OPUS

Nelson City Council

2014 Valuation of Major Assets

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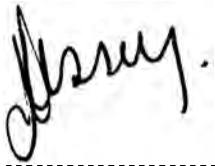
Prepared By



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Nelson City Council

2014 Valuation of Major Assets

Contents

Executive Summary

Nelson City Council commissioned Opus to value the major infrastructure assets owned by the Council as at 30 June 2014.

This report describes the valuation methodology and results of the valuation process. Key outputs from this project are:

- Asset component schedules for each type of asset
- Optimised replacement cost (ORC)
- Optimised depreciated replacement cost (ODRC)
- Annual Depreciation (AD)

The 2014 ORC, ODRC and AD for the major assets are as follows.

Asset Type	ORC ($)	ODRC ($)	AD ($)
Stoke Reservoir No.1	$1,097,900	$879,300	$12,100
Stoke Reservoir No.2	$1,097,900	$970,300	$12,800
Wakapuaka Oxidation Pond and Outfall	$19,064,400	$14,566,900	$376,400
Thomson Terrace No.1	$1,097,100	$476,600	$17,600
Tantaragee Tunnel	$1,218,900	$1,038,600	$6,000
Thomson Terrace No.2	$2,164,400	$1,189,100	$26,400
Thomson Terrace Control Room	$198,900	$81,400	$16,510
Glen Reservoir Tank	$75,500	$51,400	$1,200
Roding Water Supply	$2,859,900	$924,400	$48,900
Roding Water Supply Poorman's Tunnel	$10,458,200	$9,244,800	$48,900
Observatory Hill Reservoir	$249,600	$150,200	$5,200
Matai Water Supply	$20,670,500	$14,695,400	$222,800
Westley Detention Dam	$440,300	$367,300	$1,700
Walters Bluff Reservoir	$1,884,600	$1,601,500	$23,600
Ridgeway Reservoir Tank	$115,500	$94,300	$1,500
Transfer Station	$4,230,400	$2,574,000	$233,900
Detention Dams	$432,600	$395,500	$4,200
Total	**$67,356,600**	**$49,301,000**	**$1,059,710**

The valuation process has been performed in accordance with generally accepted accounting practice and in particular with the New Zealand accounting standard standards (NZ IAS 16) and with the NZ local authority asset management practice (NZ Infrastructure Asset Management Manual and Valuation and Depreciation Guidelines).

1 Introduction

1.1 Scope

Nelson City Council commissioned Opus International Consultants Limited (Opus) to value the major infrastructure assets owned by the Council as at 30 June 2014.

1.2 Objective

The objective of the valuation is to provide appropriate information for financial reporting. This report describes the valuation methodology and process and details the supporting data used in its preparation. Valuation outputs are rated according to the perceived accuracy/certainty associated with the input data and valuation assumptions.

1.3 Background

Asset Valuations

Local Authorities are required to apply prudent financial management practise including preparation of a long term financial strategy. Asset management plans provide a framework for technical, economic and financial inputs relating to infrastructure assets and their impact on long-term financial needs. Asset valuation provides the critical link between these financial forecasts and the asset management process.

Previous valuations

This report presents comparison with the previous valuation carried out in 2012 by Opus.

1.4 Asset Schedules and Componentisation

The assets schedules were primarily based on the 2006 valuation schedule with an appropriate level of componentisation as presented in Table 1.1 below. The asset component list developed is based on key elements, which are considered integral to the operation of the service provided. Disaggregation of assets is to the level at which components are replaced.

Asset inspections were carried out to verify the asset schedules and to update where appropriate. Council officers in Nelson were contacted to discuss the current condition and performance of assets and to confirm additions and disposals since the previous valuation. Associated cost data and relevant copies of drawings were obtained.

Table 1.1 NCC Major Assets Componentisation

Asset	Component Description
Stoke Reservoirs	Reservoir structures, pipework, valves, mechanics & electrics
Wakapuaka Treatment Plant	Embankments, pipework, clarifier, oxidation pond, flow buffer, admin building, inlet works, sludge storate and processing, water system, pump stations, trickling filter, clarifier, road, fencing, landscaping, electrical and controls.
Thomson Terrace No.1	Reservoir structure, pipework, valves, flow meters, pressure transmitters, mechanics & electrics
Tantaragee Tunnel	Formation, lining & portals

Asset	Component Description
Thomson Terrace No.2	Reservoir structure, pipework, valves, flow meters, pressure transmitters, mechanics & electrics
Thomson Terrace Control Room	Valves, flow meters, mechanics & electrics
Glen Reservoir Tank	Reservoir structure, pipework, valves, mechanics & electrics
Roding Water Supply	Tunnel, bridge, intake, dam, pipework, gates, electrics etc.
Roding Water Supply Poorman's Tunnel	Formation, tunnel, inlets and outlets
Observatory Hill Reservoir	Reservoir structure, pipework, valves, mechanics & electrics
Matai Water Supply	Dam, culverts, pipelines, valves, screens , intake & electrics
Westley Detention Dam	Embankment, culvert, structures & pipework
Walters Bluff Reservoir	Reservoir structure, pipework, valves, mechanics & electrics
Ridgeway Reservoir Tank	Reservoir structure, pipework, valves, mechanics & electrics
Transfer Station	Site formation, basement structure, buildings, hoppers, crane hoist, compactors, hydraulic arms, civil infrastructure and storage containers
Detention Dams	Components of 3 detention dams at Todd Bush, Sutton and Grampion Oaks include excavation, concrete bedding layer, bunds, planting, topsoiling and grassing, headwalls, inlets, outlets, spillway, toe drains etc.

1.5 Valuation Outputs

This report describes the valuation methodology including a full explanation of the assumptions made and input parameters used in the valuation process. Key outputs from this project are:

- Asset component schedules for each type of asset
- Optimised Replacement Cost (ORC)
- Optimised Depreciated Replacement Cost (ODRC)
- Annual Depreciation (AD)

2 Methodology

2.1 Valuation Process

Every recorded component has been valued in terms of its replacement and depreciated replacement value. The valuation process has been performed in accordance with generally accepted accounting practice and in particular with the New Zealand Accounting standard (NZ IAS 16). The methodology conforms with NZ local authority asset management practice (NZ Infrastructure Asset Management Manual and Valuation and Depreciation Guidelines).

