3 EIS PROCESS AND METHODOLOGY

This Environmental Impact Statement (EIS) for the QCLNG Project has been prepared using a systematic process that predicted and evaluated the Project's anticipated impacts on physical/biological, social, cultural, economic and built components of the environment. The EIS presents measures that QGC and other parties, where indicated, will employ to maximise benefits and to avoid, minimise, reduce, remedy, offset or compensate for adverse impacts.

This section provides an overview of the process followed in compiling the EIS. It outlines the objectives of the EIS, the different stages of the process, the impact assessment methodology, the approvals process and timeframes. Details on how the public can make submissions on the EIS are provided at the end of this section.

The stakeholder engagement process for the EIS is summarised in *Volume 1, Chapter 4* and detailed in *Volume 12*. Associated licensing and permit approval processes applicable to the Project are discussed in *Volume 1, Chapters 5 and 6.*

3.1 OBJECTIVES OF THE ENVIRONMENTAL IMPACT STATEMENT

Broadly, the purpose of the EIS is to identify the potential impacts and benefits of the proposed Project on aspects of the environment (including all relevant aspects within the physical, biological, social, cultural, economic and built components of the environment) and to ensure that benefits are maximised and adverse impacts avoided where possible.

Where unavoidable, the significance of direct, indirect and cumulative impacts is assessed and mitigation measures identified, so that the Project ultimately reflects the best practicable environmental and social option.

The key output of the process is a comprehensive EIS which presents the findings of specific studies and the overall assessment. The EIS is a key tool for decision-makers in the Project approval process. Beyond the approval stage, commitments made in the EIS will stand as a benchmark against which to measure the ongoing performance of the Project.

The principal objectives of the QCLNG Project EIS are to:

- provide public information on the need for the Project and its likely physical/biological, social, cultural, economic and built environment impacts (both positive and negative)
- identify all likely interactions of the Project with the environment (physical/biological, social, cultural, economic and built)
- set out acceptable standards and levels of impact on physical/biological, social, cultural, economic and built environment values

- assess the potential impacts from the construction, operation and decommissioning of the Project
- describe recommended management strategies and actions to ensure that the defined standards and acceptable levels of impact are not exceeded
- document the process followed for the EIS, including the stakeholder consultation process
- demonstrate the relationship between the EIS and other environmental permitting and licensing processes required in the context of other Queensland and Commonwealth legislation.

3.1.1 Project Environmental Objectives & Values

As indicated above, the broad definition of 'the environment' constitutes the physical, biological, social, cultural, economic and built components. More specifically, the environmental aspects specifically considered in this EIS are:

- climate and climate change
- topography and geomorphology
- geology and soils
- land use and infrastructure
- land contamination
- terrestrial ecology
- aquatic (freshwater) ecology
- surface water resources
- groundwater resources
- Associated Water
- air
- noise and vibration
- transport
- visual amenity
- waste management
- hazard and risk assessment.

These aspects also reflect those which have been detailed in the ToR for the EIS preparation as prescribed by the Commonwealth and Queensland governments.

Assessing environmental values is a key aspect of preparing an EIS. For each environmental aspect, an Environmental Objective has been developed for the Project (Project Environmental Objective) which acknowledges the values associated with that aspect. The process for determining environmental values was guided by section 9 of the *Environment Protection Act 1994* (Qld), which defines an environmental value as:

a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety

b) another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Therefore, in undertaking the environmental assessment process each relevant aspect considered had a value or values described which formed a Project Environmental Objective. For example, when reviewing the aspect of groundwater, the above process was used to determine the following Project Environmental Objective:

Groundwater resources:

- *need to be protected from contamination to ensure that the ecological health, public amenity and safety of those who rely on groundwater is maintained*
- *will not be extracted to the detriment of other groundwater users and biodiversity dependent on groundwater supplies.*

In the impact assessment process (described in section 3.2.4 below), as part of the Impact Evaluation Stage, the assessed impact of the Project component or activity was evaluated against the Project Environmental Objective.

3.2 STAGES OF THE EIS PROCESS

The EIS process comprises the following stages as illustrated in *Figure 1.3.1* and described in the following sub-sections*:*

- screening
- scoping
- baseline data collection
- assessment of impacts
- mitigation
- assessment of residual impacts
- reporting.

