

Wairarapa Water Use Project

Required Revenue and Potential
Financing Options
May 2012

DRAFT FOR DISCUSSION PURPOSES ONLY

Wairarapa Regional Irrigation Trust
c/- Geoff Copps
Grow Wellington
PO Box 920
MASTERTON 5840
25 May 2012

Dear Geoff,

Required Revenue and Project Financing Options for the Wairarapa Water Use Project

In accordance with the terms of our engagement letter dated 5 March 2012, we attach our report on potential project financing options and revenue requirement principles for the Wairarapa Water Use Project.

Please do not hesitate to contact me on 04 462 7452 if you require any further information.

Yours sincerely
PricewaterhouseCoopers

Bruce Wattie
Partner
Corporate Finance

Section one

Introduction

Introduction

Background and Purpose

The Wairarapa Water Use Project (WWUP) is seeking to identify potential rural water infrastructure schemes in the Wairarapa valley so that the region's rural water supply is more predictable and reliable.

The WWUP involves a number of interrelated workstreams. Identifying and assessing potential sources and structure of finance is one of the workstreams.

Irrigation projects are capital intensive. WWUP could require up to \$300 million to develop the infrastructure needed to capture, store and distribute water. The nature of major irrigation projects is such that sourcing and structuring this level of capital will be challenging.

We have been engaged by the Wairarapa Regional Irrigation Trust ("WRIT") to:

- Develop the modelling principles that could be used to estimate the potential annual level of revenue that the scheme will require to ensure its commercial viability; and
- Review the possible funding and ownership models for the scheme.

This report contains our findings with respect to these matters.

Information

Throughout the course of our engagement, we have had access to information provided by WRIT, Grow Wellington and from public sources. We have relied on the information provided to us and have not undertaken anything in the nature of an audit on that information.

For the purposes of calculating required revenue we have been instructed to use the capital and operating cost estimates for three selected schemes prepared by Beca in their 2008 pre-feasibility study.

We understand that the pre-feasibility study was a desktop exercise only. Consequently, the capital and operating costs are very high level estimates. They may also now be out of date. The required revenue calculated using these capital and operating costs should therefore also be viewed as a very high level estimate.

A list of the information we have had access to throughout the course of our engagement is presented in Appendix B.

Other

This report should be read in conjunction with the Important Notice set out in Appendix A.

All amounts in this report are expressed in New Zealand dollars and are exclusive of Goods and Services Tax ("GST") unless otherwise stated.

Certain numbers included in tables throughout this report have been rounded and therefore may not add exactly.

Section 2

Required Revenue

Required Revenue Concept

Required Revenue Concept

Required revenue is defined as the amount of revenue the scheme will need to generate to:

- Cover annual operating expenses;
- Cover mid-life refurbishment costs;
- Recover the upfront capital cost of the scheme;
- Provide a return on the capital (debt and equity) provided to finance the upfront construction and ongoing operations of the scheme.

The level of required revenue is reduced by the amount of any other revenue the scheme is able to generate (e.g. the sale of electricity from hydro generation).

Required revenue can be converted to dollars per cubic metre of water (“cmw”) through dividing by the cubic metres of water purchased.

The table opposite illustrates the components of required revenue.

Required Revenue

	Operating expenses
+	Mid-life refurbishment costs
+	Return of capital cost
+	Return on equity capital
+	Return on debt capital
-	Other revenue
=	Required revenue (\$)
÷	Cubic metres water purchased (cmw)
=	Required revenue (\$/cmw)

Capital and Operating Cost Assumptions

Capital and Operating Cost Assumptions

A key determinant of the schemes upfront capital and ongoing operating cost is the location, size and form of the dam, and the method of distribution to the farm gate. All of these aspects are still being investigated. A final decision on the dam site and configuration will not be made for some time.

In light of this, we have been instructed to use the capital and operating costs estimated for three schemes by Beca in their pre-feasibility study dated December 2008. These schemes, as they are referred to in Beca's report, are: Black Creek (with overbuild), Te Muna (single dam) and Te Mara 2 (piped).

The capital cost and annual operating cost of these schemes as estimated by Beca are presented in the tables opposite.

A construction period of 3 years has been assumed with capital costs incurred evenly over that period. Inflation of 2.20% per annum has been applied to annual operating costs.

Mid-life Refurbishment Cost Assumptions

The cost of any expenditure required to refurbish the assets part way through their life will be related to the amount of annual maintenance expenditure incurred on the assets each year. Beca did not estimate any significant mid-life refurbishment cost for the three schemes in their pre-feasibility study.

