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5. INTRODUCTION

5.1 Suitability of Proponent

5.1.1 Historical Performance of Proponent

There have been a number of submissions that have questioned the proponent's environmental history. These submissions suggest that Paradise Dam would be a suitable comparison, and that an audit of Paradise Dam should be taken into account to determine the proponent's environmental fitness to undertake the Project.

Chapter 1 of the EIS sets out the details of QWI as the Proponent, the composition of its Board and senior management, the background of senior management at QWI and the QWI Environmental Policy. The environmental history of QWI and its executive officers in relation to environmental matters is a general consideration for the Federal Minister to take into account under s.136(4) of the EPBC Act.

In relation to the Minister's decision on the fitness of QWI to undertake the Project, section 1.2.3 of the EIS notes that there are no current or former proceedings under a law of the Commonwealth or a State for the protection of the environment or the conservation and sustainable use of natural resources against QWI, any Board member or its senior management. Accordingly, QWI submits that it is a suitable person to be granted an approval, having regard to its history in relation to environmental matters and the history of its executive officers in relation to environmental matters.

The management team comprises a range of professionals experienced in the assessment, development, construction and operation of major water infrastructure projects.

The submissions make reference to the construction of the Burnett River Dam (also known as the Paradise Dam) by Burnett Water Pty Limited. The project was approved by the Federal Minister pursuant to the EPBC Act in January 2002 (EPBC Reference 2001/422). The compliance audit of Paradise Dam was undertaken by the Federal Department of Environment, Water, Heritage and the Arts (DEWHA) between 25th and 28th June 2007. The compliance audit report and a summary of the findings are publicly available on the internet from the DEWHA (www.environment.gov.au/epbc).

The findings of the audit are that, apart from relatively minor matters which were subsequently addressed by Burnett Water Pty Limited, a partial compliance was found in relation to a condition requiring a fish transfer device (fishway) to facilitate passage for the Queensland lungfish downstream past the dam wall. The partial compliance related to the fishway operation. The fishway transferring lungfish from downstream to upstream of the dam wall was operating effectively; however, the fishway transferring lungfish from upstream to downstream of the dam wall was unable to operate due to drought conditions and low dam levels. At the time of the audit, the dam storage level had not yet filled sufficiently to reach the design operating range for the downstream fishway. The design operating range was determined following extensive consultation with fish experts, government agencies and advice from fishway experts over an extended period of time. The operating range adopted was considered to offer the best cost/benefit/risk outcome for all stakeholders that balanced protecting the lungfish with cost-effectiveness of the design. The operational range for the fishway is specified in the applicable Resource Operations Plan (ROP), and the minimum dam storage level for operations has not yet been reached.

5.2 Study Team

One submission identified that the list of contributors and authors for the EIS was incomplete.

The compilation of the Environmental Impact Statement (EIS) was undertaken by Sinclair Knight Merz (SKM), who also completed a number of the technical studies supporting the EIS, including

the Environmental Management Plan (EMP). In addition to the contributors identified in the Section 1.3 of the EIS, there were a number of other contributors who were commissioned by QWI, these included:

- ACIL Tasman – Social and Economic Assessment of Water Use in South East Queensland;
- AC Nielsen - Noosa Population Priorities Survey;
- AGE – Review of Hydrogeology;
- Allens Arthur Robinson – Relevant Legislation and Approvals;
- Connell Wagner – Road Impact Assessment Report Traveston Crossing Dam;
- Golders Associates - Hydrogeological Investigations;
- Monash University - The Economic Impacts of Traveston Crossing Dam in South - east Queensland;
- Timber Qld – Forestry Carbon Offsets; and
- URS – Independent Geotechnical Investigations.

Another submission raised the issue the EIS was written by a large number of authors and that this led to duplication of information.

The study team used to compile the EIS was made up of specialists in each of the respective fields. The number of authors of the document reflected the range of disciplines and issues that needed to be addressed to provide a comprehensive assessment of the impacts. It is also appropriate to duplicate information throughout the EIS, where it is relevant to do so in response to issues being addressed.

5.2.1 Curricular Vitae

Two submissions identified that curricular vitae's for the senior management of QWI were not provided in the EIS.