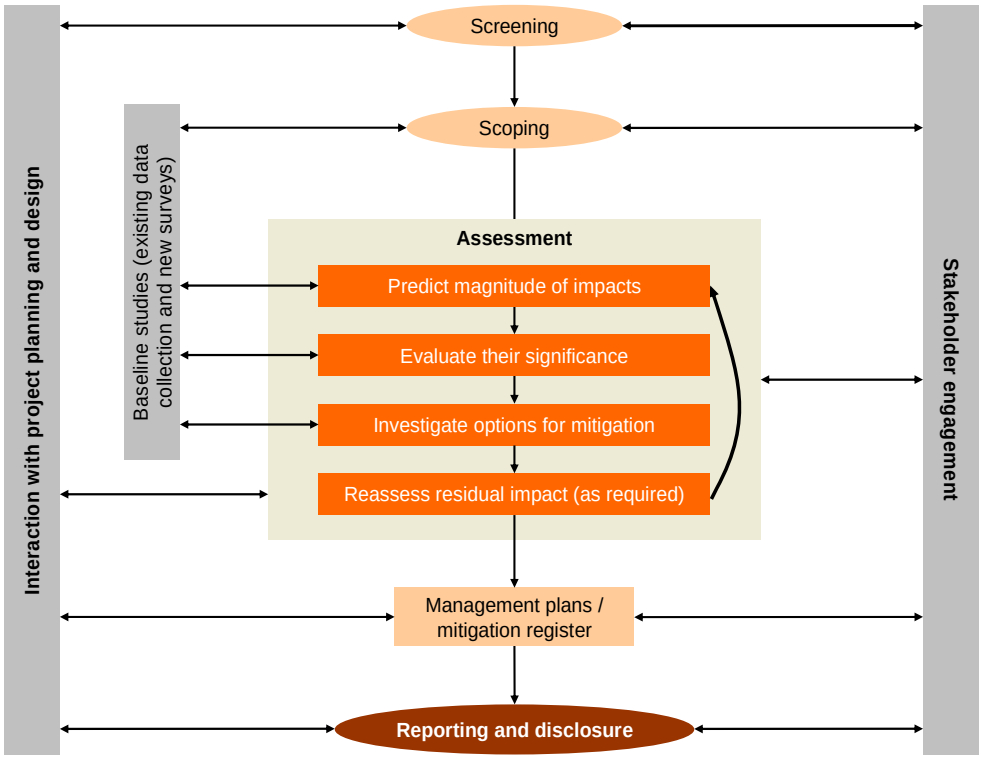
QGC personnel and a range of EIS consultants were engaged to coordinate the EIS process and prepare the documentation. Specialist input was sought to gather or collate baseline data, assess impacts and recommend management and monitoring measures.

Formal engagement with Project stakeholders was undertaken by QGC as an integral part of the EIS process. This ensured that QGC not only took into account the issues and concerns raised by external stakeholders but also fed this information into the engineering and design process to maximise benefits and mitigate adverse impacts. In turn, findings and feedback from the process were relayed to stakeholders.

This interactive process involved the Project's environmental, planning and engineering teams, the EIS consultants, government departments and agencies, other key decision-makers and the public.

It should be noted that the EIS process is not a linear process, but one in which findings are revisited and modified as the Project definition evolves and impact assessment progresses.

Figure 1.3.1 Stages of the EIS Process



3.2.1 Screening

Screening is the process by which key physical/biological, social, cultural, economic and built environment aspects and risks associated with a proposed development are anticipated at the earliest opportunity in the project life cycle, and are considered as an integral part of pre-feasibility investigations. During screening, alternatives are identified and appraised at an appropriate level of detail to ensure that subsequent stages of the EIS focus only on the assessment of technically and financially feasible alternatives.

Significant impacts are anticipated and mitigation options accommodated in initial project development designs. An important aim of screening is to establish whether there are aspects of a proposed project that are either technically flawed or have the potential to cause significant or unacceptable environmental or social consequences. The proponent relies on outcomes from the screening process to decide whether to proceed with the project and the EIS process.

For the QCLNG Project, screening commenced early in the development cycle, prior to the formal initiation of the EIS process, outlined in this chapter in *Section 3.4*.

Preliminary Project information and available baseline data were used to make a risk assessment to identify potential physical/biological, social, cultural, economic and built environment risks and impacts associated with the different components of the QCLNG Project.

The risk assessment also included a review of relevant international, Commonwealth and Queensland legislation, permitting and approval requirements, and policies and guidelines to identify potential approval risks to the Project or the proposed development schedule. Potential impacts were ranked to determine the most important issues for evaluation in the EIS.

A comprehensive site selection study was conducted during the screening stage to identify and evaluate alternative sites for the LNG Facility. Route alternatives for the Pipeline Component were also identified and evaluated. Environmental and social criteria were taken into account in the selection of the preferred LNG Facility site on Curtis Island and the preferred alignment for the Pipeline Component corridor and the layout of the Gas Field Component.

3.2.2 Scoping Stage

The scoping stage focuses on the likely significant impacts that require further investigation. It defines the final scope of the EIS by developing terms of reference for studies to assess Project impacts.

Scoping therefore requires the systematic consideration of how activities involved in developing the Project may impact on aspects of the physical/biological, social, cultural, economic and built environment.

