Water Infrastructure Fund Protocol

January 2008

Department of Treasury and Finance

Tasmania
Explore the possibilities

CONTENTS

1. OVERVIEW

1.1 PURPOSE OF THIS PROTOCOL DOCUMENT

The purpose of this Protocol document is to formally detail the approval and administration process for projects funded from the Water Infrastructure Fund (WIF).

Treasury has developed the *Water Infrastructure Fund Protocol* document in consultation with the Treasurer's Office and the Department of Primary Industries and Water. Copies of this document have been provided to Crown Law and the Auditor-General.

The Protocol document was approved by the Treasurer, and endorsed by the Budget Committee on 7 October 2008.

Any future amendments to this Protocol document will require the approval of the Treasurer.

1.2 BACKGROUND

In the 2008-09 Budget, the Government announced the establishment of a $80 million WIF.

The WIF was established by the Government to enable major investment in Tasmania's water infrastructure and to enable the State to meet its National Water Initiative (NWI) obligations.

The investment in water infrastructure will include the development of a number of significant irrigation projects with the potential to provide the State with an additional 250 gigalitres per annum of irrigation water.

The Australian Government has indicated that meeting its obligations under the NWI (signed by Tasmania on 2 June 2005) will be an important step in gaining access to the Australian Government's commitment to provide up to $140 million to fund water development infrastructure.

The WIF will be overseen the Minister for Primary Industries and Water and administered by the Department of Primary Industries and Water.

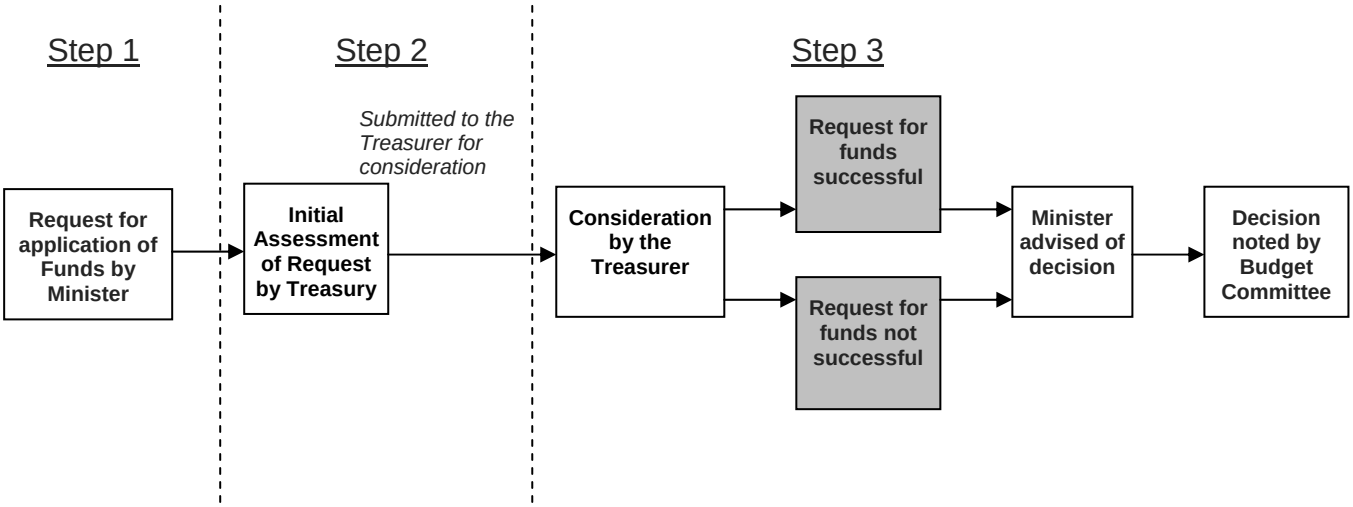
1.3 APPLICATION OF FUNDS FROM THE WIF

WIF funds can only be applied:

- to projects or project related costs that meet the requirements of the Project Approval Process (Section 2) detailed in this Protocol document; and
- following written approval by the Treasurer after consideration of a request from the relevant Minister.

2. PROJECT APPROVAL PROCESS

The approval process for the allocation of funds from the WIF involves three steps. These are outlined below:



2.1 REQUEST FOR FUNDS

2.1.1 Who can apply

Requests for funding from the WIF can only be made by the Minister for Primary Industries and Water.

Funding requests for capital projects must be submitted in accordance with the requirements of the Business Case Guidelines (refer to 2.1.5).

Funding requests for feasibility studies, related planning and assessment processes and other operational costs should be submitted in accordance with the requirements of the Operational Funding Request Guidelines (refer to 2.1.5).

2.1.2 What can be funded

Eligible projects from the WIF are those that:

- can be demonstrated to have a strong likelihood of supporting an economic and or social benefit to the State;
- support the implementation and achievement of Government policies and priorities; and
- require funding for a limited period.

Examples of costs which may be met from the WIF include:

- feasibility studies and related planning and assessment processes;

- development of irrigation projects including the construction of dams, pipelines and associated irrigation infrastructure;
- Tasmanian Irrigation Development Board (TIDB) expenses;
- measures to achieve sustainable water and land management associated with existing or proposed infrastructure developments; and
- measures to meet the requirements of the National Water Initiative to enable the Australian Government funding to be obtained.

2.1.3 What cannot be funded

Non-eligible Projects are those that are not consistent with the objectives of the Funds.

Where an agency receives funding for capital works or other fixed assets, ongoing maintenance of infrastructure and capital replacement will be the responsibility of the agency from existing Budget and Forward Estimate allocations.

2.1.4 Project Evaluation Criteria

Project Proposals will be assessed in accordance with the following evaluation criteria:

- the project must seek to achieve positive economic and social outcomes through the additional supply of irrigation water, better management of water and land, and improve capture of water;
- the project must be consistent with and assist in the achievement of Government policies including Tasmania *Together*, the Fiscal Strategy and relevant State policies relating to water, urban renewal and heritage;
- the department applicants must demonstrate that it has thoroughly investigated alternative sources of funding for the proposed project and that reasonable effort has been taken to access funds from alternative sources, including the Commonwealth, local governments and private investors;
- project costs must be fully assessed and identified by the department;
- the Department of Primary Industries and Water must endeavour to minimise the Government's exposure to financial or legal risk;
- the project applicants must demonstrate that the project will not result in unfair competition and/or business advantage;
- the project must be able to meet relevant planning and environmental approvals independently of Government sponsorship/involvement; and
- the project should have the support of key stakeholders and demonstrate where applicable an appropriate level of consultation with the local community, local government, business groups, industry associations and other relevant parties.

2.1.5 Completing the Operational Funding Request or Business Case (Refer Attachments 1 and 3)

Operational Funding Requests must address the Project Evaluation Criteria and include sufficient information to allow Treasury to fully assess the costs and benefits of the project. The Operational Funding Request must include items such as a project description, analysis of potential risks, links to Government policies including its obligation under NWI, financial information and contact details.

The guidelines for completing a formal Operational Funding Request are at Attachment 1.

A Business Case must be prepared for all capital project proposals. Funding requested for feasibility studies, related planning, assessment processes and Tasmanian Irrigation Development Board expenses do not require a Business Case.

The Business Case must include information on stakeholder management, analysis of option delivery, cost/benefit analysis, risk management, and implementation and procurement strategies. The Business Case should also outline the preferred option of delivery for the proposed capital project.