For the purposes of calculating required revenue it has been assumed that the pumps will be replaced 20 years post initial construction. The reasonableness of this assumption will need to be investigated further.

Real Capital Cost \$ million	Black Creek	Te Muna	Te Mara 2	Total Cost
Dam	32.6	8.0	8.1	48.8
Intake/offtake	5.3	1.8	0.3	7.4
Pipelines & fittings	48.1	18.7	12.4	79.3
Pumps	10.0	6.5	-	16.5
Canals	31.9	14.9	5.7	52.6
Investigations/design	28.5	11.6	6.3	46.5
Preliminary/general	14.3	5.8	3.2	23.3
Land	13.8	7.3	4.0	25.0
Other	1.0	1.0	1.0	3.0
Total Capital Cost	185.6	75.6	41.1	302.3

Source: BECA Pre-feasibility study

Real Operating Costs \$ million (per annum)	Black Creek	Te Muna	Te Mara 2	Total Cost
Admin/Operations	0.2	0.1	0.1	0.4
Dam maintenance	0.1	0.1	0.1	0.2
Pipeline maintenance	0.2	0.1	0.0	0.3
Pumping station maintenance	0.3	0.2	-	0.5
Electricity	0.4	1.5	-	1.9
Total Operating Costs	1.2	1.8	0.1	3.2

Source: BECA Pre-feasibility study

Maximum Water

Maximum Potential Water

The required revenue per cmw is a function of the potential maximum water available from the scheme. Beca referred to the irrigation potential of each scheme in terms of irrigable hectares. We have been instructed to assume a ratio of 4,500 cubic metres of water per hectare. The ratio is based on an estimate of the amount of water currently being used for irrigation purposes in the Wairarapa.

The maximum potential water (in cmw) available from each scheme, calculated using the ratio of 4,500cmw/hectare, is presented in the table opposite.

Caveat

There is an obvious relationship between the maximum potential water available from the scheme and its cost. As the estimate of maximum potential water available from the scheme has been calculated independently from its capital cost, there is a risk that the two assumptions (capital cost and available water) are inconsistent.

Further work will be required to determine the actual amount of water available from the scheme, given its capital cost.

Maximum Potential Water	Black Creek	Te Muna	Te Mara 2	Total
Max hectares	14,000	6,000	3,000	23,000
Max cm water (millions)	63.0	27.0	13.5	103.5

Note: Assumes 4,500cmw/hectare

Source: BECA Pre-feasibility study, Grow Wellington

Funding Structure

Impact on Required Revenue

The funding structure (i.e. mix of debt and equity) used to finance construction and ongoing operation of the scheme influences required revenue as the cost of capital provided differs among sources.

The required return on debt capital is generally lower than equity capital. Therefore the more debt capital the scheme is able to utilise (within reason), the lower the required revenue and the cheaper the water.

Obviously, this general relationship will only hold for reasonable levels of gearing. If the level of debt capital used to fund the scheme gets to a point such that the providers of debt capital are effectively taking equity risk, their required rate of return will adjust accordingly (i.e. it will increase).

Another important point is that the amount of debt capital available to the scheme will be influenced by the schemes ability to service the interest and principal repayments associated with that debt.

The ability of the scheme to service debt will ultimately be determined by the amount of revenue received from irrigators.

Funding Structure

Determinants of Funding Structure

There are a number of key debt ratios banks will look at when determining how much capital they are willing to lend to the scheme.

Some of these ratios are:

- **Gearing ratio:** net debt (debt less cash) / net debt + equity.
- **EBITDA interest coverage ratio:** Earnings Before Interest, Tax, Depreciation and Amortisation (“EBITDA”) / interest expense.
- **Operating cash flow interest coverage ratio:** Operating cash flow (excluding interest paid) / interest paid.
- **Debt service coverage ratio:** Operating cash flow (excluding interest paid) / interest paid + principal repaid.

The first ratio (gearing) is a maximum ratio. For example, banks might be prepared to lend a maximum of 65% debt to the scheme.