Scoping relies on inputs from a range of stakeholders, including government departments, advisory agencies and the public to ensure that all potentially significant issues and risks have been identified and assessed. The stakeholder engagement process undertaken is summarised in *Volume 1*, *Chapter 4* and detailed in *Volume 12.*

Queensland and Commonwealth legislation, BG Group guidelines and standards, the International Finance Corporation (IFC) Performance Standards, international agreements and environmental and scientific literature were reviewed to identify relevant legal requirements and legislated

and non-legislated standards that needed to be considered in defining the scope of the EIS and the specialist studies (refer to *Volume 1*, *Chapters 5 and 6*).

Although scoping was carried out early in the EIS process, it is an activity that continues as new issues and information emerge during studies, site visits and stakeholder consultations and as a result of development of the Project design. Information is collected throughout the Project's development and operational life.

The EIS cannot predict all impacts and the final Project design may change. This means the EIS will evolve through the implementation of detailed design plans, construction, operational environmental and social-impact management programs, consultation programs throughout the EIS process, Project development, site establishment, construction and decommissioning.

3.2.3 Baseline Data Collection Stage

This stage involves the collection and/or collation of physical/biological, social, cultural, economic and built environment baseline data to describe the conditions that would prevail in the absence of the Project. It is the baseline against which Project impacts are assessed.

The baseline includes scoping information on all receptors, such as residences, and resources that the Project may significantly impact. It also includes information (such as meteorological data) used to make the assessment (e.g. to carry out atmospheric dispersion modelling).

The baseline description has the following main objectives:

- to identify the key environmental, social and socio-economic conditions in areas potentially affected by the Project and highlight those that may be vulnerable to aspects of the Project
- to describe and where possible quantify characteristics (nature, condition, quality, extent, etc) now and in the future in the absence of the Project
- to provide data to aid the prediction and evaluation of possible impacts
- to inform judgements about the importance, value and sensitivity/ vulnerability of resources and receptors.

The future baseline takes into account trends that are apparent in the baseline (e.g. coastal erosion, sea-level rise, population growth). The future baseline also considers other developments in the area which are underway or committed. It can therefore be described as the "no project" scenario against which the impacts of the Project are assessed. Other developments, planned or proposed, but which have not yet commenced construction, are considered in the assessment of cumulative impacts.

For this EIS, baseline data collection included:

- collection of available data from existing sources such as:
  - government agencies
  - research and academic organisations
  - published sources
  - external stakeholders and the public
  - local experts
- review of aerial photographs and satellite imagery
- field studies to fill gaps in existing data and provide site-specific and up-to-date information required for the assessment.

Methods and limitations of baseline data collection are identified in the EIS specialist studies.

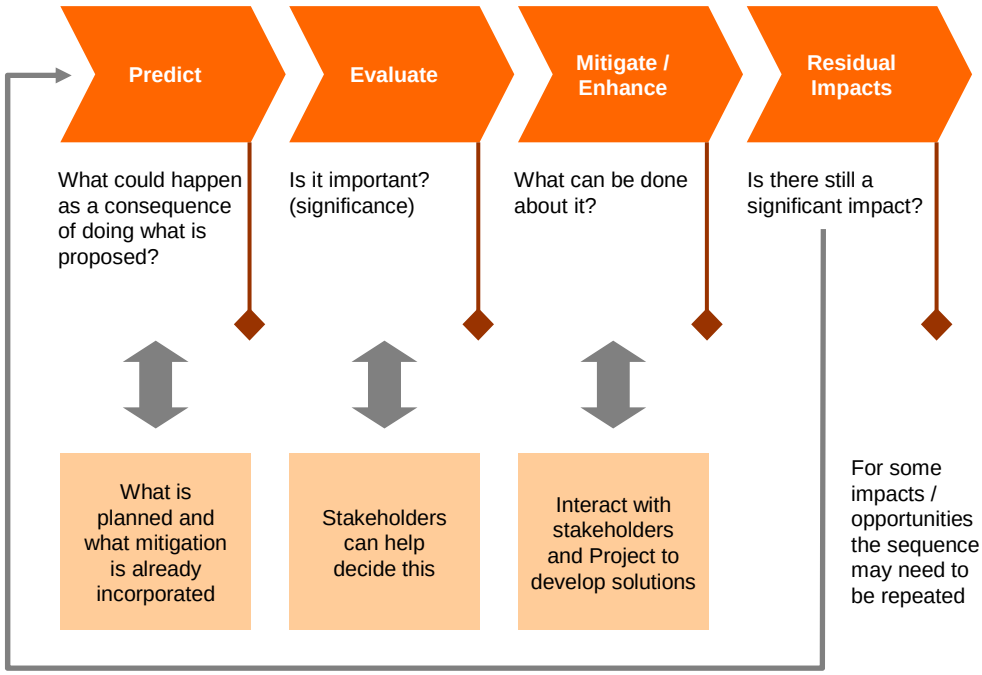
3.2.4 Impact Assessment Stage

The impact assessment stage, illustrated in *Figure 1.3.2*, involves an iterative process that considers:

1. **Prediction** – What will happen to the environment as a consequence of this Project?
2. **Evaluation** – Does this impact matter? Will it have a positive or negative effect? How important or significant is it? Does it meet the Project Environmental Objective?
3. **Mitigation** – If it is significant, can anything be done about it?
4. **Residual Impact** – Is it still significant?