The guidelines for the preparation of the Business Case are at Attachment 3.

Electronic copies of the Operational Funding Request and Business Case templates are available from Budget Management Branch at Treasury.

Once completed the Operational Funding Request or supporting Business Case should be submitted to the Treasurer by the responsible Minister.

2.2 ASSESSMENT OF REQUEST BY TREASURY

All Operational Funding Requests or Business Cases received by the Treasurer will be forwarded to the Department of Treasury and Finance for assessment.

2.2.1 Initial Assessment of the Proposal by Treasury

Treasury will initially review the project to determine if it is consistent with the objectives of the Fund. Treasury will in consultation with the Department, review the proposal against the Project Evaluation Criteria (detailed at 2.1.4) and provide an initial assessment of the proposal to the Treasurer.

2.3 CONSIDERATION BY THE TREASURER

The Treasurer will be provided with:

- the Operational Funding Request or Business Case submitted in support of the funding request; and
- Treasury's initial assessment of the proposal.

The Treasurer will consider this documentation and determine if funding will be provided for the proposed project.

2.3.1 Notification of Decision

The Treasurer will advise the relevant Minister of his/her decision in regard to the request for funding of the proposed project. The Treasurer's decision will be noted by Budget Committee.

3. PROJECT ADMINISTRATION

3.1 ROLES AND RESPONSIBILITIES

3.1.1 Responsible Agencies

Following project approval by the Treasurer, WIF projects will be administered by the Department of Primary Industries and Water.

The responsibilities of the agency in administering WIF projects include:

- ensuring appropriate governance and accountability mechanisms are in place to deliver projects effectively;
- ensuring appropriate legal agreements are entered into with relevant parties;
- the payment of project expenditures;
- correctly recording expenditures and receipts in finance systems;
- maintaining project budgets on a monthly basis (refer to 3.5.1) and advising Treasury of budget issues;
- monitoring the progress of each project and submitting quarterly Milestone Reports for each project to Treasury (refer to 3.5.1);
- provide relevant information to Treasury as requested on the progress of the fund in accordance with the objectives of the funds and Budget Allocations; and
- ensure compliance with the external reporting requirements (refer to 3.5.2).

3.1.2 Department of Treasury and Finance

The Department of Treasury and Finance is primarily involved in the following administration functions for WIF projects:

- monitoring the WIF budgets;
- assisting and advising agencies on budget issues;
- advising and reporting on WIF to the Government through internal reporting, the Budget Papers and the Mid Year Financial Report; and

- seeking the Auditor-General to conduct audits on the management of the Funds to ensure administration of the funds are in accordance with this Protocol.

3.2 FUNDING ARRANGEMENTS

The Department of Primary Industries and Water administers the WIF account (T711) within the Special Deposits and Trust Funds (SDTF).

The responsible Minister must seek approval from the Treasurer to disperse funds from the WIF.

The responsible agency will manage the expenditure incurred for projects from the Funds. Expenditure must be consistent with the objectives of the Funds.

3.3 GST TREATMENT

3.3.1 Reimbursement to Agencies

According to the Goods and Services Tax Ruling (GSTR) 2006/11, a payment made between Government related entities is exempt from GST if specifically covered[1] by an Appropriation under Australian law.

Reimbursements to agencies not specifically covered by an Appropriation will be outside the scope of paragraph 9-15(3)(C) of the GST Act, and will be subject to the general principals of the GST Act.

3.3.2 Payments to Other Organisations

In accordance with GSTR 2006/11 and paragraph 9-15(3)(c) of *A New Tax System (Goods and Services Tax) Act 1999*, once funds are transferred to the ultimate Government related entity, all further payments will be subject to GST as they are no longer specifically covered by the Appropriation under Australian Law. Agencies that are required to make further payments will be responsible for the payment of GST and all GST related matters.

Agencies who are required to make further payments will be responsible for the payment of GST and all GST related matters.

3.4 LEGAL AGREEMENTS

A legal agreement will be required in the event that the Department makes an on-payment to an organisation that is not the Crown. It is the responsibility of the relevant agency to establish legal agreements for WIF projects in consultation with the Crown Solicitor.

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[1] For a payment to be specifically covered by an Appropriation the following must be specified:
- The purpose of the payment;
- The amount of the payment; and
- The relevant Government related entitie(s).

It will be the responsibility of the Department to develop the agreement between its Minister and the relevant organisation. The type of agreement to be used will depend on the circumstances and the advice of the Crown Solicitor as to which arrangement is appropriate. Where an agreement has been prepared, a draft should be provided to Treasury for comment before it is finalised. A copy of the signed agreement must also be provided to Treasury.

When procuring goods or services relating to water infrastructure, the Department must apply the relevant Procurement Treasurer's Instructions.

3.5 MONITORING AND REPORTING

3.5.1 Internal monitoring and reporting

The following monitoring and reporting functions will be carried out during the course of each financial year:

- agencies will update project cashflows and budgets by entering variations into the Budget Management System (BMS) by the third working day PRIOR to the end of each month;

- variations to budgeted expenditure for WIF projects will be included in the monthly Budget Monitoring Report, which is prepared by Treasury and reviewed by the Treasurer.

- Treasury will monitor project cashflows against budget on a monthly basis. The Public Account Reporting System (PARS) and the BMS will be used in this process;

- agencies will submit a quarterly Milestone Report for each project to Treasury (refer Attachment 2);

- at the end of each quarter or otherwise requested by the Treasurer, the responsible agency must provide a statement of costs incurred, and a reconciliation of the relevant fund to the Treasurer; and

- Treasury will prepare a quarterly report for the Treasurer detailing project budgets, expenditures, and state of completion.

3.5.2 External reporting

The following publications will report on the WIF on an annual basis:

- The State Government Budget Papers; and
- The Treasurer's Financial Statements.

In addition, the agency receiving funding is required to disclose in their Annual Financial Report:

- the funds received from the WIF; and
- how the money has been expended.

ATTACHMENT 1: OPERATIONAL FUNDING REQUEST

<PROJECT TITLE>
OPERATIONAL FUNDING REQUEST

Date:

Submitted by:

PART A: Functional Brief:

Project Title:	
Objective:	*What is the aim of this project?*
Fund: (WIF)	
Project Description:	*Provide a brief explanation of the purpose of the project*
Anticipated Start Date:	*DD/MM/YYYY*
Anticipated Completion Date:	*DD/MM/YYYY*
Location:	*What communities will benefit?*
Justification for need:	*Outline why this project is required to be undertaken, why funding is required from the WIF and why the project is not currently being funded from existing appropriation.*
Ongoing maintenance of Assets	*In situations where the WIF funds are to be expended on capital expenditure, outline how the asset acquired will be maintained beyond the four years and what the resulting recurrent costs will be.*
Impact if project is not undertaken:	*What will be the impact if the project is not undertaken or if funding is not provided*
Major Risks:	*What are the barriers to achieving project success and how will they be managed?*
Links to Government Policy:	*What are the links to Government policies including Tasmania Together, the fiscal strategy and relevant State water policies.*
Benefits:	*What will the benefits be to the community and economy?*
Governance:	*What are the administrative arrangements to govern the initiative, monitor progress etc?*
Stakeholders:	*Who are the major stakeholders?*

Key Milestones:	Key Milestone	Target Date

PART B Financial Analysis

Part B requires financial information for the proposed projects. This includes presenting the total annual project costs over the Budget and Forward Estimates period. The information should include funding sources, operating expenses, and capital expenditure.