The basic approach has involved:

- Preparation of the valuation inventories.
- Adjustment of asset quantities, materials and techniques to reflect an optimum (least cost) modern equivalent replacement that offers the same level of service as that currently provided.
- Calculation of gross replacement cost (GRC) by multiplying asset quantities by appropriate unit construction cost rates and including an allowance for other overhead costs (such as site establishment, professional fees and financial charges).
- Prediction and assignment of economic and remaining lives
- Calculation of Optimised Depreciated Replacement Cost (ODRC) by deducting an allowance for depreciation, taking into account age, remaining life and residual value.

2.2 Replacement Cost

The NCC major infrastructure assets as at 30 June 2014 have been valued on a replacement cost basis in accordance with accepted New Zealand accounting practices.

Replacement cost is the cost of rebuilding the existing infrastructure using present day technology, but maintaining the originally designed level of service. Assuming current technology ensures that no value results from the additional cost of outdated and expensive methods of construction. Maintaining the original level of service ensures that the existing asset with all its faults is valued, not the currently desirable alternative.

Replacement cost was calculated by multiplying asset quantities by unit cost rates factored to allow for other direct costs such as professional fees.

2.3 Unit Costs

The unit costs have been obtained from a variety of sources, including the following:

- Recent construction contracts for the NCC
- Opus International Consultants costing database
- Previous valuations

- Rawlinsons
- Contractors, manufacturers and suppliers.

Historic costs have been updated to 30 June 2014 values using a composite cost index that is based on Labour cost Index, Product Price Index and Capital Goods Price Index. The rise in the composite price index varies between 0% and 3.6% over the range of components that make up the major assets. The average price increase is around 2.5% for the period 2012 to 2014.

Brownfield costs have been used which reflect the increased difficulties and constraints of undertaking construction, maintenance and renewal work simultaneously with continued operation of the infrastructure networks. Operational constraints include access, delivery, safety, security, material handling and storage, traffic control and hours available for construction work.

2.4 Overhead Factors

Unit cost rates include an overhead factor that includes all expenses incidental to the asset acquisition and all costs directly attributable to bringing the asset into working condition and location. These additional costs include site establishment and professional fees. Professional fees include planning, investigation, design, performance and quality monitoring of physical works projects (maintenance and construction) and providing other specialist advice.

The overhead factor applied in this valuation is 22% based on the information available from NCC. This factor is made up as follows:

- 6% Design, tender & supervision
- 5% Contingencies: other services, poor ground, temporary diversions
- 4% Other professional fees: (also includes allowance for regulatory compliance)
- 5% Contractor's P&G
- 2% Removal & disposal of asset

Financial charges are an overhead which represent the interest payments on capital loans taken out to fund the construction activity. Council has advised that capital loans are only taken out on projects which have a duration greater than one year. Residual Value

2.5 Method of Depreciation

The basic value of an asset reduces in accordance with the wearing out or consumption of benefits over its life arising from use, the passage of time, or obsolescence. This reduced value is called the depreciated value and has been calculated as the depreciable component of the replacement cost proportioned by the ratio of remaining useful life (RL) to economic life (EL) on a straight-line basis. This method provides a reasonable basis for the 'return of capital' over the economic life of the asset. Optimised depreciated replacement cost is given by:

$$ODRC = (ORC-RV)\ RL/EL + RV$$

Where asset age is unknown, engineering judgement and local knowledge have been used to assign a remaining life (expressed as a percentage of its overall economic life i.e. P=RL/EL). This percentage varies for each asset type. The depreciated value is given by:

$$ODRC = (ORC-RV)\ P/100 + RV$$

The remaining life of each asset has been modified by age, use, condition and performance factors in accordance with the NZ Infrastructure Asset Management Manual (NZIAMM).

2.6 Annual Depreciation

A depreciation allowance is included only for those assets funded as a capital expense (i.e. assets funded as an operating expense has zero depreciation).

The annual depreciation is calculated by dividing the depreciable portion of the replacement cost of an asset by its economic life. The annual depreciation is calculated by:

$$D = (ORC-RV)/EL \quad \text{or} \quad = (ODRC-RV)/RL$$

If the network is being maintained at a stable level of service, the long run average renewal expenditure should approximate the annual depreciation of the network. However, it should be noted that depreciation is not a proxy for the amount needed to fund long-term asset requirements. Accounting for the past consumption is not the same as providing for future consumption, these two purposes differ, and need to be considered separately.

2.7 Client Involvement

Opus has involved Council in each step of the valuation process as outlined in our methodology. Our approach has been to make all variables and assumptions explicit, and involve Council in the review process to ensure where possible that these reflect local knowledge and experience. In particular the Council has been involved in assigning condition ratings for each element of all asset types.

3 Key Assumptions

The following assumptions, which generally apply to all major assets, were made to complete this valuation:

- Land is not part of this valuation
- Resource Consent costs have been allowed for Roding Water Supply, Maitai Water Supply and Walter's Bluff Reservoir.
- No allowance has been allowed for inlet and outlet pipework for all water reservoirs.
- No holding costs have been applied to assets with construction periods less than one year.
- Landscaping, earthworks (including wetland development) and formation costs have not been depreciated.
- Elements and quantities have been primarily based on schedules developed for the 2006 valuation with additional components added based on capex information since the previous valuation.
- Remaining Life of asset components have been adjusted for age, performance, condition and utilisation in accordance with the NZ Infrastructure Asset Management Manual. NCC asset managers were consulted to check whether the stated condition and performance factors realistically represent the current condition and performance of assets.
- Tunnel excavation costs have not been depreciated.

4 Valuation Summary

4.1 Results

The results of valuation are presented in Table 4.1 below with copies of valuation schedules included in Appendix 1 and 2.

Table 4.1 2014 Major Assets Valuation Summary

Asset Type	ORC ($)	ODRC ($)	AD ($)
Stoke Reservoir No.1	$1,097,900	$879,300	$12,100
Stoke Reservoir No.2	$1,097,900	$970,300	$12,800
Wakapuaka Oxidation Pond and Outfall	$19,064,400	$14,566,900	$376,400
Thomson Terrace No.1	$1,097,100	$476,600	$17,600
Tantaragee Tunnel	$1,218,900	$1,038,600	$6,000
Thomson Terrace No.2	$2,164,400	$1,189,100	$26,400
Thomson Terrace Control Room	$198,900	$81,400	$16,510
Glen Reservoir Tank	$75,500	$51,400	$1,200
Roding Water Supply	$2,859,900	$924,400	$48,900
Roding Water Supply Poorman's Tunnel	$10,458,200	$9,244,800	$48,900
Observatory Hill Reservoir	$249,600	$150,200	$5,200
Matai Water Supply	$20,670,500	$14,695,400	$222,800
Westley Detention Dam	$440,300	$367,300	$1,700
Walters Bluff Reservoir	$1,884,600	$1,601,500	$23,600
Ridgeway Reservoir Tank	$115,500	$94,300	$1,500
Transfer Station	$4,230,400	$2,574,000	$233,900
Detention Dams	$432,600	$395,500	$4,200
Total	**$67,356,600**	**$49,301,000**	**$1,059,710**

4.2 Confidence Ratings

Confidence ratings were assigned to the source data and unit cost rates and to other items based on confidence rating descriptions provided in Table 4.2.