These are described in more detail in the following sub-sections.

Figure 1.3.2 Impact Identification and Prioritisation Process



3.2.4.1 *Predicting the Magnitude of Impacts*

Impact assessment describes what will happen if the Project is developed by predicting the magnitude of impacts and quantifying these to the extent practicable. It is important to note that impact identification takes into account any mitigation or control measures that are part of the Project design/Project plan. Additional mitigation measures aimed at further reducing identified impacts are then proposed where necessary or as appropriate.

Even with a firm Project design and an unchanging environment, predictions are by definition uncertain. In this EIS, predictions were made using methods ranging from qualitative assessment and expert judgement to quantitative modelling. The accuracy of predictions depends on the method and the quality of the input data on the Project and the environment. Where assumptions were made, the nature of any resulting uncertainty is presented in topic-specific chapters.

Uncertainty can also arise depending on when aspects of the EIS were prepared in the design process. Where this results in uncertainty and is material to the EIS findings, it is clearly stated. Generally, the approach was to take a conservative view of the likely residual impacts, to identify Project performance standards where firm predictions could not be made and to propose monitoring and further contingency measures.

Areas of uncertainty, data gaps and deficiencies, and additional work required during further Project development stages are highlighted in the report, to assist decision-making.

The terminology used for impact prediction is shown in *Table 1.3.1*.

Table 1.3.1 Impact Assessment Terminology

Term	*Definition*
Impact Nature	
Negative impact	an impact that represents an adverse change from the baseline or introduces a new undesirable factor
Positive impact	an impact that represents a baseline improvement or introduces a new desirable factor. Efforts should be made to enhance these benefits
Negligible impact	an impact that represents neither an improvement nor deterioration in baseline conditions
Impact Type	
Direct impact	impacts that result from a direct interaction between a planned Project activity and the receiving environment (e.g. between occupation of an area of seabed and the habitats which are lost)
Secondary impact	impacts that follow on from the primary interactions between the Project and its environment as a result of subsequent interactions within the environment (e.g. loss of part of a habitat affects the viability of a species population over a wider area)
Indirect impact	impacts that result from other activities that are encouraged to happen as a consequence of the Project (e.g. project implementation promotes service industries in the region)
Cumulative impact	impacts that act together with other impacts to affect the same environmental resource or receptor
Impact Duration	
Short term	impacts that are predicted to last only for a limited period but will cease on completion of the activity, or as a result of mitigation/reinstatement measures and natural recovery
Long term	impacts that will continue over an extended period. These will include impacts that may be intermittent or repeated rather than continuous if they occur over an extended time period
Permanent	impacts that result in a permanent change in the affected receptor or resource (e.g. the loss of a sensitive habitat)
Impact Extent	
Local	impacts are on a local scale
Regional	impacts are on a state-wide scale
National	impacts are on a national scale (effects extend well beyond the immediate vicinity of the operation and affect an entire region)
Global	impacts are on a global scale (e.g. global warming)
Impact Likelihood	
Extremely unlikely	the event is very unlikely to occur under normal operating conditions but may occur in exceptional circumstances
Unlikely	the event is unlikely but may occur at some time during normal operating conditions
Low	the event is likely to occur at some time during normal operating conditions
Medium	the event is very likely to occur during normal operating conditions
High	the event will occur during normal operating conditions (is inevitable)

Likelihood is estimated on the basis of experience and/or evidence that such an outcome has previously occurred.

The term “impact magnitude” is used to encompass all the dimensions of the predicted impact including:

- the nature of the change (what is affected and how)
- its size, scale or intensity
- its duration, frequency, reversibility, etc
- its geographical extent and distribution
- where relevant, the probability/likelihood of the impact occurring as a result of accidental or unplanned events.

It also includes any uncertainty about the occurrence or scale of the impact, expressed as ranges, confidence limits or likelihood.

Magnitude therefore describes the actual change that is predicted to occur in the resource or receptor (e.g. the area and duration over which air or groundwater may become polluted and the level of increase in concentration; the degree and probability of impact on the health or livelihood of a local community).

Where quantifying potential impacts was possible, impact magnitude was based on numerical values, representing regulatory limits, project standards or guidelines (e.g. noise and air quality impacts).

A number of environmental aspects such as ecology and visual impact, and generally all social and cultural impacts, require a more qualitative approach for determining magnitude due to the absence of statutory limits or universally applicable standards against which potential impacts can be evaluated.