Curricular vitae's for all relevant parties have been included as appendices to the Supplementary Report (See Appendix C2).

5.3 Assessment Process

5.3.1 EIS Preparation Period

The final Terms of Reference (ToR) for the Project were released on 7 August 2007. The Coordinator-General (CG) made 112 changes to the 67 page draft ToR in line with public comments, however the final ToR was largely consistent with the draft. The draft ToR was made available for public comment from December 2006.

Prior to the public release of the draft ToR, the proponent commissioned a number of baseline studies. A team of qualified experts spent a year working on the EIS studies in line with the draft and then final ToR.

5.3.2 EIS Methodology

One submission claimed that the EIS did not use a best practice approach for impact assessment, and that the World Commission on Dams 2000 (WCD, 2000) report should be used as guidance for undertaking the impact assessment.

The methodology used to prepare the EIS accords with up to date and current standard procedures for the undertaking of an EIS. A bilateral agreement between the Australian and Queensland Governments accredits environmental assessments under Queensland legislation as

meeting the standards required to assess the relevant impacts of the Project for the purposes of the approval required under the EPBC Act. To meet the requirements of the accredited assessment, the EIS has been prepared in accordance with the requirements of Part 4 of the SDPWO Act and Part 5 of the SDPWO Regulation.

The WCD, 2000 Report identifies a set of seven strategic priorities which are designed to provide guidance for achieving equitable and sustainable development through a process that successfully integrates social, economic and environmental considerations into decision-making.

The WCD, 2000 Report also outlines a set of 26 guidelines for good practice. These guidelines are designed to assist project proponents, planners and decision makers in their assessment (WCD, 2000). Although it is not a requirement of the EIS, many of the 26 guidelines are consistent with the standard procedures and approval processes for the EIS and Water Resource Planning processes. The applicability of the two guidelines not addressed within this planning framework is described in **Table 5-1**.

Table 5-1 World Commission on Dams, Guidelines for Good Practice

Guideline Description	Applicability
Performance Bonds - supported by financial guarantees provide a secure way of ensuring compliance with commitments and obligations	Not required under legislation for this project.
Integrity Pacts - They are voluntary undertakings aimed at reducing corruption and founded on contractual rights and obligations.	Applicable to emerging economies

The following items from the WCD Report were considered to already be integral elements of the EIS development and assessment:

- stakeholder analysis;
- negotiated decision-making processes;
- free, prior and informed consent;
- strategic impact assessment for environmental, social, health and cultural heritage issues;
- project-level impact assessment for environmental, social, health and cultural heritage issues;
- life cycle assessment;
- multi-criteria analysis;
- greenhouse gas emissions;
- distributional analysis of projects;
- valuation of social and environmental impacts;
- improving economic risk assessment;
- ensuring operating rules reflect social and environmental concerns;
- improving reservoir operations;
- baseline ecosystem surveys;
- environmental flow assessment ;
- maintaining productive fisheries;
- baseline social conditions;
- impoverishment risk analysis;

- implementation of the mitigation, resettlement and development action plan;
- trust funds;
- project benefit sharing mechanisms;
- compliance plans;
- independent review panels for social and environmental matters; and
- procedures for shared rivers.

5.3.3 Project Description

One submission raised the claim that the description of the project area excluded areas downstream except if they pertained to Matters of National Environmental Significance (MNES).

A brief description of the project is provided in Section 1.4 of the EIS. Chapter 4 of the EIS gives a more detailed description of the project and its components. Chapter 4 describes the operational area of the water storage as well as the area considered in the Environmental Assessment process. The Project was divided into four primary areas for the purpose of the Environmental Assessment, including on MNES. These comprise the:

- dam construction footprint – the dam wall footprint, embankments, spillway, dam access road, site offices, associated facilities and construction footprint;
- inundation area – the area inundated at FSL; (Contours to 20m AHD have been provided);
- linear infrastructure footprint – the location of all proposed road works and realignment of any other infrastructure; and
- downstream – the Mary River catchment downstream of the Project to the Great Barrier Reef.

Chapter 4 of the Supplementary Report provides a non-technical summary of the expected environmental conditions downstream of the dam. The assessment of downstream areas pertaining to specific disciplines is provided in Chapters 5 to 17 of the EIS and Chapters 9 to 29 of the Supplementary Report.