Table 4.2: Confidence Ratings

Grade	Label	Description	Accuracy
A	Highly Reliable	Data based on sound records and rigorous assessment	5-10%
B	Reliable	sound records for most data, some minor shortcomings (old data, some missing, reliance on unconfirmed reports and extrapolations)	10-15%
C	Uncertain	Significant data incomplete, unsupported or extrapolated from a limited sample.	15-25%
D	Very uncertain	Data based on unconfirmed verbal reports, cursory inspection and experience	25-40%

Based on the evidence from our site inspections we have judged the overall accuracy of the data used in this valuation has a confidence rating of B.

5 Comparison with 2012 Valuation

The 2014 valuation results were compared with the 2012 valuation as shown in Table 5.1.

Table 5.1 Comparison of 2014 Valuation with 2012 Values

ASSET TYPE	June 2014			June 2012		
	ORC	ODRC	AD	ORC	ODRC	AD
Stoke Reservoir No.1	1,097,900	879,300	12,100	1,071,600	877,900	12,100
Stoke Reservoir No.2	1,097,900	970,300	12,800	1,071,600	971,900	12,500
Wakapuaka Oxidation Pond and Outfall	19,064,400	14,566,900	376,400	18,397,500	14,692,100	354,300
Thomson Terrace No.1	1,097,100	476,600	17,600	1,070,900	495,600	17,400
Tantaragee Tunnel	1,218,900	1,038,600	6,000	1,181,400	1,016,300	5,900
Thomson Terrace No.2	2,164,400	1,189,100	26,400	2,120,000	1,211,900	26,000
Thomson Terrace Control Room	198,900	81,400	16,510	195,500	112,200	16,210
Glen Reservoir Tank	75,500	51,400	1,200	74,300	52,900	1,200
Roding Water Supply	2,859,900	924,400	48,900	2,767,300	984,900	46,400
Roding Water Supply Poorman's Tunnel	10,458,200	9,244,800	48,900	10,126,600	9,030,900	48,000
Observatory Hill Reservoir	249,600	150,200	5,200	246,000	157,500	5,200
Matai Water Supply	20,670,500	14,695,400	222,800	20,097,900	14,689,000	217,400
Westley Detention Dam	440,300	367,300	1,700	423,800	355,300	1,600
Walters Bluff Reservoir	1,884,600	1,601,500	23,600	1,838,700	1,607,600	23,100
Ridgeway Reservoir Tank	115,500	94,300	1,500	113,500	95,600	1,500
Transfer Station	4,230,400	2,574,000	233,900	4,072,800	2,515,300	228,600
Detention Dams	432,600	395,500	4,200	*NA*	*NA*	*NA*
Total	**67,356,600**	**49,301,000**	**1,059,710**	**64,869,400**	**48,866,900**	**1,017,410**

Table 5.2 Percentage Change in Values from 2012 to 2014

ASSET TYPE	Change 2012-14		
	RC	ODRC	AD
Stoke Reservoir No.1	2.5%	0.2%	0.0%
Stoke Reservoir No.2	2.5%	-0.2%	2.4%
Wakapuaka Oxidation Pond and Outfall	3.6%	-0.9%	6.2%
Thomson Terrace No.1	2.4%	-3.8%	1.1%
Tantaragee Tunnel	3.2%	2.2%	1.7%
Thomson Terrace No.2	2.1%	-1.9%	1.5%
Thomson Terrace Control Room	1.7%	-27.5%	1.9%
Glen Reservoir Tank	1.6%	-2.8%	0.0%
Roding Water Supply	3.3%	-6.1%	5.4%
Roding Water Supply Poorman's Tunnel	3.3%	2.4%	1.9%
Observatory Hill Reservoir	1.5%	-4.6%	0.0%
Matai Water Supply	2.8%	0.0%	2.5%
Westley Detention Dam	3.9%	3.4%	6.3%
Walters Bluff Reservoir	2.5%	-0.4%	2.2%
Ridgeway Reservoir Tank	1.8%	-1.4%	0.0%
Transfer Station	3.9%	2.3%	2.3%
Detention Dams	*NA*	*NA*	*NA*
Total	**3.8%**	**0.1%**	**3.7%**

5.1 Main changes from 2012 to 2014

The changes in values from 2012 to 2014 are primarily due to general increase in costs, renewals and additions.

Key asset additions and renewal are as follows:

- Wakapuaka Treatment Plant: Addition of 4 aerators ($283k), a skyline garage ($25k) and upgrade to the clarifier in 2013.
- Transfer Station: Addition of a Recycling Deposit Bay ($55k), and renewals to the crane overhaul, spreader beam and sump pump ($94k).
- Detention dams: Values of 3 detention dams have been included for the first time in the valuation of major assets.

6 Recommended Improvements

Opus International Consultants Ltd recommends that the Council:

- Continue to maintain, develop and improve the asset component register, as well as fill data gaps in the inventory.
- Continue to record condition/performance of assets to assess life expectancy.
- Develop a database for recording contract rates for all renewals and new capital works at component level.