Queensland and Commonwealth guidelines typically require a statement regarding any relevant potential impacts that are likely to be unknown, unpredictable or irreversible. Technical data, any sources of authority, and other information used in the impact assessment are identified in the relevant EIS specialist studies. Reliability of forecasts and predictions, confidence limits and margins of error are indicated as appropriate.

3.2.4.2 Evaluation of Significance

The next step in the assessment is to evaluate the significance of predicted impacts. Significance is evaluated by the combination of two elements:

- the magnitude of the impact
- the value/importance of the resource or sensitivity/vulnerability of the receptor affected.

There is no statutory definition of significance. However, for the purposes of this EIS, QGC and its consultants have used the following practical definition:

> *An impact is significant if, in isolation or in combination with other impacts, it should, in the judgement of the EIS team, be reported in the EIS so that it can be taken into account in the decision on whether or not the Project should proceed and if so under what conditions.*

This recognises that evaluation requires professional judgement and that judgements may vary between parties involved in the process. The evaluation of impacts presented in this EIS is based on the judgement of QGC environmental practitioners and its consultant practitioners' teams, informed by reference to legal standards, government policy, current good practice and the views of stakeholders.

Broadly, impact significance was reviewed against the relevant Project Environmental Objective. Furthermore, the following criteria were used to assess environmental impact significance:

Does the Project component or activity:

- *cause legal or accepted environmental standards to be exceeded (e.g. air, water or soil quality, noise levels) or make a substantial contribution to the likelihood they will be exceeded?*
- *adversely affect protected areas or features, or valuable resources (e.g. nature conservation areas, rare or protected species, protected landscapes, historic features, high quality agricultural land, important sources of water supply)?*
- *conflict with established government policy (e.g. to reduce CO_2 emissions, recycle waste, regenerate deprived urban areas, protect human rights)?*

Where standards are unavailable or provide insufficient information to allow a grading of significance, significance takes into account the magnitude of the impact and the value or sensitivity of the affected resource or receptor *(Table 1.3.2)*. Magnitude is defined across the various dimensions described in the previous section.

The value of a resource takes into account its quality and its importance as represented, for example: by its local, regional, national or international designation; its importance to the local or wider community; and its economic value.

The sensitivity of receptors, for example, a household, community or wider social group, will take into account their likely response to the change and their ability to adapt to and manage the effects of the impact.

As shown in *Table 1.3.2* impacts are assessed as holding negligible, minor, moderate, major or critical significance. Terms for describing impact significance are defined in *Table 1.3.3.*

Table 1.3.2 Classification System Used for Evaluating Impact Significance

Magnitude of Impact	*Sensitivity of Receptor/Value of Resource*		
	Low	**Medium**	**High**
Negligible	Negligible	Negligible	Negligible
Small	Negligible	Minor	Moderate
Medium	Minor	Moderate	Moderate to Major
Large	Moderate	Moderate to Major	Major to Critical

Table 1.3.3 Definitions of Impact Significance

Significance	Definition
Negligible	Magnitude of change comparable to natural variation. Not significant to the decision to be made on the Project.
Minor	Detectable but not significant. Impact warrants being brought to the attention of the decision-maker but does not require special conditions to be attached to the approval. Negative impacts can be controlled by adoption of normal good practice. Monitoring is required to ensure the measures used to mitigate negative impacts are working properly, that benefits are realised and that the impact is not worse than predicted.
Moderate	Significant. Positive and negative impacts warrant being brought to the attention of decision-makers and deserve careful attention. Negative impacts are amenable to mitigation but likely to require conditions to ensure mitigation is undertaken. The proponent should demonstrate that the effect has been reduced as far as technically and financially feasible. Monitoring is required to ensure mitigation of negative impacts works properly, that benefits are realised and that the impact is not worse than predicted.
Major	Significant. Impact mitigation measures must be found to reduce impacts. Positive and negative impacts warrant considerable weight in the decision. For negative impacts conditions should be attached to the approval and residual impacts must be compensated for, if possible. Monitoring is required to ensure mitigation of negative impacts works properly, that benefits are realised and that the impact is not worse than predicted.
Critical	Applies to negative impacts only. Intolerable, not amenable to mitigation. Alternatives must be found.

For some impacts there are well-established criteria for determining significance. For example, if a standard is breached or a protected area is damaged the impact is of critical significance. However, it is important to acknowledge that the scales of magnitude, sensitivity/value and significance are all in practice continuous, and the evaluation of significance along the spectrum requires the exercise of careful professional judgement and experience. Each impact has been evaluated on a case-by-case basis and in conjunction with the impact of other Project components. The evaluation is explained through a detailed discussion of the issues contributing to the conclusion.

Impacts assessed as negligible or minor require no additional management or mitigation measures on the basis that the magnitude of the impact is sufficiently small, or that the receptor is of low sensitivity and/or that adequate controls are already included in the Project design. Negligible and minor impacts therefore are deemed insignificant and fall within the ‘‘no action’’ criterion.