Project Summary

	Total Cost	200X-0X	200X-XX	20XX-XX	20XX-XX
	$'000	$'000	$'000	$'000	$'000
FUNDING REQUIREMENT (WIF)					
Project Title					
TOTAL FUNDING REQUIREMENT					

OPERATING STATEMENT

	Total Cost	200X-0X	200X-XX	20XX-XX	20XX-XX
	$'000	$'000	$'000	$'000	$'000
FUNDING SOURCES					
WIF					
Other (Internal/External)					
TOTAL					
EXPENSES					
Employee Entitlements					
Salaries and Wages					
Other Employee Related Expenses					
Supplies and Consumables					
Consultants					
Maintenance					
Other Supplies and Consumables					
Other Expenses					
TOTAL (A)					
CAPITAL EXPENDITURE					
Works and Services					
TOTAL (B)					
TOTAL PROJECT COST (A+B)					

General Comments:

PART C Other Information

1. Contact Details

Responsible Department:

Contact Officers Name:

Contact Officers Address:

Contact Officers Phone:

ATTACHMENT 2: MILESTONE REPORT

Water Infrastructure Fund

Milestone Report

Project Title:

Project Code: *As per the Budget Management System*

Department:

Date:

Contact Officer:

	Activity:	Original Date:	Revised Date:	Comments:
1				
2				
3				
4				
5				
6				
7				
8				

General Comments:

BUSINESS CASE GUIDELINES
for
WATER INFRASTRUCTURE APPLICATIONS

December 2008

CONTENTS

1. PURPOSE OF PAPER

The purpose of this paper is to provide guidelines for the preparation of a business case for parties applying for Water Infrastructure Funds (WIF). This paper is an attachment to the WIF Protocol document and should be read in conjunction with it.

The guidelines are based on the Department of Premier and Cabinet's Project Business Case (medium to large projects) template. Amendments to conform with the National Water Initiative have been made to the template to reflect the specific needs of WIF projects.

2. COVER PAGE

A cover page with the name of the business case, the proponent's name and the date it has been prepared should be provided with the business case.

3. EXECUTIVE SUMMARY

The executive summary is an introduction and summary of the main body of the business case. It provides an outline of:

- the proposal and the business concept;
- the purpose of the proposal;
- a summary analysis of the options and alternatives considered; and
- details of the preferred option.

An executive summary should be provided at the beginning of the business case.

4. INTRODUCTION/BACKGROUND

Summarise any relevant background information. Additional information may be included in the Appendices.

5. OVERVIEW

5.1 POLICY CONTEXT

The policy context section should briefly summarise high-level policy directions and strategic priorities relevant to the business case. Consider relevant State, Federal and Local Government policies and documents and identify the key strategic priorities and policies that are relevant to the business case.

5.2 OBJECTIVES AND SCOPE

The objectives directly link the business case activities with the organisational goals and direction of Government businesses providing the context in which the business case is being undertaken. This section should provide clear statements of the objectives and scope of the proposed initiative and its connection to:

- State Government objectives;
- Federal Government objectives (where relevant);
- Local Government objectives; and
- Government business objectives.

Anything that is not listed as an objective should be considered outside of the scope of the business case.

5.3 OUTCOMES

Outcomes are the benefits or other long-term changes that are sought from undertaking the project. They are achieved from the utilisation of the project's outputs. Outcomes are linked with objectives, in that if the outcomes are achieved then the objectives have been met.

Outcomes should simply state a requirement and not contain any details about how they will be achieved (this information is considered in the definition of project outputs and processes).

List the outcomes sought from the project i.e. ask why the stakeholders want the project to proceed.

5.4 OUTPUTS

Outputs are the products, services, business or management practices that will be produced to meet the identified outcomes. Outputs link with outcomes, in that the outputs are used by the end users to achieve the outcomes i.e. products and services.

List the high-level outputs to be delivered by the project. Include descriptions where necessary.

Overview Checklist

- ☐ Summarise high level policy directions and strategic priorities relevant to the business case
- ☐ Relevant State, Federal and Local Government policies and documents have been considered
- ☐ Key strategic priorities and policies that are relevant to the business case have been identified
- ☐ Objectives set out in the business case are clearly linked to the organisational goals and direction of the government business
- ☐ Clear statements are provided of the objectives and scope of the proposed initiative
- ☐ Document connections to objectives of the three tiers of government, where relevant, and government business objectives
- ☐ Outcomes (the long term benefits or changes sought from undertaking the project) are clearly stated
- ☐ Outputs (the products, services, business or management practices that will produce the identified outcomes) are listed and described where necessary

6. CRITICAL ASSUMPTIONS AND CONSTRAINTS

It is essential that assumptions used to build the business case are identified. Examples of assumptions and constraints include deadlines, finance and budget, legislation, resource availability, environment, technology and security.

This process will later also assist with risk identification, as both assumptions and constraints will reveal areas of risk for the project.

6.1 ASSUMPTIONS

List any assumptions made eg in relation to resource availability, prices and the environment.

6.2 CONSTRAINTS

List any constraints applied eg finance and budget, legislation, supply of water, derived demand, and construction.

Assumptions and Constraints Checklist

- ☐ Assumptions used to build the business case have been identified and listed
- ☐ Constraints applied to the business case have been documented
- ☐ Factors such as the following have been considered: deadlines, finance and budget, legislation, water supply and resource availability, construction, demand, prices, environment, technology and security

7. STAKEHOLDER MANAGEMENT

7.1 STAKEHOLDER IDENTIFICATION AND ANALYSIS

Key stakeholders need to be identified and analysed in this section. Consider:

- a summary of the nature of the stakeholder relationship and the potential impact of the proposal;*
- the wider implications of the proposal, including the impact on any other proposals, which are dependent on this proposal or should be jointly considered to give optimal cross government outcomes;
- certification of the accuracy of information submitted in the proposal eg stakeholders' willingness to accept the assumptions made within the business case such as net margins; and
- where appropriate, information should be provided on the likely demand and any charging policies to recover costs (either in full or in part) from clients who have been identified as stakeholders.

*Some stakeholders may be disadvantaged or not fully informed and thus not support the proposal. Other stakeholders may resist change due to fear of the unknown and actively resist the proposal. In these cases it will be necessary to outline a formal communication strategy to address these issues, including possible public communication from the responsible Minister.

7.2 RELATED PROJECTS & PROGRAMS

Related projects (or major change initiatives) can be of significance to the project. Identify other relevant projects including the type and nature of the relationship between the projects and the dependency of the projects.

7.3 PUBLIC INTEREST ISSUES

Detail the public interest issues eg accountability, transparency, consumer rights and access. These should have been highlighted during the options analysis stage. Include information on how those public interest issues are being addressed.