Appendix 1

Major Assets Valuation Schedule 2014

NELSON CITY COUNCIL
MAJOR ASSETS VALUATION 2014

30 June 2014

LOCATION	ASSET TYPE	VOLUME (M3)	SPAN(M)	HEIGHT (M)	AREA (M2)	LENGTH(M)	DIAMETER (M)	QUANTITY	YEAR INSTALLED	AGE (YR)	Base Life	Remaining Economic Life based on lesser of REL(cond) and REL(perf) adopted for Valuation Purposes	Replacement Year	Economic Life	Fraction of Life Expired	Residual Value	Appropriate Index	2012 - 2014 Index	Replacement Unit Cost (Year 2014) ($/unit)	Grosss Optimised Replacement Cost (Yr 2014)	Decline in Value (Cumulative Depreciation)	Optimised Depreciated Replacement Cost	Annual Depreciation	Asset Inspection comments
Stoke Reservoir	**Stoke Reservoir**																							
Reservoir No 1	**Reservoir No 1**																							
	Reservoir Structure	2533		5.6			24	1	1996	18	100	82	2096	100	0.18	$0	Other construction	3%	657,359	657,400	118,200	539,200	6,560	
	Pipew ork and Fittings							1	1996	18	80	62	2076	80	0.22	$0	Pipelines	0%	93,854	93,900	21,000	72,900	1,170	
	Valve pit, Telemetry sheds, Manholes							1	1996	18	80	62	2076	80	0.22	$0	Other construction	3%	72,149	72,100	16,200	55,900	900	
	Valves and mechanics							1	1996	18	40	23	2037	41	0.44	$0	Other fabricated metal products	1%	53,767	53,800	23,600	30,200	1,310	
	Telemetry, Electrical and Controls							1	1996	18	15	2	2016	20	0.90	$0	Electricity distribution and control apparatus	3%	43,954	44,000	39,600	4,400	2,200	
	Earthworks							1	1996	18		0	0	0	0.00	$176,700	Earthmoving and site w ork	4%	176,691	176,700	0	176,700	0	
																				1,097,900	**218,600**	**879,300**	**12,140**	
Reservoir No 2	**Reservoir No 2**																						0	
	Reservoir Structure	2533		5.6			24	1	2004	10	100	90	2104	100	0.10	$0	Other construction	3%	657,359	657,400	65,600	591,800	6,560	New asset assed 2012 as a result of a on site register inspection
	Pipew ork and Fittings							1	2004	10	80	70	2084	80	0.12	$0	Pipelines	0%	93,854	93,900	11,700	82,200	1,170	New asset assed 2012 as a result of a on site register inspection
	Valve pit, Telemetry sheds, Manholes							1	2004	10	80	70	2084	80	0.12	$0	Other construction	3%	72,149	72,100	9,000	63,100	900	New asset assed 2012 as a result of a on site register inspection
	Valves and mechanics							1	2004	10	40	31	2045	41	0.24	$0	Other fabricated metal products	1%	53,767	53,800	13,100	40,700	1,310	New asset assed 2012 as a result of a on site register inspection
	Telemetry, Electrical and Controls							1	2004	10	15	6	2020	16	0.64	$0	Electricity distribution and control apparatus	3%	43,954	44,000	28,200	15,800	2,820	New asset assed 2012 as a result of a on site register inspection
	Earthworks							1	2004	10		0	0	0	0.00	$176,700	Earthmoving and site w ork	4%	176,691	176,700	0	176,700	0	New asset assed 2012 as a result of a on site register inspection
																Subtotal				**1,097,900**	**127,600**	**970,300**	**12,760**	
Wakapuaka Oxidation Pond and Outfall	Wakapuaka Oxidation Pond																							
	Embankments					2130		2130	1977	37	150	103	2117	140	0.26	$0	Earthmoving and site w ork	4%	803	1,710,400	452,900	1,257,500	11,320	
	Hobas Inlet pipeline					118		118	1995	19	100	77	2091	96	0.20	$0	Pipelines	0%		0	0	0	0	Removed
	Concete Inlet Pipe (removed)					360		360	1977	37	60	2	2016	39	0.95	$0				0	0	0	0	Removed
	Outlet Pipeline					115		115	1995	19	100	77	2091	96	0.20	$0	Pipelines	0%		0	0	0	0	Removed
	Outfall pipe					350		350	1968	46	80	38	2052	84	0.55	$0	Pipelines	0%	9,385	3,284,800	1,790,700	1,494,100	38,020	
	Manholes, chambers and flumes (removed)							1	1968	46	80	2	2016	48	0.96	$0				0	0	0	0	Removed
	Electrical, control, Flow meters (removed)							1	2003	11	15	2	2016	13	0.85	$0				0	0	0	0	Removed
	Outfall chamber							1	1977	37	60	26	2040	63	0.59	$0	Other construction	3%	48,100	48,100	28,300	19,800	730	
	Preloading (for new treatment plant)							1	2001	13		0	0	0	0.00	$442,600	Other construction	3%	442,641	442,600	0	442,600	0	
	Aerostaer #1							1	1996	18	20	5	2019	23	0.78	$0	Other construction	3%	27,186	27,200	21,200	6,000	1,170	
	Aerostaer #2 (removed)							1	1991	23	20	3	2017	26	0.87	$0	Other construction	3%		0	0	0	0	Removed
	New items added after the Treatment Plant Upgrade																							
	Oxidation pond and Effluent channel (additional)							1	2007	7	49	42	2056	49	0.14	$0	Other construction	3%	1,555,568	1,555,600	222,200	1,333,400	31,750	
	Flow Buffer							1	2007	7	50	43	2057	50	0.14	$0	Other construction	3%	928,698	928,700	130,000	798,700	18,570	
	Admin Building							1	2007	7	49	42	2056	49	0.14	$0	Non-residential buildings(1)	3%	296,729	296,700	42,400	254,300	6,060	
	Inlet Works + Interceptor Box							1	2007	7	36	29	2043	36	0.19	$0	Metal tanks, reservoirs and containers	1%	365,587	365,600	71,100	294,500	10,160	
	Sludge Storage							1	2007	7	31	18	2032	25	0.28	$0	Metal tanks, reservoirs and containers	1%	221,568	221,600	62,000	159,600	7,150	
	Sludge Processing							1	2007	7	15	8	2022	15	0.46	$0	Other construction	3%	223,037	223,000	103,400	119,600	14,780	