Impacts evaluated as moderate or major require the implementation of further management or mitigation measures. Major and moderate impacts are therefore deemed significant.

Major impacts always require further management or mitigation measures to minimise or reduce the impact to an acceptable level. An acceptable level is the reduction of a major impact to a moderate after mitigation.

In seeking to mitigate moderate impacts, the emphasis is on demonstrating that the impact is reduced to a level that is “as low as reasonably practicable”, (abbreviated to ALARP). It is not always practicable to reduce moderate impacts to a minor level due to the cost-ineffectiveness of the approach (the diminishing return of a reduction of impact versus cost).

It is not possible to manage or mitigate critical impacts. These require the identification of alternatives (elimination of source of potential impact). Such impacts are intolerable and could potentially result in abandonment of a project.

3.2.5 Mitigation

Impact assessment is designed to ensure that decisions on projects are made in full knowledge of their likely impacts on the environment and society. But a vital step within the process is the identification of measures to mitigate impacts so that these are incorporated into the Project.

Improvements in the environmental performance of the Project are an important outcome of the EIS. This was achieved by integrating mitigation into the Project proposals, in the design of the Project, the methods for its construction and operation and the management of the development process.

The process has involved identifying where significant impacts could occur and then working with the Project team to identify practicable and cost-effective approaches to mitigating those impacts to the greatest extent possible. These measures were agreed and integrated into the Project proposals.

Where a significant impact is identified, a hierarchy of options for mitigation was considered to identify the preferred approach:

- **avoid at source** – remove the source of the impact by designing the project so that a feature causing an impact is designed out or altered

- **abate at source** – reduce the source of the impact by adding something to the basic design to abate the impact (e.g. pollution control)
- **attenuate** – reduce the impact between the source and the receptor
- **abate at the receptor** – reduce the impact at the receptor
- **remedy** – repair the damage after it has occurred
- **compensate/offset** – replace in kind or with a different resource of equal value.

3.2.6 Assessing Residual Impacts

Once a feasible mitigation measure is identified and agreed, the EIS team re-assesses the impacts with the mitigation measure integrated into design and operation of the Project. Where an impact is not avoided completely the residual impact is reassessed and the possibility for further mitigation investigated. All residual significant impacts are described in this report with commentary on why further mitigation is not practicable. Where the impact is of more than minor significance the EIS explains how the impact has been reduced as far as is technically and financially feasible.

The degree of significance attributed to residual impacts is related to the weight the EIS team considers appropriate in reaching a decision on the Project.

- In deciding whether the Project should proceed, any residual major impacts – positive or negative – warrant substantial weight, when compared with other physical/biological, social, cultural, economic and built environmental benefits. Conditions should be imposed to ensure adverse impacts are strictly controlled and monitored and beneficial impacts are fully delivered.
- Residual moderate impacts are less critical to the decision, but still warrant careful mitigation and monitoring to ensure best-available techniques are used to minimise adverse impacts and beneficial impacts are delivered.
- Minor impacts, while brought to the attention of the decision-maker, warrant little, if any, weight in the decision; mitigation can be achieved using normal good practice and monitoring carried out to confirm that impacts do not exceed predicted levels.

3.2.7 Assessment of Cumulative Impacts

Section 3.10 of the Terms of Reference requires the EIS to clearly and concisely summarise the cumulative impacts of the Project, and to describe them in isolation and in combination with other known, existing or proposed project(s) (where details of such proposed projects have been provided to QGC by the Department of Infrastructure and Planning or are otherwise published).

This section describes the approach used in the QCLNG Project EIS in the assessment of cumulative impacts.

3.2.7.1 *Defining Cumulative Impacts*

The EIS adopts the International Finance Corporation's (IFC) definition of cumulative impacts which are defined as:

> *"the combination of multiple impacts from existing projects, the proposed project, and/or proposed projects that may result in significant adverse and/or beneficial impacts that would not be expected in case of a stand-alone project" (IFC, 2006[1]).*

3.2.7.2 *Approach to the Assessment of Cumulative Impacts*

The following approach was adopted for the QCLNG Project EIS to identify and assess cumulative impacts:

- current and proposed projects were selected for consideration
- at the time of drafting the EIS, consultants reviewed relevant information on these proposed projects
- potential cumulative impacts arising from these projects being constructed and/or operated at the same time as the QCLNG Project were identified and assessed.

The approach is outlined in more detail in the following sections.