5.3.4 Assessment of Stage 2

A number of submitters have queried why Stage 1 and Stage 2 of the Project have been separated for the purposes of assessment and approval under the EPBC Act. The submissions noted that the EIS does not currently include a separate chapter addressing Stage 2 of the Project as the then Deputy Premier indicated it would to the then Federal Environment Minister.

The relationship between the proposed Stage 1 of the Project and the possibility of Stage 2 (should it be determined that there is an appropriate need in approximately 30 years time) is dealt with in detail at section 4.13 of the EIS. Copies of correspondence between the Federal Minister, the Queensland Government and QWI are presented at Appendix G of the EIS. Further submissions received on the public notification of the EIS in relation to the Stage 1 and possible Stage 2 issue are dealt with in Chapters 8 and 29 of the Supplementary Report.

The EIS did not include a separate 'Chapter' in relation to the possible Stage 2, however, it included a separate section 4.13 which clearly identified in a single, consolidated part of the EIS the elements of a possible Stage 2 that are included in the application for Stage 1 and an assessment of their impacts. This has satisfied the commitment referred to in the correspondence from the Commonwealth Government to the State Government, dated 3 August 2007.

5.3.5 Compliance with ToR

Several submissions claimed that the EIS did not meet the ToR on a range of issues, including sustainability, downstream impacts and MNES.

The content of the EIS is determined by a number of legislative requirements, including the EPBC Act, the SDPWO Act, the regulations made under those Acts, as well as the ToR which are issued by the CG.

Prior to the EIS being released for public comment, the Coordinator-General reviewed the EIS to ensure that it satisfactorily meets the ToR. The Coordinator-General deemed that the EIS had satisfactorily addressed the ToR. QWI also considered that the EIS satisfactorily addressed the ToR.

5.3.6 Access to EIS

Several submissions raised the issue that the EIS was difficult to access, and that the cost of the EIS was excessive.

Hard copies of the seven-volume EIS were distributed to 19 locations for public display and available for viewing throughout the public review period. They were also made available at a cost of \$150 for the EIS, and \$400 for the supplementary technical reports. All reports were delivered to the display locations on the 18th October 2007, four days ahead of the official notification period.

The EIS was also made available at the two Information Days held in Maryborough and Amamoor. An additional 37 copies of the EIS were distributed on request during the public notification period.

In addition, over 1,500 free electronic copies of the EIS were distributed on CD Rom or DVD format. In some cases the DVDs were not able to be used on certain home computers. When requests were received from the public for a compatible CD, these were distributed accordingly. The electronic copies were broken down by chapter, with a table of contents provided for easy reference through the document. The PDFs could be searched using the standard search functionality available.

The full EIS was also uploaded to the QWI website on 18 October 2007, in file sizes of less than 7 mb for easier download.

All requests for information on the EIS and related materials were sent within two business days of receipt of the request.

Interested persons were encouraged through advertising, project updates (to over 110,000 people) and individual communication to visit the website for further information. This information also included a list of display locations and other contact information for how to obtain a copy of the EIS.

Four hard copies of the EIS and Technical Reports were supplied to the Save the Mary on 2 November 2008 at the request of the Coordinator-General. The Community Futures Taskforce also purchased hard copies of the EIS to provide to the Kandanga One Stop Shop and community groups.

In addition, an easy to read overview of the EIS was produced to make the document more accessible to a broader audience. Over 2,400 copies of this overview were distributed during the notification period.

5.3.6.1 Information Days

Two information days were held during the publication notification period, at Maryborough on 10 November 2007 and Amamoor on Sunday, 11 November 2007. These locations were consistent with previously held Information Days in June 2007 and December 2006/January 2007.

All information available at the Information Days was posted on the QWI website on the 14 November 2007 to ensure all stakeholders in the region had access to the information.

In addition, to ensure that a broad audience was notified of the EIS and the public notification period, project updates were widely distributed to over 110,000 stakeholders, and 26 advertisements were placed in local and state newspapers.

5.3.7 Public Review Period

A number of submissions raised the issue that the public review period was insufficient given the size of the document.

The public review period for the EIS was determined by the Coordinator-General in accordance with s33(1)(d) of the SDPWO Act.