	Water Systems							1	2007	7	25	18	2032	25	0.28	$0	Irrigation and land drainage	3%	106,810	106,800	29,900	76,900	4,270	
	Pump Stations - Mechanical Components							1	2007	7	25	18	2032	25	0.28	$0	Pumping and compressing equipment	3%	261,273	261,300	73,200	188,100	10,450	
	Pump Stations - Civil Components							1	2007	7	50	43	2057	50	0.14	$0	Other construction	3%	313,435	313,400	43,900	269,500	6,270	
	Valves							1	2007	7	24	17	2031	24	0.29	$0	Other fabricated metal products	1%	144,596	144,600	42,200	102,400	6,030	
	Roads, Fencing, Landscaping							1	2007	7	50	43	2057	50	0.14	$0	Transport w ays	3%	23,715	23,700	3,300	20,400	470	
	Trickling Filter							1	2007	7	38	31	2045	38	0.18	$0	Other construction	3%	1,152,360	1,152,400	212,300	940,100	30,330	
	Clarifier							1	2007	7	43	33	2047	40	0.18	$0	Other construction	3%	1,078,013	1,078,000	188,700	889,300	25,070	
	Odour Control (Biofilter + Fans + Ductwork)							1	2007	7	29	22	2036	29	0.24	$0	Other construction	3%	278,609	278,600	67,200	211,400	9,610	
	Electrical and Control							1	2007	7	17	10	2024	17	0.41	$0	Electrical w orks	2%	1,428,507	1,428,500	586,000	842,500	83,710	
	Exterior Piping + MHs							1	2007	7	50	43	2057	50	0.14	$0	Pipelines	0%	2,208,517	2,208,500	309,200	1,899,300	44,170	
	Seeding Pipeline (350m of 150mm dia PVC)							1	2012	2	80	78	2092	80	0.03	$0	Pipelines	0%		75,000	1,900	73,100	940	
	Earthworks and Planting - Development of Wetlands							1	2010	4		0	0	0	0.00	$2,581,300	Earthmoving and site w ork	4%	2,581,347	2,581,300	0	2,581,300	0	
	4 Aerators added in 2013							4	2013	1	20	19	2033	20	0.05	$0			70,750	283,000	14,200	268,800	14,150	
	Skyline Garage in 2013							1	2013	1	20	19	2033	25	0.04	$0			25,000	25,000	1,300	23,700	1,250	
																Subtotal				**19,064,400**	**4,497,500**	**14,566,900**	**376,430**	
Matai Water Supply Reservoir	**Thomson Terrace No.1**																							
	Pipes and fittings					54		1	1961	53	100	48	2062	101	0.52	$0	Pipelines	0%	34,412	34,400	18,000	16,400	340	
	0.225 Dew atering Pipe					20		20	1961	53	80	33	2047	86	0.61	$0	Pipelines	0%	313	6,300	3,900	2,400	70	
	0.375 dewatering pipe					20		20	1962	52	80	34	2048	86	0.61	$0	Pipelines	0%	469	9,400	5,700	3,700	110	
	Concrete Reservoir	2273		4.8			25.146	1	1961	53	50	12	2026	65	0.82	$0	Other construction	3%	617,277	617,300	505,000	112,300	9,530	
	Fibreglass Roof On external skeleton							1	2002	12	50	38	2052	50	0.24	$0	Other construction	3%	295,090	295,100	70,600	224,500	5,880	
	Valve pit, telemetry hut							1	1988	26	50	24	2038	50	0.52	$0	Non-residential buildings(1)	3%	5,010	5,000	2,600	2,400	100	
	Rotork Actuated Valves							1	1988	26	40	18	2032	44	0.59	$0	Other fabricated metal products	1%	4,242	4,200	2,500	1,700	100	
	Rotork Actuated Valves							0	1961	53	40	8	2022	61	0.87	$0	Other fabricated metal products	1%	0	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Valves and mechanics							0	1961	53	40	8	2022	61	0.87	$0	Other fabricated metal products	1%	25,314	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Telemetry							1	2004	10	10	2	2016	12	0.86	$0	revision and radio transmitters and apparatus	-2%	7,759	7,800	6,700	1,100	670	
	Electrical and controls							0	2004	10	10	2	2016	12	0.86	$0	Electrical w orks	2%	8,681	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Earthworks							1	1961	53		0	0	0	0.00	$88,300	Earthmoving and site w ork	4%	88,345	88,300	0	88,300	0	
	Additional Pipe laying including connections					43		1	2007	7	40	33	2047	40	0.18	$0	Pipelines	0%	16,762	16,800	2,900	13,900	420	
	Butterfly valve 450mm dia						450mm	0	2007	7	10	3	2017	10	0.69	$0	Other fabricated metal products	1%	24,581	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Flow meter on Stoke/Tahuna Pipeline 450 mm dia						450mm	0	2007	7	40	33	2047	40	0.18	$0	Electrical w orks	2%	18,856	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Valve Chamber							1	2007	7	50	43	2057	50	0.14	$0	Other construction	3%	7,429	7,400	1,000	6,400	150	
	Pressure Transmitters incl. installn							1	2007	7	40	33	2047	40	0.18	$0	Electrical w orks	2%	2,972	3,000	500	2,500	80	
	PVC Electrical/Control duct							1	2007	7	10	3	2017	10	0.69	$0	Electrical w orks	2%	1,600	1,600	1,100	500	160	
	Overflow pipe 0.420 m dia					42		1	2007	7	80	73	2087	80	0.09	$0	Pipelines	0%	453	500	0	500	10	New asset assed 2012 as a result of a on site register inspection
																Subtotal				**1,097,100**	**620,500**	**476,600**	**17,620**	
Tantaragee Tunnel	**Tantaragee Tunnel**																							
	Formation							240	1961			0	0	0	0.00	$770,900	Earthmoving and site w ork	4%	3,212	770,900	0	770,900	0	
	Full concrete lining				2.13*2.13	28.96		28.96	1961	53	100	43	2057	96	0.55	$0	Other construction	3%	1,604	46,500	25,700	20,800	480	
	Timbered with nib lining				2.13*2.14	205.84		205.84	1990	24	80	45	2059	69	0.35	$0	Other construction	3%	1,604	330,200	114,100	216,100	4,760	