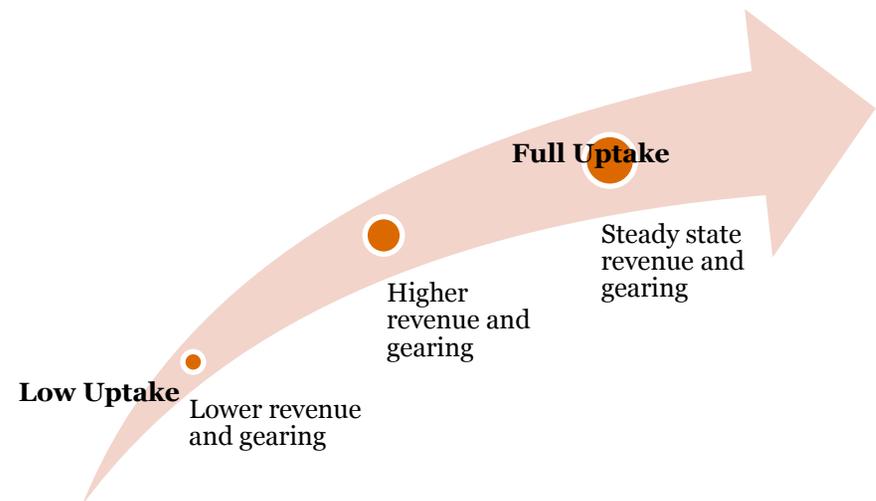
The bottom three ratios are minimum ratios. For example, banks might require the scheme to generate operating cash flow equal to a minimum of two times interest and principal paid.

A key determinant of the amount of debt capital available to the scheme will be the amount of revenue the scheme is able to generate from irrigators.

The amount of revenue generated from irrigators will be a function of: 1) the price irrigators are charged for water and 2) the amount of water that they purchase.

This implies that the amount of debt capital available to the scheme may change over time as the amount of revenue generated from irrigators changes with uptake.

This relationship is illustrated in the figure below.



Funding Structure

Funding Structure at Full Uptake

A key question then becomes: what is a realistic funding structure at full uptake?

We held discussions with a number of banks regarding, among other things, the “steady state” level of debt.

They all noted that it would depend on a range of factors and that these factors were difficult to assess at present given the very early stage of the project.

However, most banks thought that gearing of not more than 60% to 70% at full uptake was possible.

Required Rates of Return

There will be a number of factors that influence the return required by the providers of debt and equity capital. Some of these factors are:

- Nature of contracts with irrigators.
- The scheme risk profile (bearing in mind this is a new asset class for most investors).
- The level of interest rates in the market at the time finance is raised.
- The expected uptake of water by irrigators.
- The relative mix of debt and equity used to fund construction and ongoing operations.
- Whether other irrigation projects are also seeking to raise capital at the same time that finance is being sought for the WWUP.

Financing Costs

Another significant cost associated with raising capital (in addition to the cost of providing a required rate of return), are the fees paid to lawyers, banks, investment banks etc during the capital raising process.

It has been assumed that these fees will equal 1% of total capital raised. These fees have been applied to the initial capital raised and to any capital raised for refinancing.

Repayment Period

It has been assumed that debt capital will be repaid over a total term of 30 years and that it will be refinanced every 5 years.

Equity is assumed to be repaid as quickly as possible, subject to compliance with reasonable estimates of the key debt ratios discussed on the previous page.

Section 3

Potential Ownership Models and Financing Options

Potential Ownership Models

Background

Historically, schemes have been developed around irrigator affordability and cost recovery.

Consequently, scheme development has been characterised by relatively low levels of return on investment and in many cases returns have been largely ignored. Instead investors have focused on the 'affordability' of the scheme and the 'benefits' which may follow.

Where there has been insufficient irrigator demand to support an economically viable scheme, third party support has been sought:

- **North Otago Irrigation Company – Waitaki District Council**

The Waitaki District Council provided a loan of \$10m to help meet the capital costs of stage one. This loan was intended to fund the additional capital expenditure relating to the primary works for stage two of the scheme. Meridian Energy Limited, underwrote the issue of shares (in the form of dry shares).

- **Barrhill Chertsey Irrigation Limited- Electricity Ashburton/Trustpower**

A JV was established between Electricity Ashburton Limited (EAL) and BCI to construct, own and operate the scheme.

Business Models

We have observed three business model options for ownership and investment:

- Co-operative;
- Corporate; and
- Hybrid.

Co-operatives are typically owned and controlled by the irrigators.

Corporate models can enable a wider ownership base, that may include irrigators. They are controlled by a traditional corporate governance model.

Hybrids are typically a mixed ownership model, with elements of both the co-operative and corporate. In this case, we have observed hybrid models where irrigator investment has been supplemented by third party investment from local government or electricity companies.