On 27 November 2007, an addendum to the EIS was distributed and the public submission period was extended from 3 December 2007 to 14 January 2008. This provided 84 days for the public to make comment on the EIS.

The addendum related to some inconsistencies between the various mediums (printed/CD/DVD and internet version) of the EIS. The addendum provided information to assist the identification and correction of these discrepancies. A hardcopy of the addendum was also distributed to all persons who had previously received a hardcopy or electronic copy of the EIS. The addendum was also made available at all identified display locations, on the QWI website and in hardcopy on request. The Coordinator-General also advertised the extended timeframe and details of the addendum on six advertisements.

The duration of the public review period for the EIS was considered appropriate and provided sufficient time for community members to review and provide comments on the EIS.

5.3.8 Senate Inquiry

5.3.9 Independent Assessment

There have been a number of submissions that have raised issues regarding the ability of the CG, as a representative of the sole shareholder, to conduct an unbiased assessment of the project or its EIS.

The CG operates under the SDPWO Act and is constituted as a separate legal entity. The CG has a statutory responsibility to conduct an independent, unbiased assessment of the Project and its EIS. The proponent, QWI, is a *Corporations Act* company and subject to all State and Commonwealth legislation.

The role of the CG is to plan, deliver and coordinate the implementation of large scale projects. Significant projects under the SDPWO Act, such as Traveston Crossing Dam, are not exempt from the approvals process under the *Integrated Planning Act 1997* (IP Act). Government departments and government-owned corporations are required to go through the same approval processes that are required for private individuals and corporations and do so on a regular basis. The role of the CG in this situation is to conduct an independent and unbiased assessment of the Project as it would for any private company or individual.

Furthermore, Section 35 of the SDPWO Act states that:

- 1) *"The Coordinator-General must, after the end of the submission period, consider the EIS, all properly made submissions and other submissions accepted by the Coordinator-General about the EIS and any other material the Coordinator-General considers is relevant to the project.*

- 2) *The Coordinator-General may ask the proponent for additional information or comment about the EIS and the project.*
- 3) *The Coordinator-General must prepare a report evaluating the EIS.*
- 4) *In evaluating the EIS, the Coordinator-General may—*
 - (a) *evaluate the environmental effects of the project and any other related matters; and*
 - (b) *state conditions under section 39, 45, 47C, 49 or 49B; and*
 - (c) *make recommendations under section 43 or 52; and*
 - (d) *if division 8 applies to the project—impose, under that division, conditions for the undertaking of the project.*
- 5) *After completing the report, the Coordinator-General must—*
 - (a) *give a copy of it to the proponent; and*
 - (b) *publicly notify the report.”*

5.3.10 Senate Inquiry

One submission raised the issue that the EIS inadequately referenced the findings of the Senate inquiry into options for supplying additional water for South East Queensland.

On 26 February 2007, the Senate referred the following matter to the Senate Standing Committee on Rural and Regional Affairs and Transport for inquiry and report:

“The examination of all reasonable options, including increased dam capacity, for additional water supplies for South East Queensland, including:

- a) *the merits of all options, including the Queensland Government's proposed Traveston Crossing Dam as well as raising the Borumba Dam; and*
- b) *the social, environmental, economic and engineering impacts of the various proposals.”*

The Committee received 246 public and 3 confidential submissions. The Committee held public hearings in Gympie, Brisbane and Canberra undertook inspections of the proposed Traveston Crossing Dam site and the Borumba Dam site. In conducting the Inquiry, the Committee consulted with many people who are directly and indirectly affected by various Queensland Government initiatives which aim to secure future water supplies.

The Committee recognised that the Federal Government was limited to EPBC Act matters when assessing the project, however the majority report made two recommendations:

- 1) that the Commonwealth Minister for Environment and Water Resources, when exercising authority under the EPBC Act, considers the evidence received on the potential environmental impact of the Traveston Dam on the Mary River and the species of the river. The Committee also recommends that the Minister reviews the results of the audit on the Paradise Dam approval conditions to mitigate any potential effect on threatened species; and
- 2) that the Queensland Government continues to:
 - o instigate strategies that will inform, engage and consult with members of the affected communities;
 - o ensure that businesses affected by the proposed dams are adequately compensated and offered appropriate assistance; and
 - o where possible, facilitate the timely release of copies of reports and information to members of the community to achieve a transparent and open process.