	Nib lining				2.13*2.15	4.67		4.67	1961	53	100	43	2057	96	0.55	$0	Other construction	3%	0	0	0	0	0	
	Portals							2	1961	53	100	48	2062	101	0.52	$0	Other construction	3%	32,067	64,100	33,500	30,600	630	
	Overflow pipe bracing							1	1961	53	10	2	2016	55	0.97	$0	Other construction	3%	7,197	7,200	7,000	200	130	New asset assed 2012 as a result of a on site register inspection
																Subtotal				**1,218,900**	**180,300**	**1,038,600**	**6,000**	
Matai Water Supply	**Thomson Terrace No.2**																							
	Pipes and fittings							1	1974	40	80	40	2054	80	0.50	$0	Pipelines	0%	86,076	86,100	43,100	43,000	1,080	
	0.450 concrete overflow pipe					327		327	1974	40	80	40	2054	80	0.50	$0	Pipelines	0%	453	148,100	74,100	74,000	1,850	
	0.450 steel inlet outlet pipe					134		134	1974	40	90	48	2062	88	0.45	$0	Pipelines	0%	1,132	151,700	68,800	82,900	1,720	
	Concrete Reservoir	5682.5		7.6			31.7	1	1974	40	100	50	2064	90	0.44	$0	Other construction	3%	1,551,971	1,552,000	687,700	864,300	17,190	
	Valve pit							1	1974	40	50	17	2031	57	0.70	$0	Other construction	3%	70,581	70,600	49,600	21,000	1,240	
	Valves and mechanics							1	1974	40	40	9	2023	49	0.81	$0	Other fabricated metal products	1%	42,266	42,300	34,300	8,000	860	
	Earthworks							1	1974	40		0	0	0	0.00	$88,400	Earthmoving and site w ork	4%	88,389	88,400	0	88,400	0	
	Butterfly valve 250mm dia						250mm	1	2007	7	10	3	2017	10	0.71	$0	Other fabricated metal products	1%	5,000	5,000	3,600	1,400	500	New asset assed 2012 as a result of a on site register inspection
	Butterfly valve 100mm dia						100mm	1	2007	7	10	3	2017	10	0.71	$0	Other fabricated metal products	1%	1,000	1,000	700	300	100	New asset assed 2012 as a result of a on site register inspection
	Actuated eccentric plug valve 250 mm dia						250mm	0	2007	7	10	3	2017	10	0.70	$0	Other fabricated metal products	1%	15,460	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Flow meter on Boundary Rd Pipeline 600 mm dia						600mm	0	2007	7	10	3	2017	10	0.70	$0	Other construction	3%	28,674	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Flow meter on Ariesdale Tce Pipeline 150 mm dia						150mm	0	2007	7	10	3	2017	10	0.70	$0	Other construction	3%	5,456	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Valve chamber							1	2007	7	50	3	2017	10	0.70	$0	Other construction	3%	8,590	8,600	6,000	2,600	840	
	Overflow pipe bracing							0	2007	7	10	3	2017	10	0.70	$0	Other construction	3%	7,197	0	0	0	0	Moved to Thompson Terrace Control Room Asset
	Pressure Transmitters incl. installn							1	2007	7	10	3	2017	10	0.70	$0	Electrical w orks	2%	3,657	3,700	2,600	1,100	360	
	Pipes, valves etc.							1	2007	7	10	3	2017	10	0.70	$0	Pipelines	0%	6,909	6,900	4,800	2,100	680	
																				2,164,400	**975,300**	**1,189,100**	**26,420**	
Control Room Serving Reservoirs No 1 & 2	**Control Room Serving Reservoirs No 1 & 2**																							
	Rotork Actuated Valves							1	2007	7	10	3	2017	10	0.71	$0	Other fabricated metal products	1%	4,242	4,200	3,000	1,200	420	Assets moved from individual Thompson Terrace assets
	Valves and mechanics							1	2007	7	50	41	2055	48	0.15	$0	Other fabricated metal products	1%	42,266	42,300	6,200	36,100	850	Assets moved from individual Thompson Terrace assets
	Electrical and controls							1	2007	7	10	3	2017	10	0.71	$0	Electrical w orks	2%	8,681	8,700	6,200	2,500	870	Assets moved from individual Thompson Terrace assets
	Butterfly valve 450mm dia						450mm	3	2007	7	10	3	2017	10	0.71	$0	Other fabricated metal products	1%	25,026	75,100	53,400	21,700	7,510	
	Flow meter on Stoke/Tahuna Pipeline 450 mm dia						450mm	1	2007	7	10	3	2017	10	0.71	$0	Other construction	3%	18,856	18,900	13,400	5,500	1,890	Assets moved from individual Thompson Terrace assets
	Actuated eccentric plug valve 250 mm dia						250mm	1	2007	7	10	3	2017	10	0.71	$0	Other fabricated metal products	1%	15,460	15,500	11,000	4,500	1,550	Assets moved from individual Thompson Terrace assets
	Flow meter on Boundary Rd Pipeline 600 mm dia						600mm	1	2007	7	10	3	2017	10	0.71	$0	Other construction	3%	28,674	28,700	20,400	8,300	2,870	Assets moved from individual Thompson Terrace assets
	Flow meter on Ariesdale Tce Pipeline 150 mm dia					0	150mm	1	2007	7	10	3	2017	10	0.71	$0	Other construction	3%	5,456	5,500	3,900	1,600	550	Assets moved from individual Thompson Terrace assets
																Subtotal				**198,900**	**117,500**	**81,400**	**16,510**	
Glen Reservoir Tank	**Glen Reservoir Tank**																							
	Timber and steel roof				7.35*7.35			1	1990	24	50	22	2036	46	0.52	$0	Other construction	3%	8,818	8,800	4,600	4,200	190	
	Tank	96		3			7	1	2005	9	80	71	2085	80	0.11	$0	Other construction	3%	26,454	26,500	3,000	23,500	330	
	Pipes and fittings					24		1	1990	24	100	69	2083	93	0.26	$0	Pipelines	0%	21,587	21,600	5,600	16,000	230	
	Valves and mechanics							1	1990	24	40	17	2031	41	0.59	$0	Other fabricated metal products	1%	18,588	18,600	10,900	7,700	450	
																Subtotal				**75,500**	**24,100**	**51,400**	**1,200**	