Stakeholder Management Checklist

- ☐ Key stakeholders have been identified and analysed
- ☐ Stakeholder relationships and potential impacts of the proposal have been summarised
- ☐ Any wider implications of the proposal, including impact on other proposals, are documented
- ☐ Qualification is provided for accuracy of information included in relation to stakeholders' views
- ☐ Information is provided on likely demand and cost recovery policies from stakeholder clients
- ☐ If required, outline a formal communication strategy to address stakeholder issues

☐ Other relevant projects are identified and described, including reference to any dependencies
☐ Public interest issues are detailed, including information about how the issues are being addressed

8. ANALYSIS OF OPTIONS

The following section should outline the possible options that could be undertaken in regards to the business case. This section should include:

- as a minimum two or three options, which are most likely to deliver the desired outcomes and the 'do nothing' or minimal approach (base case) option;
- information on the present service delivery performance or condition, and performance and utilisation of existing infrastructure;
- the impact on related services and assets and opportunities for integration with other government services;
- information on whether the operation, or part of it, could be efficiently and reliably contracted out;
- details of capacity for variations to the design and/or life of the proposal;
- an assessment of the scope to trade-off capital and maintenance costs;
- details of interim or staged implementation solutions available;
- information on whether any aspect of the proposal can be scaled down;
- the level of strategic thinking and the investment of other resources in the development of the business case; and
- information on whether and how the delivery options are feasible and realistic.

Specifically it should cover key issues identified under the following sub-headings.

8.1 PROCESS OF OPTION DEVELOPMENT

Briefly explain the process of developing and evaluating the options. For most capital projects this will involve: engagement of specialist consultants, feasibility study, schematic design, cost reports, revenue and cost modelling. This should provide information on the completeness and depth of information obtained.

8.2 OPTIONS CONSIDERED

This section should document the solutions that have been considered and evaluated during the project.

It is important to demonstrate that all feasible options have been identified and considered. Provide a logical argument for pursuing or discarding each option.

The feasibility of each solution should be assessed. Consider existing conditions, integration with other providers, ability to source other providers, recurrent cost data or implications, achievement of project objectives, alignment with strategy or policy, feasibility of staging and capacity to provide interim solutions.

The solutions should include but not be limited to:

- doing nothing – what are the consequences and issues related to not proceeding with the project;
- private sector – what are the implications of minimal or no public sector investment; and
- potential solutions achievable within any announced budget or budget expectation. Solutions must consider new versus refurbishment options, options for staging, options for interim works and deferral of the project.

8.3 OPTION ANALYSIS - SCHEME DESIGN AND SALE OF WATER

The option analysis needs to address the following issues:

- proposed arrangements for the sale of water eg the water rights, a usage charge or annual charge per megalitre;
- the process of how the water rights will be sold eg auctions and binding contractual offers. If it is proposed that credit be provided to purchasers, the conditions and arrangements for providing credit need to be set out;
- the level of sale or commitment that is required before the project proceeds;
- the level of certainty regarding supply of, and demand for, the water;
- the level of interest of farmers in the project eg market research, existing water sales in the area; and
- any factors that could affect the certainty of water supply of demand.

8.4 DESCRIPTION OF OPTIONS

This section should provide a summary of the options that are technically feasible. The options presented must include a base case, an option consistent with any previous commitments or financial limits and other feasible options. Preliminary financial and economic assessments are required, together with an initial assessment of environmental sustainability. Any major industry development, employment or social impacts should also be included. A possible structure is suggested below.

The discussion points should include:

- effective life of proposal / asset;
- capacity to change the project once it has commenced; and
- assessment of feasibility and any risk factors or external factors that can impact on the success of the project.

8.4.1 Base Case (which may be the ‘do nothing’ option)

- description of option;
- estimated capital cost;
- a summary of the flow of costs, revenues and benefits over the project’s life cycle, including preliminary financial, economic, social and environmental assessments;*

- a summary of the financial cash flow over the project's life cycle;*
- a summary of any major industry, employment or social impacts;*
- a description of the principal risks of the option and the possible outcomes;
- advantages; and
- disadvantages.

* see guidelines for completing this in the relevant section on cost:benefit analysis below.

8.4.2 Option A

- As above.

8.4.3 Option B

- As above.

Options Analysis Checklist

- ☐ Include a range of options such as a choice of options most likely to deliver the desired outcomes and a "do nothing" or base case option for comparison
- ☐ Detail any interim or staged solutions that may be available
- ☐ Include information on whether any aspect of the proposal can be scaled down
- ☐ Include information on whether and how the delivery options are feasible and realistic
- ☐ Explain the process of developing and evaluating the options
- ☐ Demonstrate that all feasible options have been identified and considered
- ☐ Document how the feasibility of each solution has been assessed
- ☐ Document how each option has been analysed against scheme design criteria and issues relevant to the sale of water
- ☐ Summarise the technically feasible options, including the base case, an option consistent with any previous commitments or financial constraint and other feasible options

9. COST/BENEFIT ANALYSIS

This is to include detailed analysis of the financial, economic, environmental and social costs and benefits of the options under consideration. The economic and financial analyses should use discounted cash flows in calculating the net costs and benefits of a proposal. It is important that:

- all assumptions are explained;
- information on full lifecycle costs including recurrent costs are included; and
- the costs and benefits, including social and environmental costs and benefits, should be quantified where possible.

The source of cost and performance information used as a basis for the analysis and its likely accuracy needs to be explained. This would include whether revenue and

cost information has been constructed using accepted methods and techniques prescribed and/or accepted industry practice. In the event that estimates are used, the basis of those estimates needs to be disclosed.

As part of the economic assessment it is essential not just to consider quantitative measures but also to incorporate measures of a qualitative nature. This is particularly important because many social costs such as high salinity, loss of native flora and fauna and many social benefits such as flood mitigation can be difficult to quantify.

Attachment A, *Guidelines for Preparation of a Social, Economic and Financial Assessment of Water Development Projects*, provides further information on how to construct an economic and financial analysis.

9.1 FINANCIAL ANALYSIS

A financial assessment considers whether the project's revenues will be sufficient to cover all expenditures and whether the financial return is sufficient to make the project commercially viable. The financial assessment demonstrates whether a project meets a commercial 'hurdle' rate for the investment. It is undertaken from the perspective of the participant eg Tasmanian Irrigation Schemes Pty Ltd.

All assumptions should be set out, such as the projected demand for water, the range of farm activities, including crops, for which the water is expected to be used, and an explanation of the estimated costs and revenues.

- Estimate the project's life cycle.
- Identify and measure cash flows, in particular, the value of certain cash flow (the amount committed to by farmers at the time the business case is prepared) as opposed to the projected cash flow that assumes a rate of uptake.
- Prepare discounted cash flows and measure the net present value of the project. Note for Rivers and Water Supply Commission (RWSC) projects, the discount rate should be the RWSC's real pre-tax weighted average cost of capital (WACC).
- Include sensitivity analysis that includes, but is not limited to, different capital costs, different rates of uptake and different operating costs.

A useful guide is the New South Wales Government's, Guidelines for Financial Appraisal, which can be found at: http://www.treasury.nsw.gov.au/__data/assets/pdf_file/0014/7412/tpp07-4.pdf.

9.2 ECONOMIC ANALYSIS

The following section should analyse the economic costs and benefits of undertaking the proposal. An economic assessment assesses the broader community benefits and costs of the project to determine whether, overall, society will be better or worse off as a result of the development.

In addition to the cash benefits and costs for water users and associated beneficiaries, economic assessments may include actual or imputed benefits and costs of externalities such as environmental impacts, impacts (positive or negative) on recreation and amenities and on flood risks.

It is important to note that the impact of the project on the level of economic activity, such as investment, employment and exports, is not included in an economic analysis.

If there are no externality benefits or costs, the economic analysis would usually be the same as the financial analysis. In some cases, there will be a difference if the net financial value of the water to farmers and other users, as estimated in the economic analysis, is greater than the revenue received from users over the project's lifetime. As the economic value of the water to users is reflected in what the users are willing to pay, if the estimate of the economic value of the water is correct, farmers would be expected to pay up to this amount. If there is a significant difference between the estimated economic value of the water and the prices farmers are charged and agree to pay, a robust explanation of this difference is required.