Section 5.4 of Supplementary Report discusses how QWI has implemented the second recommendation of the Senate Inquiry Report.

The Commonwealth Minister when determining whether to approve the Project must take into account only those matters required by the EPBC Act, which will include the information presented in the EIS and this Supplementary Report in relation to the assessment of the potential environmental impacts of the Project on the Mary River and those species listed under the EPBC Act.

5.4 Consultation

One submission claimed that the consultation program did not comply with best practice standards for public participation.

The EIS study's community engagement was conducted in line with the Queensland Government's *Community Engagement, Policy, Principles, Standards and Guidelines (2004)*. A detailed consultation report was included in the EIS, and a report relating to the public notification period can be found in Appendix C3.

5.4.1 Communication of Key Issues

Several submissions considered that communication between QWI and the public was poor and did not effectively communicate potential impacts to landholders. Another submission raised the issue that the glossy brochures produced by QWI were at an enormous expense to the Queensland government.

Several project updates were issued to the public that specifically dealt with the potential impacts associated with the Project, these covered issues such as:

- vegetation offsets;
- land use controls; and
- local road upgrades.

5.4.1.1 Vegetation Offsets

A letter to 29 landholders surrounding the dam's project boundary was distributed on 22 November 2007, following inaccurate media reports that these properties would be required for vegetation offsets for the project. QWI confirmed to property owners that their properties were not required for the Project.

The correct information regarding properties required for the vegetation offsets was contained within the EIS report. Further discussion of the Vegetation Management Offset Strategy is provided in Chapter 18 of the Supplementary Report.

5.4.1.2 Land Use Controls

A Land Use Controls fact sheet was prepared in October 2006, and was broadly distributed at this time. The fact sheet has been available on QWI's website since this time. Detailed information was included in the EIS.

5.4.1.3 Local Road Upgrades

An updated map outlining local road upgrades was included in the EIS, and associated materials.

Where there had been a change to a road alignment that differed from the original notification to landholders, those landholders within the Project designation area were advised via written communication from QWI. This included a letter to the landholder and a copy of the updated road upgrade map.

Where requested, landholders were further briefed via telephone and onsite meetings.

5.4.1.4 Costs of Communication Materials

In accordance with the second recommendation of the Senate inquiry (see Section 5.3.10), QWI has continued to instigate strategies that inform members of the affected communities about the Project.

One method utilised to deliver information on the Traveston Crossing Dam is through the Project Update, of which eight editions have been broadly distributed to stakeholders. The distribution list for these Project Updates was more than doubled following the Senate's recommendations.

The Project Update is an important tool in circulating factual information, breaking down complex matters into non-technical language, and encouraging participation in key elements of the project's delivery, including environmental approval process, and business and employment opportunities.

One such initiative has been the development of a local business register to encourage local businesses to enhance their capability, ensure their business documentation is up to date, and that their staff have the appropriate qualifications and skills to work on the project. This initiative has been broadly promoted through the Project Updates, and as a result, more than 720 businesses have now registered for opportunities associated with the dam's construction as at 20 June 2008.

A total of 700,500 project updates have been produced at a cost of \$222,000. This equates to an average of 32c per Update.

5.5 Sustainability

A number of submissions raised claims that the EIS did not adequately assess or consider the sustainability of the project. Specifically, submissions raised issues relating to:

- precautionary principle and its application to the lack of knowledge about the effectiveness of mitigation measures;
- intergenerational equity for future generations enjoyment of the Mary Valley;
- intragenerational equity related to the movement of water between basins;
- national strategy for ecologically sustainable development; and
- CSIRO strategies and principles for Traveston Crossing Dam.

5.5.1 Project Sustainability

Section 1.7 of the EIS discussed issues related to sustainability and the project. The study undertaken by CSIRO Sustainable Ecosystems identified sustainability principles for the project to inform and guide the design, construction and operation of the project. A second component of the CSIRO work involved developing a method to assess the benefits of any proposed actions.