Roding Water Supply	**Roding Water Supply**																							
	Precast Intake structure			1800	1350*4750			1	1986	28	100	66	2080	94	0.30	$0	Pipelines	0%	34,412	34,400	10,300	24,100	370	
	Intake screens				4.91*2.70			1	1986	28	25	5	2019	33	0.85	$0	Other fabricated metal products	1%	33,796	33,800	28,700	5,100	1,030	
	Mesh screens				4.91*2.71			1	1987	27	10	2	2016	29	0.94	$0	Other fabricated metal products	1%	33,796	33,800	31,700	2,100	1,170	
	Screen house (concrete and masonry) and paths			9	4.9*2.44			113	1986	28	80	48	2062	76	0.37	$0	Non-residential buildings(1)	3%	700	85,900	31,600	54,300	1,130	
	Screen house gears/handwheels etc.							1	1987	27	25	5	2019	32	0.84	$0	Other construction	3%	28,238	28,200	23,700	4,500	880	
	Dam				45.3	20		906	1940	74	100	38	2052	112	0.66	$0	Other construction	3%	1,604	1,453,200	956,500	496,700	12,930	
	500mm dia pipe from Dam to Tunnel					190		190	1940	74	80	25	2039	99	0.75	$0	Pipelines	0%	1,095	208,100	155,800	52,300	2,110	
	750 scour pipe					11.4		11.4	1940	74	80	25	2039	99	0.75	$0	Pipelines	0%	939	10,700	8,000	2,700	110	
	450 mild steel pipe and fittings					13.2		13.2	1988	26	80	50	2064	76	0.34	$0	Pipelines	0%	625	8,300	2,900	5,400	110	
	Steel truss bridge		21					1	1986	28	75	44	2058	72	0.39	$0	Other construction	3%	48,100	48,100	18,800	29,300	670	
	Diversion Tunnel					110		110	1940	74	80	22	2036	96	0.77	$0	Other construction	3%	2,726	299,900	231,000	68,900	3,170	
	Diversion Tunnel ram + motor							1	1986	28	25	5	2019	33	0.85	$0	Other construction	3%	26,454	26,500	22,500	4,000	800	
	Diversion tunnel gate + housing							1	2003	11	50	39	2053	50	0.22	$0	Other construction	3%	110,659	110,700	24,300	86,400	2,210	
	Diversion tunnel inlet and outlet structures							1	1940	74	75	22	2036	96	0.77	$0	Pipelines	0%	43,016	43,000	33,100	9,900	452	
	Chlorinator building							1	1960	54	50	13	2027	67	0.81	$0	Non-residential buildings(1)	3%	50,089	50,100	40,300	9,800	750	
	Resource Consent							1	1999	15	18.27	3	2017	18	0.82	$0		11%	385,233	385,200	316,300	68,900	21,080	
																Subtotal				**2,859,900**	**1,935,500**	**924,400**	**48,920**	
Roding Water supply	**Roding Water Supply Poorman's Tunnel**																							
	Formation					3231		3231	1940	74		0	0	0	0.00	$7,786,700	Earthmoving and site work	4%	2,410	7,786,700	0	7,786,700	0	
	Poormans Valley Tunnel				1.02*1.68	3231		3231	1990	24	60	30	2044	54	0.45	$0	Other Construction	3%	802	2,591,300	1,153,400	1,437,900	48,060	
	Poormans Valley Tunnel Inlets and outlets							2	1940	74	80	25	2039	99	0.75	$0	Other Construction	3%	40,082	80,200	60,000	20,200	810	
																Subtotal				**10,458,200**	**1,213,400**	**9,244,800**	**48,870**	
Observatory Hill Reservoir	**Observatory Hill Reservoir**																							
	Tank	375		3.95			11	1	1990	24	100	61	2075	85	0.28	$0	Metal tanks, reservoirs and containers	1%	91,805	91,800	25,800	66,000	1,080	
	Aluminium stairs and handrails							1	1990	24	25	6	2020	30	0.80	$0	Other construction	3%	35,273	35,300	28,300	7,000	1,180	
	Earthworks							1	1990	24		0	0	0	0.00	$32,100	Earthmoving and site work	4%	32,126	32,100	0	32,100	0	
	Pipework and fittings							1	1990	24	80	51	2065	75	0.32	$0	Pipelines	0%	39,105	39,100	12,500	26,600	520	
	Valves and mechanics							1	1990	24	40	17	2031	41	0.59	$0	Other fabricated metal products	1%	25,348	25,300	14,800	10,500	620	
	Telemetry, Electrical and Controls							1	2004	10	15	4	2018	14	0.69	$0	Electrical works	2%	26,043	26,000	18,000	8,000	1,800	
																Subtotal				**249,600**	**99,400**	**150,200**	**5,200**	
Matai Water Supply	**North Branch Dam**																							
	Dam and platform	272000		7.62				272000	1987	27	200	173	2187	200	0.14	$0	Other construction	3%	29	7,888,000	1,064,900	6,823,100	39,440	
	1XRC culvert under road and rock rip-rap					10		10	1987	27	80	54	2068	81	0.33	$0	Other construction	3%	2,726	27,300	9,100	18,200	340	
	Diversion culvert - Type A					105		105	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	6,734	707,100	189,300	517,800	7,010	
	Diversion culvert - Type B					45		45	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	5,611	252,500	67,600	184,900	2,500	
	Concrete valve chamber	328						1	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	211,637	211,600	56,700	154,900	2,100	
	600 RC scour - In culvert					150		150	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	1,443	216,500	58,000	158,500	2,150	
	600 RC supply - In culvert					150		150	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	1,443	216,500	58,000	158,500	2,150	
	Exit slab and anchor blocks							1	1987	27	50	26	2040	53	0.51	$0	Other construction	3%	88,183	88,200	45,000	43,200	1,670	
	Pipework and fittings							1	1987	27	100	74	2088	101	0.27	$0	Pipelines	0%	344,131	344,100	92,100	252,000	3,410	
	500 AC City supply					380		380	1987	27	80	54	2068	81	0.33	$0	Pipelines	0%	1,408	535,000	177,900	357,100	6,590	
	200 Sluice pipeline					10		10	1987	27	50	26	2040	53	0.51	$0	Pipelines	0%	469	4,700	2,400	2,300	90	
	Galvanised intake screen			1.45				4	1987	27	30	9	2023	36	0.75	$0	Other fabricated metal products	1%	16,898	67,600	50,800	16,800	1,880	
	Control building			5	11*17			187	1987	27	100	74	2088	101	0.27	$0	Non-residential buildings(1)	3%	3,643	681,200	182,400	498,800	6,750	
	Culvert Portal concrete and retaining wall			3.8				30	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	2,886	86,600	23,200	63,400	860	
	Service spillway chute, Flip bucket, apron			4	120*12*0.25	120		2500	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	641	1,602,500	429,000	1,173,500	15,890	
	Spillway boom							1	1987	27	20	3	2017	30	0.91	$0	Other construction	3%	35,273	35,300	32,000	3,300	1,180	
	Spillway bridge				4.6	10		46	1987	27	80	54	2068	81	0.33	$0	Other construction	3%	3,527	162,200	53,900	108,300	2,000	
	Auxiliary spillway, fuse plug			0.6	22*120	120		2640	1987	27	50	26	2040	53	0.51	$0	Other construction	3%	33	87,100	44,500	42,600	1,650	