3.3 IDENTIFICATION OF PROPOSED PROJECTS CONSIDERED FOR CUMULATIVE IMPACTS

The following criteria were applied to determine which other proposed projects in the QCLNG Project's area of potential influence could reasonably and practically be assessed for cumulative impacts in the QCLNG Project EIS:

- the other project is being proposed by QGC as an extension of existing domestic gas supply operations or power generation but is not associated with the QCLNG Project (i.e. Condamine Power Station and expansion of CSG fields to supply domestic gas markets)
- the Coordinator-General has declared the other project ''state significant'' and an EIS for it is either under way or has been completed. As a minimum an Initial Advice Statement is on the Department of Infrastructure and Planning (DIP) website

1 International Finance Corporation (2006). ***Performance Standards on Social and Environmental Sustainability.***

- the other project is being/was assessed under Part 1 of *Chapter 3* of the *Environmental Protection Act 1994* (Qld) with the Queensland Environmental Protection Agency (EPA), now the Department of Environment and Resource Management (DERM), the EIS Coordinator. As a minimum an Initial Advice Statement or similar is available on the EPA website
- the other project is an Ancillary Component of the QCLNG directly associated with its development (i.e. the WBSDD Project or development of the Curtis Island Bridge/Roads).

Review of Available Project Information

Available information on other projects was reviewed at a high level to determine the nature, location and timing of possible cumulative impacts.

Identification and Assessment of Cumulative Impacts

A qualitative approach was undertaken to identify and assess the cumulative impacts from other proposed projects for the construction and operations phases of the QCLNG Project. In many cases it was not possible to make a more quantitative assessment due to limited access to data and information for the other proposed projects.

The physical/biological, social, cultural, economic and built environment values potentially affected due to cumulative impacts were identified for each proposed project, taking into account geographic and scheduling overlaps with the QCLNG Project. In addition, cumulative impacts of the different components of the QCLNG Project were also identified and evaluated. For example, this considered cumulative impact of the Gas Field and the Pipeline Component construction on terrestrial ecology.

The significance of cumulative impacts to each physical/biological, social, cultural, economic and built environment value was evaluated qualitatively using the methodology outlined in *Section 3.2.4.*

3.3.1 Reporting

The findings of the impact assessment process are reported to government and the public. A Draft EIS is provided for government and public review prior to completing a supplementary or final EIS. The final EIS forms the basis for government decision-making on the Project.

3.4 EIS APPROVAL PROCESSES

This EIS is a self-contained document which aims to provide sufficient information for readers to make an informed decision on the potential benefits and impacts of the QCLNG Project. Detailed technical information supporting the EIS appears in a series of annexes and appendices accompanying the EIS.

The Project is assessed by both the Queensland and Commonwealth Governments under separate administrative arrangements. However, it was agreed that this EIS document could be prepared to satisfy the requirements of both jurisdictions with the assessment process and timelines harmonised. At the conclusion of the assessment process, separate decisions on approvals will be considered by the Queensland Coordinator-General and the Commonwealth Minister for the Environment.

This section outlines both EIS approval processes and the specific steps followed by QGC in addressing them. It should be noted that whilst described separately, the two processes were initiated and will continue to be undertaken concurrently.

3.4.1 Administrative Procedures for Preparation of ToR and EIS

On 3 June 2008, QGC prepared and lodged an initial advice statement (IAS) for the project with the Coordinator-General (CG). The IAS provided an outline of the proposed project, including the project rationale and its potential impacts.

On 4 July 2008, the CG declared the project to be a 'significant project for which an EIS is required', pursuant to s.26 (1) (a) of the State Development Public Works Organisation Act 1971 (*SDPWO Act*). Matters considered by the CG in making this declaration included information in the initial advice statement (IAS) prepared by QGC, the level of investment necessary for the project, employment opportunities provided by the project, potential impacts on the environment, potential effects on relevant infrastructure and the significance of the project to the region and state. The declaration initiated the statutory environmental impact assessment procedure of Part 4 of the *SDPWO Act*, which requires the proponent to prepare an environmental impact statement (EIS).

The first step in the impact assessment process has been the development of terms of reference (ToR) for the preparation of an EIS. The process involved the formulation of draft ToR which were made available for public and government agency comment. The CG considered all comments received on the draft ToR in finalising the ToR.

The Project also triggered the *Environmental Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) with nine EPBC referrals relating to project components lodged by QGC. All were declared controlled actions under the *EPBC Act*. As such they require approval and assessment under the *EPBC Act*. The proposals were determined to be controlled actions on the basis of World Heritage and National Heritage Places (except for the coal seam gas field referral), Listed threatened species and communities and Listed migratory species. The Shipping activities referral, in addition to these controlling matters, also was determined to be a controlled action on the basis of the Commonwealth marine area.

Because a component of the project, Shipping Activities, involves Commonwealth jurisdiction the Australian Government has determined that a Commonwealth EIS (a level of assessment parallel to that required by Queensland) is the appropriate level of assessment. Cooperative arrangements established between the Queensland and Australian Governments has enabled a single assessment document to be prepared to meet the requirements of both jurisdictions and for the harmonisation of process timelines. At the conclusion of the assessment process, separate State and Australian Government approvals will be considered by the Coordinator-General and the Commonwealth Minister for the Environment.