QWI recognises that the principles of sustainable development are relevant considerations for many of the approvals required for the Project both under Federal and State legislation and are important in addressing development of major infrastructure in the 21st century.

It was also recognised in the EIS that most of the direct negative impacts of the Project would be in the local area, while the bulk of the positive impacts (relating to water supply security and flow-on economic benefits) would be felt, in addition to within the local area, at regional, state and national levels outside the area of negative impact.

The CSIRO principles therefore focused on the need to address equity issues across the geographic distribution of negative and positive impacts. This resulted in a focus on the

enhancement of positive outcomes at a local and sub-regional scale by assisting the community of the Mary Valley to take advantage of the opportunities offered by the construction and operation of the Project. 'Community' in this sense refers not only to the human community but also to ecological communities.

The goals for the sustainability of the project, as outlined in the EIS are to plan, design and enable innovative projects that:

- promote the development of sustainable communities through opportunities generated by Traveston Crossing Dam;
- encourage sustainable local enterprises that benefit from the development of Traveston Crossing Dam; and
- contribute to the conservation of riverine communities and the restoration and management of ecosystem processes that support sustainable catchments.

These goals are focussed on generating local benefits from the project and ensuring equity between those communities that are physically impacted by the project and those who are perceived to benefit from the project through the security of water supply.

Chapter 17 of the EIS, evaluates and discusses ten sustainability strategies associated with the project including:

- freshwater species conservation centre;
- native timber plantations;
- design for turtles;
- sustainable riparian farm management maintenance;
- Kandanga Township revitalisation;
- recreation and tourism planning;
- educational opportunities;
- Mary Valley Rattler;
- local industry participation plan; and
- apiculture.

These strategies were developed in consultation with agencies, the Community Futures Taskforce and local stakeholders. This initial set of strategies was designed to achieve the vision, goals and design principles which have been established for the Project. Each of the strategies was assessed against the sustainability criteria developed by CSIRO. The assessment showed that each of the strategies contributed to at least one of the goals for the project including:

- sustainable communities;
- sustainable local enterprises; or
- ecologically sustainable catchments.

One submission claimed that the goals for the sustainability of the project would not be achieved, particularly the restoration of the whole of catchment.

A principle of the third strategy identified by CSIRO being "ecologically sustainable catchments", refers to this "whole of catchment" approach, stating that the project should "encourage and facilitate whole of catchment restoration of riparian vegetation and wetlands for nature conservation and water quality enhancement". This principle uses the terminology "whole of

catchment” in reference to the implementation of restoration and rehabilitation measures across all aspects of the catchment rather than in all elements of the catchment. For example, restoration activities should incorporate measures such as planting, habitat creation, including introducing snags as well as improved land management practices and controlling feral animals.

The sustainability principles were used by QWI to develop the initial list of potential sustainability initiatives that aim to deliver environmental, economic and / or social benefit to the region, with outcomes that can be assessed and measured. These are described in Chapter 17 of the EIS.

Progress has been made on the implementation of many of the initiatives proposed in the EIS. To date, preferred location has been selected for the Freshwater Species Conservation Centre. The Centre will be located on the shore of the dam directly south of the Dam Access Road. The location provides direct and easy access from the Bruce Highway for visitors to the Environment Education Centre allows any necessary research to be commenced during dam construction. It is anticipated that the site will also be used for site offices and hard stand areas during construction.

In addition, an in principle agreement with the Burnett Mary Regional Group (BMRG) has been established to undertake a range of actions on behalf of QWI. The actions identified by BMRG cover all six of their management action programs including:

- biodiversity conservation;
- water quality and equitable use;
- weeds and pest management;
- sustainable use;
- coastal and marine management; and
- community capacity and partnerships.

In all, a package of over \$3.7M of actions will be implemented over a 10 year period, including infrastructure and maintenance is to be carried out in a phased approach.

5.5.2 SEQ Water Supply

One submission raised the issue that the Project has not been initiated as part of an overall long term solution to water supply in SEQ.

The report, *Water for South-East Queensland: A Long Term Solution 2006* presents a range of comprehensive measures designed to meet future water demands for the SEQ region to about 2050 and summarises the water sources for SEQ, supply-side measures being or to be implemented, and a range of demand management initiatives.