Many of the established or developing schemes in the South Island follow the co-operative model.

These schemes are typically smaller in scale than what is being proposed for WWUP. Therefore it may have been feasible for the capital cost of the scheme to be funded by irrigators.

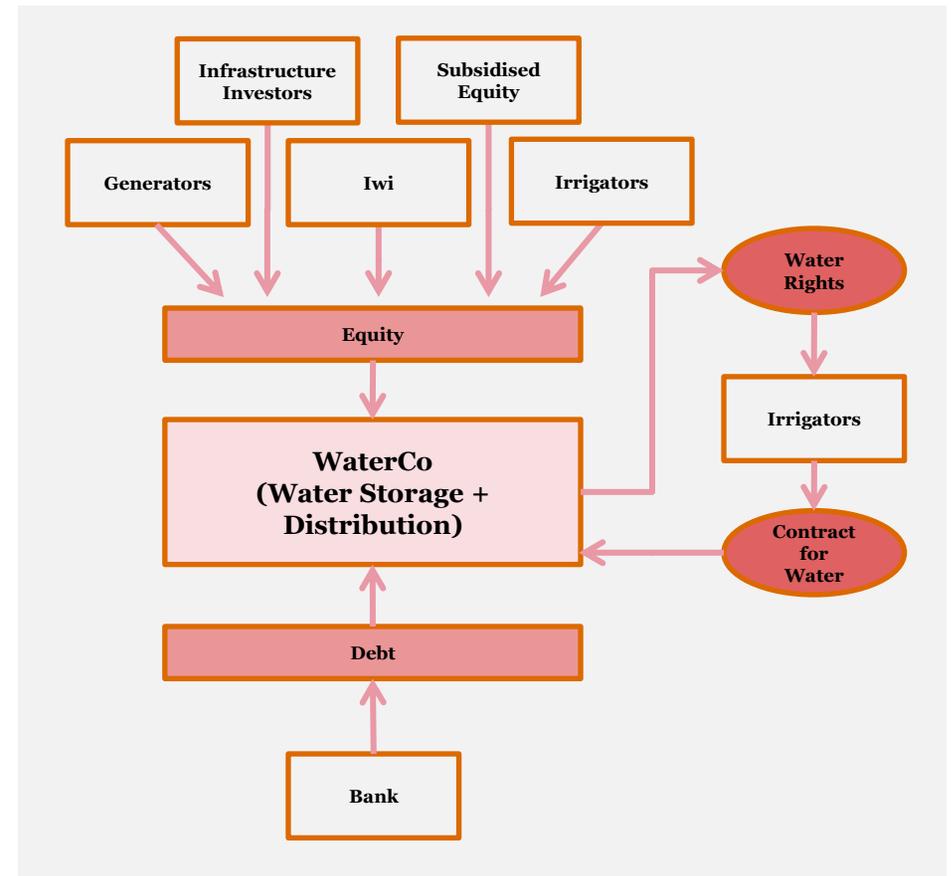
Our working assumption is that due to the scale of the proposed scheme (based on current capital cost estimates), the WWUP will need to adopt a corporate model to be feasible.

Corporate Model

The Corporate Model

The diagram opposite illustrates a typical corporate model that could be applied to the scheme.

- The operations of the scheme are run by a Company “WaterCo”.
- WaterCo is funded by a mixture of debt and equity provided by various parties.
- WaterCo sells water rights to irrigators who then hold a contract for the purchase of water from WaterCo.



Financing Options - Feedback from discussions with banks

Background

We have interviewed a number of banks. We provided each bank with some background to the WWUP and its status.

We asked:

- What the key factors likely to impact whether or not they participated in irrigation schemes were; and
- Whether they had any initial views on potential funding structures.