It is recommended that evidence of actual water sales in the relevant areas is sought, as evidence of the economic value of water, rather than relying solely on residual value estimates.

It is recommended that a discount rate of six per cent (real pre-tax) is used with sensitivity tests at five and seven per cent.

Note that under the State's obligations in the National Water Initiative, only projects that have a net positive economic present value should proceed. Consider:

- an estimate of the project's life;
- the quantifiable economic costs and benefits throughout the project life;
- the qualitative costs and benefits including social and environmental impacts;
- the net present value; and
- a sensitivity analysis similar to that required for the financial analysis.

A useful guide is the New South Wales Government's *Guidelines for Economic Appraisal*, which can be found at:

http://www.treasury.nsw.gov.au/__data/assets/pdf_file/0016/7414/tpp07-5.pdf;

http://www.treasury.nsw.gov.au/__data/assets/pdf_file/0018/7416/tpp07-6.pdf

9.3 ENVIRONMENTAL IMPACTS

Under the National Water Initiative framework, water projects should be environmentally sustainable. Although there are no specific guidelines in place, at a minimum, projects should meet statutory and legislative requirements.

As the project cannot proceed without obtaining the relevant approvals under Federal, State and local Government requirements, a detailed account of all the environmental issues is not required.

However, if there are some major environmental issues, especially issues that may lead to public controversy, these should be highlighted. The report should also identify any linkages and potential conflicts with the Government's environmental objectives and policies.

In addition, there are some matters, such as salinity, that are not covered in the statutory approvals. These should also be addressed in the report.

9.4 INDUSTRY DEVELOPMENT, EMPLOYMENT AND SOCIAL IMPACTS

The economic assessment does not include the impact of the project on the level of economic activity, including employment, investment, exports and industry development. Any major impacts in these areas should be documented.

Any major social impacts should be included. In particular, the project beneficiaries should be identified and described, together with an estimate of the level of financial assistance (if any) that they might receive if water costs are below the economic value of water to the users.

A detailed account of all the social impacts is not required. However, Attachment A, *Guidelines for the Preparation of Social, Economic and Financial Assessments of Water Development Projects*, provides a useful checklist of social issues to consider.

Cost/Benefit Checklist

- ☐ A cost/benefit analysis has been prepared analysing the economic costs and benefits of the options being considered and the relative financial costs and benefits
- ☐ Discounted cash flows have been used in calculating all net costs and benefits
- ☐ All assumptions have been explained
- ☐ Information on full lifecycle costs including recurrent costs is included
- ☐ Costs and benefits should be quantified where possible
- ☐ A financial assessment has been carried out to demonstrate whether a project meets a commercial “hurdle” rate for the investment
- ☐ An economic assessment has been carried out to analyse the economic costs and benefits of undertaking the proposal
- ☐ Any project proposal should at least meet statutory and legislative environmental requirements
- ☐ Any major environmental issues, especially issues that may lead to public controversy, should be highlighted
- ☐ Any major impacts in employment, investment, exports and industry development should be documented
- ☐ Any major social impacts should be included

10. RISK MANAGEMENT

The purpose of risk management is to ensure levels of risk and uncertainty are properly managed, so any potential threat to the delivery of outputs (level of resourcing, time, cost and quality) and the realisation of outcomes is appropriately managed to ensure the project is completed successfully.

Attention should also be paid to the assumptions and constraints identified during this process, as they will often indicate risks to the project's success.

On completion of the initial risk analysis, and following risk reviews, strategies to manage or reduce high-level risks should be detailed here, noting how they will be implemented and how their effectiveness will be monitored.

Attachment B should be completed and provided with the business case as part of the risk assessment process.

10.1 RISK IDENTIFICATION

Identify the risks by considering the following variables:

- change in law/policy, commercial, commissioning, completion/construction, contractual, demand, economic, environmental, financial, implementation, investment planning, management, obsolescence, operations, organisational, political, private sector, regulatory/technological, residual value upgrade.

10.2 RISK ANALYSIS

Risk analysis involves analysing the likelihood that risks will be realised and the level of seriousness/impact they will have if they occur. A matrix for grading risks is provided as part of Attachment C. The results of the initial analysis, particularly any 'Extreme' and 'A' level risks, should be included here. Initial results are also included in the Risk Register at Attachment C.

10.3 RISK EVALUATION

Identify which risks pose the highest threat? What are the consequences should the risk be realised? Are benefits delayed or reduced? Are timeframes extended? Are costs advanced or increased? Is output quality reduced? Are treatment or mitigation plans required?

10.4 RISK MITIGATION

Identify what preventative action can be taken to reduce the likelihood a risk will be realised? What contingency planning can be done to reduce the seriousness of a risk if it occurs? For each risk that requires treatment or a mitigation plan, what is the cost (in budget terms as well as time and effort)? What recovery action is required if a risk occurs? Who is responsible for mitigation of each risk, and in what timeframe should action be taken?

Risk Management Checklist

- ☐ Risks have been identified using a recognised assessment framework
- ☐ A risk register has been established for the project, having regard for assumptions and constraints
- ☐ Risks have been analysed according to their likelihood of realisation, and the potential consequences if they occur
- ☐ Highest threat risks have been evaluated in terms of specific effects on the project benefits, timeframes, costs, and quality
- ☐ Mitigation strategies to manage or reduce high-level risks have been detailed, including information about implementation plans and effectiveness monitoring

11. RECOMMENDED OPTION

11.1 IDENTIFY THE RECOMMENDED OPTION

Once a summary analysis of the options has been completed a preferred option should be identified and a detailed cost/benefit analysis completed.

11.2 LEVEL OF COMMITMENT TO THE RECOMMENDED OPTION

It is highly desirable to have a very good understanding of the level of interest of farmers and other users in purchasing water at agreed prices before the project's business case is prepared. Agreement to purchase water through legally binding contracts provides much better evidence than expressions of interest or market research.

It is therefore recommended that detailed consultation is undertaken with water users and, if appropriate, legally binding contracts, with a deposit, are entered into that commit users to the purchase of water if the project proceeds. Importantly, these contracts should impose no obligations on the project proponent if the project does not proceed.

Recommended Option Checklist

- ☐ A preferred option has been identified and subjected to a detailed cost/benefit analysis
- ☐ Detailed consultation has been undertaken with water users
- ☐ If appropriate, contracts and deposits have been put in place to commit users to purchase water if the project proceeds

12. IMPLEMENTATION STRATEGY

A range of proposal delivery performance measures (milestones) is necessary at the project level, including those related to standards to be met, timing issues, location (where relevant), benefit realisation and costing.

Detail timing and delivery sequencing requirements and the potential lead-time expected for the preferred option:

- an indicative and realistic timetable should be developed outlining the key delivery events of the proposed initiative;
- the governance framework should be outlined; and
- identify resourcing implications.

12.1 TIMELINE AND KEY MILESTONES

Outline the timeline and key milestones for the implementation of the project including the preferred commencement date, if known.

12.2 BUDGET AND EXPENDITURE

Using Attachment D, identify and summarise the business case's budget and expected expenditure in line with the project plan and financial planning. The budget information should reflect funding for the life of the project. Separate budget information should be provided for all sub-projects. Where the project draws on multiple funding sources (eg Commonwealth and State funds), separate budget analysis should be provided for each source.