This report is based on a planning strategy which is designed to promote the sustainable management and best use of water based on a three-pronged hierarchy:

- facilitating the move toward high value and best use of water through improved specification and security of existing water entitlements and providing for water trading;
- encouraging the efficient use of water (reduce, reuse, recycle) and, if supplies cannot still be met, then;
- promoting the development of additional water supply through new least-cost water infrastructure.

In identifying Traveston Crossing as the preferred location for the dam, the Queensland Government considered a wide range of alternative solutions and locations to meet SEQ's water supply – demand gap. The Government decided that a portfolio of projects was the most effective

way of addressing this shortfall in supply. It was determined that surface water supply would be a major component of this strategy because it is technically feasible, cost effective, low risk and can provide ancillary benefits. In addition, climate independent strategies cannot realistically meet the supply shortfall in their own right without significant cost and energy implications.

Traveston Crossing was determined to be the preferred location for a surface water supply dam because it can provide the highest yield of any surface water option available in South East Queensland, it is geographically appropriate to service northern Brisbane and the Sunshine Coast, and it is the most cost effective option that provides the necessary yield. The site for the dam is also identified in the South East Queensland Regional Plan (SEQRP). The SEQRP is a statutory plan under the IP Act for the sustainable management of the expected growth in the SEQ region.

Furthermore, the *Water for Today, Water for Tomorrow SEQ Water Strategy Draft* was released by the Queensland Water Commission (QWC) in March 2008. The Strategy outlines a new approach to integrated, sustainable water supply planning in SEQ. The Strategy identifies Traveston Crossing Dam as a committed project that is part of a suite of other projects that will increase the diversity of supply of water for SEQ. Further discussion about the Strategy is provided in Chapter 7 – Project Rationale and Alternatives of this Supplementary Report.

5.5.3 National Strategy for Ecological Sustainable Development

Chapter 3 of the EIS identifies the legislative and policy framework which may influence the Project including the National Strategy for Ecologically Sustainable Development (NSED). NSED was introduced by the Commonwealth Government in 1992 addressing a number of key issues that arose out of Agenda 21, being the environmental policies discussed by a significant number of countries at the United Nations Conference on Environment and Development (the Earth Summit) held in Rio de Janeiro in June 1992.

Five key principles accepted in this national strategy were:

- integrating economic and environmental goals in policies and activities;
- ensuring that environmental assets are properly valued;
- providing for equity within and between generations;
- dealing cautiously with risk and irreversibility; and
- recognising the global dimension.

Chapter 18 of the national strategy addresses water resource management.

The mechanism for implementing the principles of NSED in relation to water resource planning in Queensland is through the *Water Act 2000* and the WRP process contained in that Act. Section 10 of the Act establishes that the purposes of the water resource planning chapter of the Act is to advance sustainable management and efficient use of water and other resources recognising that sustainable management is management that contributes to:

"The economic development of Queensland in accordance with the principles of ecologically sustainable development."

In the context of this Project, the *Water Resource (Mary Basin) Plan 2006* (Mary Basin WRP) has been passed. This provides outcomes for the sustainable management of water, performance indicators and objectives and a range of strategies for achieving sustainable outcomes. This plan has requirements for environmental flows which must be met in order to achieve the ecological outcomes nominated for particular areas of the catchment.

The Project, as explained throughout the EIS is consistent with the outcomes and strategies identified in this Mary Basin WRP and consequently with the implementation of the NSESD.

Chapter 9 of the NSESD addresses biological diversity and recognises the challenge of protecting biological diversity and maintained ecological processes and systems.

The EPBC Act represents the Commonwealth's implementation of the NSESD. The Project requires approval under the EPBC Act and as such the Project must meet the requirements of the Act. The EIS addresses these requirements in relation to biodiversity throughout the document and particularly in Chapter 7 Terrestrial Environments, Chapter 8 Aquatic Environments and Chapter 9 Matters of National Environmental Significance. This EIS concludes that an approval should be granted under the EPBC Act, inferring that the Project, if implemented, is consistent with the national strategy.