Summary of Key Points

We outline the key points from our discussions with the banks below:

- The banks have a strong understanding of the factors that drive irrigator affordability.
- However, they noted that large scale water storage and irrigation schemes are at this stage an unproven asset class in New Zealand. They will therefore attract additional scrutiny prior to any investment.
- Banks have significant on-farm exposure through the provision of existing debt. The prospect of additional on-and off-farm irrigation infrastructure could place pressure on their ability to support new schemes without additional equity.
- **Uptake risk** is the single biggest risk factor impacting banks' ability to support off-farm funding of new schemes.
- Uptake risk, particularly in the early adoption phase results in a lack of certainty of cash flow generation.
- This uncertainty is likely to lead to a lower gearing ratio in the early years of the scheme
- There is need for strong investment support from an equity investor from the pre-construction stage.
- It may be challenging to find equity investors willing to invest significant sums of capital given that irrigation is a relatively unproven asset class. Some form of subsidised equity might help to address this “funding gap”. While subsidised equity might be helpful, it does not directly address the key issue: low revenue during the early years of the scheme because of low uptake.
- Overall, feedback from banks was that they would want to see significant equity investment at construction and throughout the initial uptake phase in order for the project to have an acceptable level of risk for banks to be willing to lend.
- Notwithstanding these comments the banks are keen to be involved in irrigation projects. They are willing to work with project sponsors and other advisers to develop solutions to the funding challenges.

Potential Initiatives to Mitigate Uptake Risk

Potential Solutions to Mitigate Uptake Risk

Our discussions with banks and research on other schemes have highlighted the following potential initiatives that could be pursued to mitigate uptake risk.

- Allowing interest to be capitalised during the construction period.
- Allowing interest to be capitalised during the initial uptake period. This was discussed but deemed unlikely.
- The use of a form of subsidised equity with a lower required return that is deferred until principal is repaid.
- Setting a minimum threshold of ‘water right sales’ to irrigators to be reached prior to construction start (the Tasmania project used this).
- Third party underwrite of sale of water rights – a third party takes any unallocated water rights and pays any water charges attached to the water rights. Those rights can then be sold to late adopting irrigators generating a return for the third party.
- Establishing contractual obligations with irrigators to take water. Examples discussed included take or pay contracts and minimum subscription periods.
- In isolation, none of these “solve” the problem of uptake risk, but taken in combination they may help mitigate some of the issues faced.

Indicative Funding Structure, Consents and Other Attributes

Guidance on Debt Funding Structure

The banks gave the following guidance on the typical terms that they would look at for committing funding for both the construction and the post construction phase.

Construction phase:

- Will start funding at consent phase.
- Equity required, with lock-in.
- Capitalise interest during construction period.

Post construction phase:

- Refinance construction costs funding.
- Low level of gearing initially (amount to be determined by uptake).
- Steady state gearing target estimated at ~30-70% based on full uptake – there was a wide range of views among the banks.

Consent Certainty and Timeframe

Banks are looking for consent certainty. They expressed a requirement for a consent framework that enables investment on their part in the early stages of scheme development, as well as the knowledge they would have the ability to enforce step in rights should the scheme fail.

The duration of consents is important to them. Generally they indicated a preference for longer rather than shorter consent periods.

Banks have indicated a preference for the loans to amortise over the consent life and with all loans needing to be repaid or refinanced before consents expire.

Other Attributes

In supporting new schemes, banks identified other criteria required including:

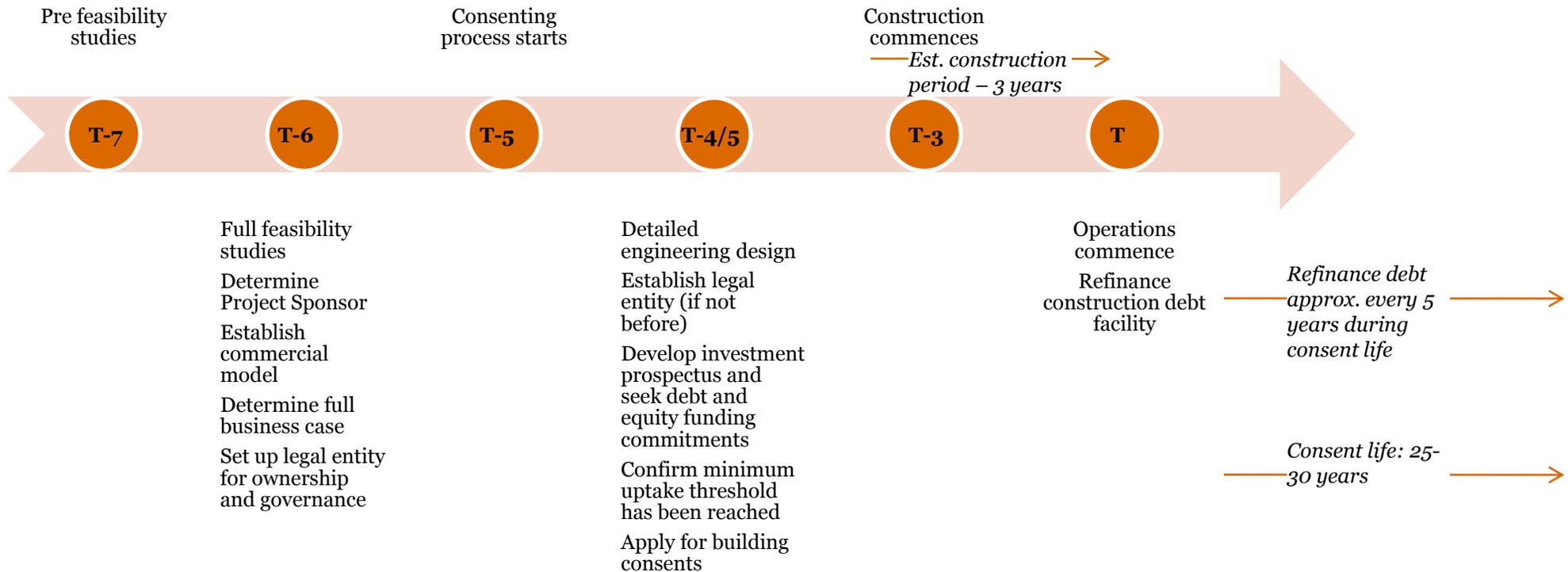
- Project sponsors need to have proven experience in large infrastructure developments and in dealing with problems as they arise.
- Strong governance and good management. A prerequisite of funding would be the presence of an appropriate level of internal scrutiny and discipline for a corporate model.
- Evidence the scheme has been subject to suitable level of commercial, financial and legal rigour.
- Quality of counter parties and external advisers. Particularly in relation to the level of scrutiny the financial model has been subjected to.
- Irrigator involvement in funding would be encouraged. However, banks question irrigator's ability to fund off-farm investment given their on-farm commitments.

Section 4

Timeline of Key Milestones

Illustrative Timeline

We have prepared this high level timeline to illustrate certain key milestones and timeframes during the feasibility, pre construction and operational phases.



T equals first year of operation of scheme

Appendices

Appendix A

Important Notice

- This Report has been prepared solely for the purposes stated herein and should not be relied upon for any other purpose. We accept no liability to any party should it be used for any purpose other than that for which it was prepared.
- This Report is strictly confidential and (save to the extent required by applicable law and/or regulation) must not be released to any third party without our express written consent which is at our sole discretion.
- To the fullest extent permitted by law, PwC accepts no duty of care to any third party in connection with the provision of this Report and/or any related information or explanation (together, the “Information”). Accordingly, regardless of the form of action, whether in contract, tort (including without limitation, negligence) or otherwise, and to the extent permitted by applicable law, PwC accepts no liability of any kind to any third party and disclaims all responsibility for the consequences of any third party acting or refraining to act in reliance on the Information.
- We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of the Company. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied.
- The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise.
- The statements and opinions expressed in this report are based on information available as at the date of the report.
- We reserve the right, but will be under no obligation, to review or amend our Report, if any additional information, which was in existence on the date of this report was not brought to our attention, or subsequently comes to light.
- We have relied on forecasts and assumptions prepared by the Company about future events which, by their nature, are not able to be independently verified. Inevitably, some assumptions may not materialise and unanticipated events and circumstances are likely to occur. Therefore, actual results in the future will vary from the forecasts upon which we have relied. These variations may be material.
- This report is issued pursuant to the terms and conditions set out in our engagement letter and the Terms of Business attached thereto.
- In addition the following should be noted:
 - Certain numbers included in tables throughout this report have been rounded and therefore do not add exactly.
 - Unless otherwise stated all amounts are stated in New Zealand dollars.

Appendix B

Sources of Information

Throughout the course of our engagement we have had access to the following sources of information:

- Prefeasibility Report on the Wairarapa Regional Irrigation Scheme prepared by Beca Carter Hollings & Ferner Ltd (Beca), dated 12 December 2008.

Estimates of the schemes capital and ongoing operating costs and potential irrigation area (in hectares) were obtained from this report. These estimates were used for the purposes of calculating required revenue.

- Inland Revenue Department (“IRD”). Depreciation rates used to calculate depreciation for tax purposes were obtained from the IRD’s website using the tax depreciation rate finder.
- Discussions with various banks. Discussions held with various banks assisted in the determination of reasonable assumptions for key debt ratios (e.g. gearing), debt amortisation periods and required rates of return.

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