Implementation Strategy Checklist

- ☐ Milestones have been established for the project with reference to quality, timing, location (where relevant), benefit realisation and costing
- ☐ Project timing and delivery sequencing requirements have been detailed
- ☐ Potential lead-time for the preferred option has been identified
- ☐ Timelines for implementation of the project, including a preferred commencement date if known, are documented
- ☐ A summary budget and expected expenditure plan has been prepared in line with the project plan and financial planning

13. PROCUREMENT STRATEGY

Outline the strategy required to enable procurement of the services or the project.

Procurement Strategy Checklist

- ☐ The strategy required for procurement of the services or project has been identified
- ☐ Supporting information in support of the chosen procurement method has been included

14. RECOMMENDATION

A clear recommendation is required for the preferred option, outlining the reasons for the recommendation.

15. ATTACHMENTS

Attachment A *Guidelines for Preparation of a Social, Economic and Financial Assessment of Water Development Projects*

Attachment B *Risk Register*

Attachment C *Key to Risk Rating Symbols*

Attachment D *Financial Analysis*

DRAFT (14 June 2007)

GUIDELINES

for the preparation of

SOCIAL, ECONOMIC AND FINANCIAL ASSESSMENTS

of

WATER DEVELOPMENT PROJECTS

in

TASMANIA

June 2007

DEPARTMENT OF PRIMARY INDUSTRIES AND WATER

Introduction

The purpose of this document is to provide guidelines for the financial and economic assessment component of new water infrastructure investments being proposed to the Tasmanian Department of Primary Industries and Water - including extensions to existing water infrastructure.

These guidelines require that, in most cases there is, in addition to an engineering/technical feasibility, a need to prepare:

(a) a financial assessment;

(b) an economic assessment;

(c) a social assessment; and

(d) an environmental assessment.

The results of the social and environmental assessments are necessary to feed into the financial and economic assessments.

These guidelines place a strong emphasis on the financial assessment that should be completed where new water infrastructure is being assessed - particularly in the context of considering water pricing and cost recovery for new projects.

2. The difference between a financial and an economic assessment

A “financial assessment” is used to determine the commercial viability (profitability) of a project from a developer's perspective whereas the “economic assessment” determines the net benefits of a project to the economy and society as a whole. Both assessments are based on discounted cash flows although they take account of different cost/benefit streams and use different discount rates.

A financial assessment considers whether the projected revenues will be sufficient to cover expenditures and whether the financial return is sufficient to make the project commercially viable (profitable). It is the financial assessment that demonstrates whether a project meets a commercial 'hurdle' rate for the investment.

An economic assessment, on the other hand, assesses the broader community benefits and costs of the project to determine whether, overall, society will be better or worse off as a result of the development. In addition to the cash benefits and costs for water users and associated beneficiaries, economic assessments may include actual or imputed benefits and costs of externalities such as biodiversity, salinity, acidity etc as well as recreation, tourism and flood mitigation.

Economic assessments are based on the expected life of a development whereas a financial assessment will generally use a time period that reflects the planning horizon of the developer.

Clearly, the purpose and objectives of financial and economic analysis are quite different so it will not always be the case that a project that is financially viable will be economically viable or a project that is economically viable will be financially viable.

A comparison between the revenues/benefits and costs captured in a financial and economic assessment of a water infrastructure project is outlined in Table 1.

A financial evaluation considers only those revenues and costs that are directly attributable to a project developer. Therefore, unless costs that come through externalities can be quantified and charged to the project developer, it is possible to have a project that is financially viable but not economically viable.

For example, a project may be financially viable, but the economic assessment shows that the project will cause major salinity problems with a high cost both in terms of loss of productive land and/or remedying the situation. Consideration of these externality costs can mean that the project is not economically viable.

Table 1: Comparison of financial and economic costs and benefits

Financial		Economic	
Revenues	Costs	Benefits	Costs
Direct income streams from project e.g. revenue from water allocation sales, annual water sales. A Government contribution should be considered after the preliminary financial assessment.	Capital costs of the project including financing costs. Project operating, maintenance, administration and refurbishment costs (including overheads) Taxation costs. Regulatory, licencing and compliance costs (e.g. costs of compliance with Environmental Management Plans etc).	Direct benefits such as the increase in economic income directly ascribed to project e.g. increases in income from irrigation and primary processing etc Other direct benefits such as flood mitigation, tourism and recreation. Indirect benefits (excluding transfer impacts e.g. Increases in employment on the project). Environmental impacts (to the extent that a monetary value can be approximated).	Capital costs of the project plus capital costs of other direct beneficiaries. Project operating, maintenance, administration and refurbishment costs, regulatory, licencing and compliance costs. Increase in operating costs of irrigators and primary processors. Loss of economic income from "without case". (i.e. the situation without the project proceeding). Indirect costs of the project (excluding distributional or transfer impacts). Environmental impacts (to the extent that a monetary value can be approximated).

Alternatively, an economic evaluation may show a project to be economically viable, however, a project developer may be unable to capture a sufficient amount of benefits from primary beneficiaries via charges to make the project commercially viable. The willingness and capacity of water users to pay charges levied by a developer will be influenced by the magnitude of their economic benefit, their required return from entrepreneurship, taxation, the private cost of borrowings and their length of planning horizon.

In some situations, some primary beneficiaries (such as water processing plants) may not be water users and the project developer may be unable to levy charges to capture part of their economic benefits.

Where projects are assessed as being economically viable, but not commercially viable, there may be, in limited circumstances, a case for the Government to provide some assistance – either by way of a lump sum contribution to the capital costs or via a revenue stream over time - or both.

3. Environmental Assessment

This document does not cover the environmental analysis required for all capital projects under Tasmania's planning and environmental laws or other relevant legislation. It is a prerequisite for development approval that a project is able to demonstrate that it is ecologically sustainable. If a project is not demonstrated to be ecologically sustainable, then the project should not proceed.

The environmental assessment should consider:

(a) the extent and nature of both on-site and off-site environmental consequences;

(b) the short and long-term environmental effects from the project;

(c) opportunities to improve environmental benefits from the project (eg. through the incorporation of conservation initiatives); and

(d) whether environmental considerations associated with the project are likely to be of a significant community concern.

From a financial and economic evaluation perspective, environmental implications of projects should be considered in the following manner:

(a) financial assessment should include the direct costs to the commercial provider of complying with environmental and resource management requirements during the development of the project and for the life of the infrastructure investment;

(b) economic assessment should, to the extent possible, quantify the environmental costs and benefits of the proposed project.

4. Social Assessment

Regional impacts such as flow-on employment and investment effects (economic multiplier effects) can be difficult to quantify. For this reason, they are not usually required to be formally included in the financial or economic assessment for new water development projects.

An economic assessment takes account whether there are sufficient benefits from the project to more than fully off-set any costs or losses attributable to a project. However, an economic assessment does not always specify where the costs and benefits from a project fall or who in the community will be the beneficiaries or losers. A financial assessment considers the viability of the project from the perspective of the commercial developer.

Accordingly, an analysis of the social impacts of projects, separate to the economic assessment, may be needed for decision makers to assess the desirability or otherwise of projects.

An analysis of the social impacts of a project would be undertaken where it is likely that the project will:

(a) result in significant distributional shifts in costs and benefits between and within communities;

(b) significantly affect employment, trade, private sector or other levels of government etc;

(c) cause disproportionate disadvantage to a particular sector;

(d) provoke significant community concern; or

(e) require changes in government policy and direction.