The major State approvals relevant to the Project, which are discussed later, involve assessment under IP Act which also reflects the principles of ecological sustainability and which represents the major method adopted by the Queensland Government for implementing the strategy. Other Queensland legislation relevant to the assessment such as the *Environmental Protection Act 1994*, the *Vegetation Management Act 1999* are also examples of the Queensland Government's implementation of this strategy. The findings in this EIS reflect the Project's consistency with the NSESD.

5.5.3.1 Precautionary Principle

A number of submissions have claimed that the EIS does not prove that serious and irreversible impacts on MNES will not occur. As a result of this, it has been submitted that the precautionary principle requires that the Project should not be approved.

The 'precautionary principle' is one of a number of elements that constitute an Ecologically Sustainable Development approach. These elements are intended to encourage development that meets the needs of the present without compromising the ability of future generations to meet their own needs. NSESD and the 'precautionary principle' are intended to require decision makers to consider the environmental costs and benefits of any development and make a decision based on long and short term economic, environmental, social and equity considerations.

This decision making process is to take into account all NSESD principles in order to determine if the benefit of undertaking the project outweighs any actual, or potential costs associated with it. The EIS and this Supplementary Report addresses these issues by providing an assessment of all relevant considerations and making recommendations in respect of the cumulative impact of the Project (see Chapter 29 of the Supplementary Report).

The EIS (Chapter 9) and this Supplementary Report (Chapter 20) describe the MNES in the Project study area and outline how the Project is likely to impact on these matters. Where relevant, mitigation measures have been presented that will be implemented as part of a program of environmental management to minimise or avoid impacts on those MNES affected by the Project.

An outline of the draft Environmental Management Plan (EMP) is provided in Chapter 30 of the Supplementary Report. The outline summarises the recommendations made in the EIS in relation to the management of environmental impacts during the construction and operation of the Project. The draft EMP is intended to provide a commitment that certain measures will be taken to manage and limit any environmental impacts of the Project.

The environmental assessment in respect of impacts on MNES has not identified any serious and irreversible impacts that cannot be adequately addressed through the EMP and implementation of

mitigation measures and other offset programs. Notwithstanding this, it is important to recognise that the precautionary principle only applies where there is both a threat of serious or irreversible environmental damage and scientific uncertainty as to the likely environmental damage. Both these conditions need to be satisfied to require a precautionary measure to be taken to avert an anticipated threat of environmental damage, and then such a measure should be proportionate.

The engagement of the precautionary principle does not necessarily require the prohibition of a particular development. However, if triggered, it does require sufficient measures to be put in place to manage the risk of the threat actually occurring.

The selection of appropriate precautionary measures involves examining both the costs associated with the Project as well as the benefits of the Project. Chapter 17 of the EIS and Chapter 29 of the Supplementary Report provide an assessment of the cumulative effects of the Project. This assessment identifies and describes the cause/effect relationships (including direct and indirect impacts/effects) using a network analysis method, identifies valued attributes within the Mary River catchment that may be affected by the Project, identifies relevant cumulative impacts and assesses the potential effects of those impacts. This assessment has included an evaluation of potential risk and opportunities, and has taken into account both the impacts before mitigation measures have been put in place as well as the 'residual risk' that remains following the implementation of proposed mitigation measures. It is the residual risks that are used to evaluate potential cumulative impacts. The assessment of risks and opportunities was undertaken for the Project in its totality, including for the four major spatial areas of the Project, specifically:

- the dam construction footprint;
- the inundation area;
- associated linear infrastructure (including roads, power, telecommunications, etc.); and
- downstream of the proposed dam wall.

Assessment within these areas has been undertaken at both a local and regional scale, as well as at three temporal scales (immediate, short-term and long-term). The cumulative impacts of the Project on the environmental values protected by MNES are presented in Chapter 17, taking into account the assessment of impacts on MNES in Chapter 9 of the EIS and the supporting technical reports.

5.5.3.2 Global Dimension of Impact

It has been suggested by a submission that the 'global dimension' of impacts has, at best, received only very general treatment.

The Guiding Principles of the NSESD include "the global dimension of environmental impacts of actions and policies should be recognised and considered". The EIS had addressed the global dimension impacts of the Project through an analysis of the Project's effects on the broad scale global environment through the assessment of greenhouse gas emissions, conservation of world heritage values and biodiversity and protection of migratory species (refer to Chapter 9 of the EIS).