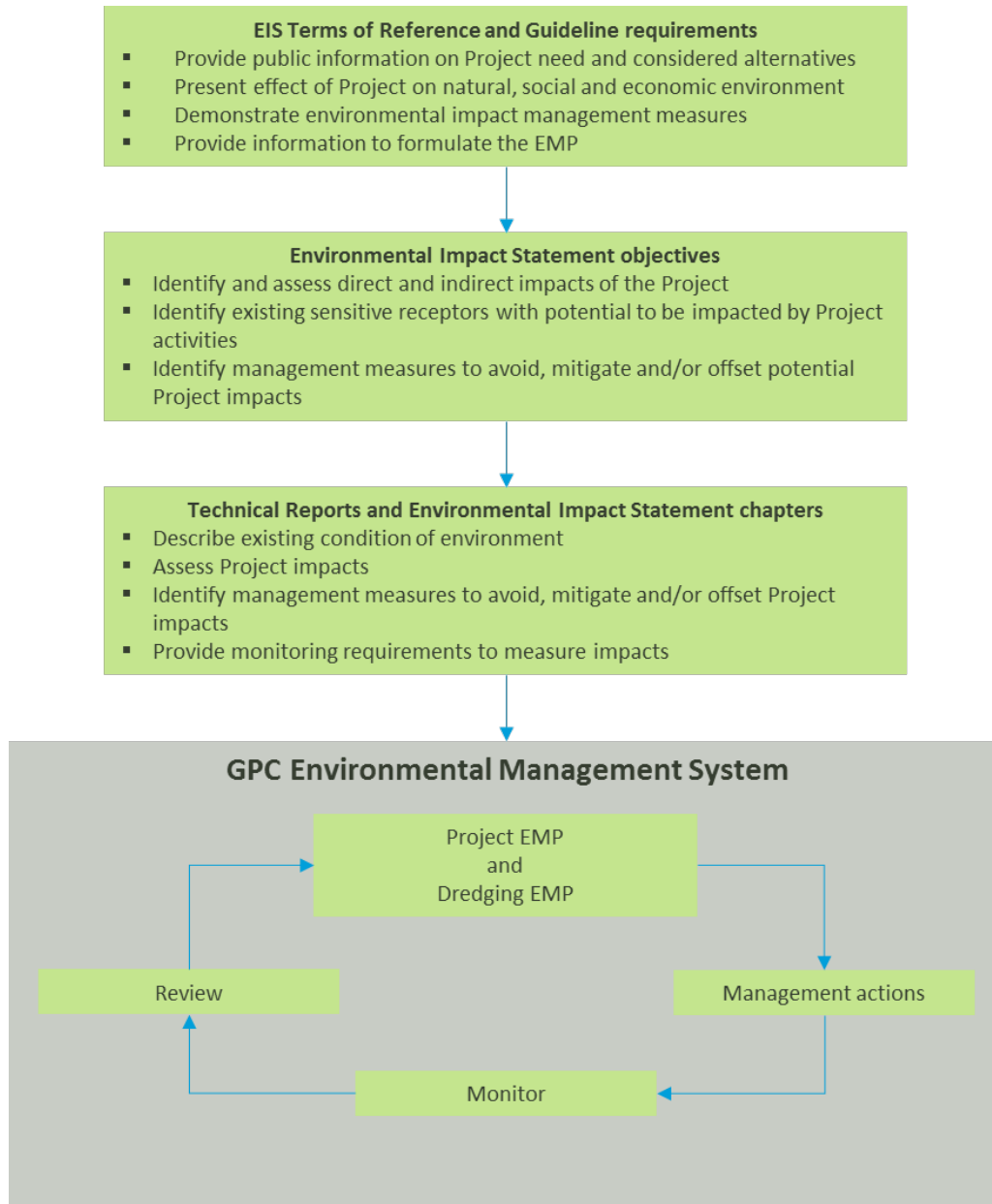
- Defined roles and responsibilities for the implementation of the relevant management plans
- Control measures/actions that will be taken to prevent adverse environmental impact

- Corrective actions that will be taken in the event of an environmental incident or non-conformance
- A monitoring procedure to monitor the effectiveness of the environmental controls being implemented
- Project staff training required to ensure all staff are adequately trained in order to fulfil the requirements of the relevant EMP
- Reporting requirements to ensure good record keeping practices are being maintained
- Audit and review requirements to ensure regular reviews of environmental performance to ensure continual improvement is maintained.

The estimated cost of implementing the Project mitigation measures is in the order of \$15 million to \$23 million. This cost will be confirmed during the detailed design and dredging contractor tendering phases.

The Project EMP and Dredging EMP will operate within the framework provided by the existing GPC EMS, which is an overarching framework for managing environmental risk at all GPC managed sites. The intent of the EMS is to provide a user friendly directory which quickly directs the user to the desired area of the EMS for guidance and actions to undertake.

The Project EMP and Dredging EMP will sit within the EMS framework. GPC staff and relevant contractors are directed to follow reporting, incident and record keeping procedures outlined in the EMS, while also following the site specific management actions and monitoring outlined in the Project EMP and Dredging EMP. Figure 22.1 demonstrates the role the Project EMP, Dredging EMP and GPC EMS have within the EIS framework.



**Figure 22.1** Role of Project Environmental Management Plan, Dredging Environmental Management Plan and Gladstone Ports Corporation Environmental Management System within the Environmental Impact Statement framework