An analysis of the social impacts of a project should:

(a) identify any significant social issues or opportunities associated with the project;

(b) outline the extent to which they may impact on the project; and

(c) develop strategies and options to deal with these issues.

Risks and uncertainties associated with the analysis, in particular with the assumptions underlying the analysis, should be outlined to assist in the overall assessment of project risk.

Issues identified in this analysis should be stated clearly in the evaluation report so that all interested parties are aware of any policy implications or community reactions to the project proposal.

The extent and nature of the social analysis of a project proposal should be commensurate with the importance of the project and the social issues involved.

5. Financial Assessment

Financial analysis assesses the commercial viability (profitability) of the water project from the perspective of the project developer. The financial assessment will measure the level and timing of cost recovery estimated from the project and the projected return on the investment.

Financial analysis should be completed by the prospective project developer(s). In those limited cases where some funding assistance is to be sought from the Government, the project developer would need to demonstrate the extent to which the project is not financially viable and the extent of the Government funding sought.

Accordingly, the financial assessment should be suitably robust to withstand independent audit and scrutiny.

5.1 Calculation of expected project income

In identifying project income, only the financial benefits attributable to the project developer should be considered. That is direct income that is anticipated to be collected by the project developer over the life of the project.

In this respect the financial analysis should include the following:

(a) estimated volume of water available for sale per year (high reliability and medium reliability) – as distinct from the amount of water to be harvested;

(b) estimated timing and magnitude of demand for water (high reliability and medium reliability) – including the broad categories of those groups that are likely to be purchasing the water to be made available by the proposed project;

(c) estimated price for water at the purchase point – including water charges and water transport charges etc (upfront charges and annual charges for both high reliability and medium reliability water);

(d) estimated total revenue (including upfront and annual);

(e) residual value of infrastructure, if any.

The financial analysis should not initially include any allowance for estimated income from Government assistance. That is, the first stage commercial assessment should be conducted in the absence of any financial assistance from the Government.

5.2 Calculation of expected project costs

The financial analysis should include only the direct costs to the project developer of undertaking the particular project. The stream of costs should cover the developer's planned investment period for the proposed water project.

Costs that should be considered would include:

(a) capital costs of developing the water;

(b) infrastructure (including the costs of project investigation, design, construction, approvals, land acquisition etc);

(c) project financing costs (associated with the developer);

(d) ongoing costs of operating and maintaining the infrastructure (including direct/specific costs of ongoing compliance with the resource management regulatory framework and actual refurbishment costs over the life of the project);

(e) administration and overheads;

(f) taxation costs; and

(g) other relevant costs.

The degree of precision in identifying costs will vary with the significance of the project the availability of data and the financial risk associated with the project.

5.3 Calculation of financial viability

The financial assessment measures whether the present value of revenues and costs is positive or negative. Ideally values in a financial assessment should be expressed in nominal terms. Care should be taken to ensure that a combination of real and nominal values are not included in the same analysis. If a financial assessment is undertaken using real values, the discount rate will need to be adjusted accordingly.

The discount rate recommended for financial evaluation of water infrastructure is the project developer's Weighted Average Cost of Capital (WACC). The WACC should be expressed as being either before or after tax, depending on whether tax has been included in the assessment.

In calculating financial viability, commercial businesses would need to take account of, amongst other things, the various options for financing the project taxation liabilities associated with various options, and an appropriate hurdle rate for new investments.

Financial analysis should include projected profit and loss, balance sheets and cash flows statements for the developer's planned investment period, if not the life of the project. Where the developer's planned investment period is shorter than the life of the project, the financial assessment should take account of the residual value of the project at the end of the planned investment period.

5.4 Assessment of the project's financial viability

The tests for financial viability are outlined in Table 2.

The financial viability assessment is completed for two reasons:

(a) to determine whether the proposed water infrastructure investment is commercially viable in its own right. In this regard, the analysis should demonstrate whether the project can be developed by a commercial provider.

(b) if the project is not financially viable (ie. expected income does not cover costs and provide a commercial return on investment as required by the developer), the financial viability assessment should clearly indicate the level of anticipated cost recovery from the project.

The results of the financial assessment should be subjected to a sensitivity assessment.

Table 2: Tests for Financial Viability

If NPV (financial) >0	Project can be completed on a fully commercial basis. An economic assessment is required if water allocation or site for the project is strategically significant.
If NPV (financial)<O and projected revenues at least cover the direct cash costs of providing infrastructure	Financial assessment shows that the project is not financially viable ie. the project has a negative NPV. However, if project income at least covers the ARMCANZ Lower Bound, then an economic assessment of the project may be completed. However, the project should only progress to the economic assessment stage if the project meets a clearly defined Government outcome.
If NPV (financial)< O and income does not cover direct cash costs of providing infrastructure	If financial viability analysis shows that the project would not satisfy the ARMCANZ Lower Bound requirements, the project should be redesigned or abandoned. Only under exceptional circumstances involving a policy decision by Government should consideration be given to progressing water infrastructure projects that cannot cover at least the ARMCANZ Lower Bound.

6. Economic Assessment

An economic assessment considers the overall impact of the water project on the regional or State economy. Cost/benefit analysis is used to identify the economic costs and benefits of a project, calculated in monetary terms, (using imputed values if necessary), to generate a net present value (NPV) for the project. Projects can be ranked as candidates for development according to their NPV.

To the extent that an economic assessment considers the broader impacts of a project on the region or economy as a whole, the Government, rather than a commercial provider, will generally make the final judgement as to the reasonableness of the conclusions reached about the net economic benefit. This means that the Government will use its own officers or specialist advisers to review the analysis provided.

Subsequent to an assessment of the reasonableness of the judgements made, and any consequential changes regarding the economic viability, there can be a ranking of the project as a potential candidate for development.

Ideally values in an economic assessment should be expressed in real terms. The discount rate should also be expressed in real terms. Care should be taken to ensure that a combination of real and nominal values are not included in the same analysis.

The level of detail in the economic cost benefit assessment should have regard to the significance of the project. That is to say, the larger the level of investment, the most detailed should be the assessment. The assessment should be suitably robust to withstand external review.

6.1 Identification of benefits

Benefits should be valued in monetary terms wherever possible, eg. by using actual or estimated market values. In some instances it may be necessary to use notional or imputed values. However, in some cases valuation may be excessively expensive and the results produced may be uncertain. In such situations, discretion should be used to determine the worth of undertaking such valuations.

In identifying project benefits, consideration should be given to:

(a) avoided costs - costs which are unavoidable if nothing is done, but may be avoided if action is taken (for example, costs if a township experiences regular flooding);

(b) cost savings - verifiable reductions in existing levels of expenditure if a project proceeds (for example, reduced user pumping costs through new or extended distributional channels);

(c) benefits - benefits which result directly or indirectly from the project (for example, increases in net farm produce as a result of the project). Changes in net benefits which would have occurred regardless of the project must be identified and included as a cost against the project;

(d) benefits to consumers, and the broader community as a whole - (externalities) (for example, recreational benefits);

(e) the residual value of the project (if any).

Multipliers, which measure the secondary or indirect benefits of a project on the economy, should not be included as benefits in this economic assessment. However, multipliers may be identified and reported as part of separate regional impact or distributional impact analyses for consideration by Government in the social assessment referred to in section 4.