Approval under the Commonwealth *Environment Protection (Sea Dumping) Act 1981* (*EPSD Act*) may be required for the dredging and loading of dredged material and its disposal offshore. The loading and dumping activity was also designated under Section 160 of the *EPBC Act* for assessment. The EIS is also to be scoped to meet the requirements of the *EPSD Act*.

Following consultation with advisory agencies, DEWHA and the public, the final ToR were issued by the Queensland Government and the Commonwealth Government (as EIS Guidelines) on 26 May 2009. The ToR are provided in *Volume 1, Appendix 1.1*. Thus, the EIS has been prepared in accordance with ToR/guidelines issued under separate jurisdictions and processes but, amalgamated into a single document and issued jointly by the two governments.

Following this draft EIS exhibition and the statutory commentary period, QGC is required by DEWHA, which is coordinating the environmental assessment process on behalf of the Australian Government to prepare a final EIS to address comments submitted on the EIS.[2]

3.4.1.1 EIS Assessments

At the end of the EIS phase, the CG and Commonwealth Minister for the Environment will prepare a report assessing the EIS and other material, in accordance with the relevant provisions of their respectively administered legislation.

Queensland

Following the statutory public exhibition period for the EIS, the Queensland Coordinator-General coordinates all comments from the public and advising agencies and provides them to the Proponent. The Proponent is then required to provide responses to comments received on the EIS and will be required to prepare a Supplementary EIS to address specific matters raised.

2 Note this is a requirement of the EPBC Act, Section 104.

At the end of the EIS phase, the Coordinator-General will prepare a report assessing the EIS and other material, in accordance with section 35 of the *SDPWO Act*.

The Coordinator-General's report is provided to QGC, the Australian Minister for Environment, Heritage and the Arts and any other relevant assessment managers responsible for administering other Project approval processes. It is also made publicly available on the Department of Infrastructure and Planning website.

The project involves proposed petroleum authorities to prospect, petroleum lease(s), pipeline licence(s) and/or petroleum facility licence(s) under the *Petroleum and Gas (Production and Safety) Act 2004* (Qld). The CG Report for the project may state conditions for the proposed lease or licence in accordance with Part 4, Division 6A of the *SDPWO Act*. If such conditions are included in the CG Report, the CG will give the minister administering the Act, under which the lease or licence is proposed to be granted, a copy of the CG Report.

The project also involves a development approval for a material change of use under the development scheme for the Gladstone State Development Area, as assessed by the CG in accordance with the *SDPWO Act*. Therefore, a material change of use for an environmentally relevant activity and all development permits will also be assessed under the *Integrated Planning Act 1997*.

In accordance with Part 4, Division of the *SDPWO Act*, the CG Report may also state for the assessment managers one or more of the following:

- the conditions that must be attached to the development approval
- that the development approval must be for part only of the development
- that the approval must be a preliminary approval only.
- Alternatively, the CG Report must state for the assessment manager(s) that:
- there are no conditions or requirements for the Project
- the application for the development approval is refused.

Commonwealth

Upon completion of the Supplementary/Final EIS process, the Secretary of the DEWHA will prepare, and provide to the Minister, a recommendation report relating to the actions referred to the Minister. The report will include recommendations on whether the taking of the action should be approved and if approval is recommended, any conditions that should be attached to the approval.

Before the Minister decides whether to approve the taking of an action, and what conditions to attach to an approval, he or she may publish the proposed decision and any conditions that are proposed to attach to the approval. After publication of this information, any person may within 10 business days provide comments on the proposed decision and any condition.

Upon consideration of any submissions on the proposed decision the Minister may then grant an approval of taking of the action.

3.4.1.2 Assessment Process Timetable

The key steps in both the EIS processes are summarised in *Table 1.3.4.*

Table 1.3.4 Timeframes for Stages of the EIS

Task	Date
Initial Advice Statement	3 June 2008
Coordinator-General declares the Project a ''State-significant project''	4 July 2008
Referrals submitted to DEWHA	7 August 2008
Coordinator-General prepares draft ToR	July – November 2008
Release of draft ToR for comment	1 November 2008
Public advertisement and review of draft ToR	1 November – 12 December 2008
Final ToR	26 May 2009
Prepare EIS	March 2008 – July 2009
Public advertisement and review of EIS	31 August – 16 October 2009
Proponent prepares responses to submissions to EIS and/or Supplementary EIS	September – December
Coordinator-General's assessment report	March 2010
Decision by Commonwealth (DEWHA)	March 2010
Preparation of applications for other approvals, licences and permits required by the Project	March 2010

3.5 EIS SUBMISSIONS PROCESS

Stakeholders wishing to make a submission in relation to the EIS should do so in writing to either of the agencies below:

EIS Project Manager
Queensland Curtis LNG Project (QGC)
Significant Projects Coordination Division
Department of Infrastructure and Planning
PO Box 15009 City East Qld 4002 Australia
Fax: +61 7 3225 8282
Email : QCurtisLNG@dip.qld.gov.au