6.2 Identification of costs

Evaluations should be based on the additional cost to the economy of undertaking the particular project. Costs which would have been incurred anyway should be excluded. The stream of costs should cover the life of the proposed water project. Costs that should be considered include:

(a) capital costs of the water infrastructure project plus capital costs incurred by water users and other direct beneficiaries;

(b) project operating, maintenance, administration and refurbishment costs (including overheads) of the developer and all associated stakeholders;

(c) loss of economic income when compared to the "without case"; and

(d) environmental impacts (to the extent that a monetary value can be approximated) and costs of implementing environmental management plans etc.

The above list is not exhaustive and will vary depending on the characteristics of the individual infrastructure project.

The degree of accuracy in identifying costs will vary with the significance of the project and the availability of data.

It is very important that assumptions underlying all capital and recurrent cost estimates are made explicit in the evaluation - including assumptions regarding, labour costs and energy costs.

It is important that estimates of costs be undertaken on a consistent basis to enable meaningful comparisons to be made between competing options and projects. All valuations of costs should be on the same basis as the valuation of benefits.

6.3 Calculation of net benefits

As with the financial analysis, the concept of net present value (NPV) is used to facilitate comparisons between projects. For cost benefit analysis, all future costs and benefits should be expressed in present value terms.

Calculation of present value requires the use of a discount rate. Discounting takes account of the fact that the initial investment costs are borne up front, while benefits and operating costs, maintenance costs and similar will extend into the future. Discounting reflects the concept of the time preference of money.

The discount rate recommended for economic evaluation of water infrastructure in the first instance is 7%.

This rate does not take into account the market risk inherent in the development of individual water projects. These include the fact that the demand for water will be impacted on by a range of variable such as exchange rates, world commodity prices and the cyclical economy and business conditions. It normally should not take account of issues of unique risk such as weather conditions or changes to the regulatory framework.

These and similar issues should be dealt with as part of a sensitivity assessment. This explores the effect on the net benefit from a change in the major variables that drive the end result. For instances, the sensitivity assessment might consider the change in the expected net benefit from a rise or fall in prices received for the sale of the main agricultural product being produced by 10%, an increase or decrease in interest rates by 10%, an increase or decrease in energy costs by 10% and an increase or decrease in engineering costs by 10%.

Ordinarily, the time period for an economic assessment should cover the expected life of the asset to be created so that immediate costs and benefits, as well as those that occur at varying times in the future, are included in the assessment. To the extent that water infrastructure projects will have significantly long lives (eg. potentially over 100 years), use of a shorter time horizon for economic assessment may be more appropriate.

The appropriate time period for a cost/benefit analysis depends on the magnitude of the discount rate. Where the discount rate is above 5%, there is little justification for extending the period beyond 30 years. However, it is important to include a residual value for project assets where the life of the project exceeds the planning period.

7. Summary

An examination of the financial and economic, as well as the engineering, environmental and social impacts of a potential water development project, is essential.

Ideally, in considering the financial and economic dimensions, the following matters should be explicitly considered:

(a) a statement of the objective that is being pursued as well as a statement of the boundaries of the cost/benefit analysis;

(b) a clear specification of the base case (ie what will happen if the project does not proceed);

(c) an indication of what other options are available to achieve the objective and why the one preferred has been chosen;

(d) an assessment of all the apparent costs;

(e) an assessment of all the apparent benefits;

(f) outline all assumptions used – including those relating to price received for products sold at farm gate, value of inputs, take up rates, energy costs, interest rates etc;

(g) a statement as to the weighted average cost of capital that is used;

(h) a sensitivity analysis; and

(i) a conclusion.

The Department would identify the approach taken by Marsden Jacob Associates in its review of the Meander Dam proposal dated July 2003 for the Tasmanian Government as one approach that effectively deals with most the financial and economic issues outlined in this document.

It is possible that in some limited circumstances the Government will, in effect, purchase some identified public benefit by contributing funds towards the project.

8. Conclusion

This document has outlined some guidelines to be followed in relation to proposals to be considered by the Department of Primary Industries and Water for water development projects.

In simple terms, it means that for each project for which Government financial assistance is requested, a significant amount of information is required. In many cases, it will be necessary for specialist assistance to be engaged to undertake such assessments. DPIW can suggest some consultants that could be approached to undertake economic and financial assessments. However, it needs to be recognised that they will need to be provided with engineering and other details for this to be done effectively.

Further clarification can be obtained from approaching the Water Division in DPIW.

It is acknowledged that this document has benefited from the text of a publication by the Queensland Department of Treasury entitled "Guidelines for Financial and Economic Evaluation of New Water Infrastructure in Queensland", September 2000 and a document produced by the NSW Treasury, Office of Financial Management entitled "Guidelines for Economic Appraisal" 1997.

Attachment B Risk Register

<insert business case name>

<insert date>

Id	Description of Risk Identification of consequences	Likelihood/ Seriousness	Grade	Change	Impact	Mitigation Actions (Preventative or Contingency)	Individual/Group Responsible for Mitigation Action	Timeline for Mitigation Action
<n>	*<Description of risk and the impact /consequences to the project>*							
<n+1>	*<Description of risk and the impact/ consequences to the project>*							

Attachment C Key to Risk Rating Symbols

Rating for Likelihood and Seriousness for each risk			
L	Rated as Low	E	Rated as Extreme (Used for Seriousness only)
M	Rated as Medium	NA	Not Assessed
H	Rated as High		

Grade: Combined effect of Likelihood/Seriousness					
	Seriousness				
Likelihood		**Low**	**Medium**	**High**	**EXTREME**
	Low	E	D	C	A
	Medium	D	C	B	A
	High	C	B	A	A

Recommended actions for grades of risk	
Grade	Risk mitigation actions
A	Mitigation actions to reduce the likelihood and seriousness to be identified and implemented as soon as the project commences.
B	Mitigation actions to reduce the likelihood and seriousness to be identified and appropriate actions implemented during project execution.
C	Mitigation actions to reduce the likelihood and seriousness to be identified and costed for possible action if funds permit.
D	To be noted - no action is needed unless grading increases over time.
E	To be noted - no action is needed unless grading increases over time.

Change to Grade since last assessment			
NEW	New risk	↓	Grading decreased
—	No change to Grade	↑	Grading increased

Attachment D Financial Analysis

The table below requires financial information for the proposed projects. This includes presenting the total annual project costs over the Budget and Forward Estimates period. The information should include funding sources, operating expenses, and capital expenditure. All costs are to be shown in real amounts and the year that is being used should be specified.

Project Summary

	Total Cost	200X-0X	200X-XX	20XX-XX	20XX-XX
	$'000	$'000	$'000	$'000	$'000
FUNDING REQUIREMENT (WIF)					
Project Title					
TOTAL FUNDING REQUIREMENT					

OPERATING STATEMENT

	Total Cost	200X-0X	200X-XX	20XX-XX	20XX-XX
	$'000	$'000	$'000	$'000	$'000
FUNDING SOURCES					
WIF					
Other (Internal/External)					
TOTAL					
EXPENSES					
Employee Entitlements					
Salaries and Wages					
Other Employee Related Expenses					
Supplies and Consumables					
Consultants					
Maintenance					
Other Supplies and Consumables					
Other Expenses					
TOTAL **(A)**					
CAPITAL EXPENDITURE					
Works and Services					
TOTAL **(B)**					
TOTAL PROJECT COST **(A+B)**					