	Electrical and controls							1	1987	27	15	2	2016	29	0.93	$0	Electrical works	2%	260,431	260,400	242,400	18,000	8,980	
	Actuated valves							9	1987	27	25	5	2019	32	0.83	$0	Other fabricated metal products	1%	30,416	273,700	227,900	45,800	8,370	
	Actuated valves							3	2005	9	25	16	2030	25	0.36	$1	Other fabricated metal products	1%	0	0	0	0	0	
	Valves and mechanics							1	1987	27	40	17	2031	44	0.61	$0	Other fabricated metal products	1%	101,389	101,400	61,900	39,500	2,290	
	Plunge pool					50*10		500	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	1,443	721,500	193,200	528,300	7,150	
	Concrete valve chamber					39		39	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	481	18,800	5,000	13,800	190	
	Intake tower include. Stairway, not valve chamber							1	1987	27	80	54	2068	81	0.33	$0	Other construction	3%	529,095	529,100	175,900	353,200	6,520	
	Cathodic protection to the intake tower							1	2009	5	30	25	2039	30	0.17	$0	Other fabricated metal products	6%	33,708	33,700	5,600	28,100	1,120	
	Mixing box				9.3*4.35		25.8	1	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	105,826	105,800	28,300	77,500	1,050	
	Chimney drain					10	CHECK	10	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	2,405	24,100	6,500	17,600	240	
	300 RC berm stormwater drain					57		57	1987	27	80	54	2068	81	0.33	$0	Other construction	3%	641	36,500	12,100	24,400	450	
	900 RC mixing box overflow drain					48		48	1987	27	80	54	2068	81	0.33	$0	Other construction	3%	1,443	69,300	23,000	46,300	850	
	Measuring chamber							1	1987	27	100	74	2088	101	0.27	$0	Other construction	3%	52,910	52,900	14,200	38,700	520	
	Piezometers							27	1987	27	50	26	2040	53	0.51	$0	Other construction	3%	12,826	346,300	176,800	169,500	6,550	
	Roading							1000	1987	27	50	26	2040	53	0.51	$0	Transport ways	3%	164	164,000	83,700	80,300	3,100	
	Landscaping							1	1987	27		0	0	0	0.00	$441,700	Earthmoving and site work	4%	441,728	441,700	0	441,700	0	
	Waveband rock rip-rap							1	1987	27	80	54	2068	81	0.33	$0	Earthmoving and site work	4%	441,728	441,700	146,900	294,800	5,440	
	Resource Consent							1	2001	13	15	4	2018	17	0.77	$0		11%	130,016	130,000	100,600	29,400	7,740	
	Holding Costs (not included)																			0	0	0	0	Not included
																Subtotal				**16,964,900**	**4,140,800**	**12,824,100**	**158,220**	
	South Supply Intake																							
	Intake structure structure + walls + backfeed channel							1	1985	29	100	58	2072	87	0.33	$0	Other construction	3%	5,292	5,300	1,800	3,500	60	
	Manhole							1	2005	9	100	91	2105	100	0.09	$0	Other construction	3%	3,882	3,900	400	3,500	40	
	375 Dia Conc Pipe						375	15	2005	9	100	91	2105	100	0.09	$0	Pipelines	0%	536	8,000	700	7,300	80	
	200 Steel sluice					35		35	1985	29	80	47	2061	76	0.38	$0	Other fabricated metal products	1%	921	32,200	12,200	20,000	420	
	600 AC supply extension					884		884	1985	29	90	56	2070	85	0.34	$0	Pipelines	0%	1,095	968,000	330,300	637,700	11,390	
	450 backfeed extension					841		841	1985	29	90	56	2070	85	0.34	$0	Pipelines	0%	469	394,400	134,600	259,800	4,640	
	Submerged Weir				1.5*.75	7		7	1985	29	50	22	2036	51	0.57	$0	Other fabricated metal products	1%	16,898	118,300	67,200	51,100	2,320	
	Screen house - timber			4.5	3*5			15	1985	29	50	22	2036	51	0.57	$0	Non-residential buildings(1)	3%	25,045	375,700	213,400	162,300	7,360	
	Screen house - below ground			4.5	1.5*3			45	1985	29	50	22	2036	51	0.57	$0	Non-residential buildings(1)	3%	33,393	1,502,700	853,600	649,100	29,440	
	Overflow weir screens				1.0*2.1			2.1	1985	29	50	20	2034	49	0.60	$0	Other fabricated metal products	1%	25,348	53,200	31,700	21,500	1,090	
	Aeration channel				.65*.675	13		0.57375	1985	29	50	22	2036	51	0.57	$0	Other construction	3%	17,636	10,100	5,700	4,400	200	
	Pipes and fittings							1	1985	29	25	5	2019	34	0.86	$0	Pipelines	0%	34,412	34,400	29,600	4,800	1,020	
	Spillway and fittings							1	1985	29	50	22	2036	51	0.57	$0	Other construction	3%	70,546	70,500	40,000	30,500	1,380	
	Electrics and controls							1	1985	29	10	2	2016	31	0.95	$0	Electrical works	2%	34,724	34,700	32,900	1,800	1,130	
	Screens							1	1988	26	25	5	2019	31	0.85	$0	Other fabricated metal products	1%	42,245	42,200	35,700	6,500	1,370	
	Resource Consent							1	1997	17	19.87	3	2017	20	0.86	$0		11%	52,007	52,000	44,500	7,500	2,620	
	Holding Costs (not included)							1	1985	29	80	51	2065	80	0.36	$0	Other construction	3%	0	0	0	0	0	Not included
																Subtotal				**3,705,600**	**1,834,300**	**1,871,300**	**64,560**	
Westley Detention Dam	**Westley Detention Dam**																							
	Intake Structure							1	1970	44	80	37	2051	81	0.54	$0	Other construction	3%	24,049	24,000	13,000	11,000	290	
	Spillway and drop structures							5	1970	44	80	37	2051	81	0.54	$0	Other construction	3%	16,033	80,200	43,300	36,900	980	
	Culvert Pipe					60		60	1970	44	70	30	2044	74	0.59	$0	Pipelines	0%	469	28,100	16,700	11,400	380	
	Embankment	14000		8		60		14000	1970	44		0	0	0	0.00	$308,000	Earthmoving and site work	4%	22	308,000	0	308,000	0	
																Subtotal				**440,300**	**73,000**	**367,300**	**1,650**	
Walters Bluff Reservoir	**Walters Bluff Reservoir**																							
	Reservoir Structure	2500						1	2002	12	80	68	2082	80	0.15	$0	Other construction	3%	767,399	767,400	115,100	652,300	9,590	
	Pipework and manholes (stormwater)							1	2002	12	80	68	2082	80	0.15	$0	Pipelines	0%	87,642	87,600	13,100	74,500	1,100	
	Pipework and fittings							1	2002	12	80	68	2082	80	0.15	$0	Pipelines	0%	279,144	279,100	41,900	237,200	3,490	
	Valves and mechanics							1	2002	12	40	28	2042	40	0.30	$0	Other fabricated metal products	1%	137,070	137,100	40,900	96,200	3,410	
	Valve pit, Valve chambers							1	2002	12	80	68	2082	80	0.15	$0	Other construction	3%	25,364	25,400	3,800	21,600	320	
	Telemetry, Electrical and Controls							1	2002	12	15	4	2018	16	0.74	$0	Electrical works	2%	77,004	77,000	56,800	20,200	4,730	
	Landscaping							1	2002	12		0	0	0	0.00	$114,400	Land clearing and establishmen	3%	114,419	114,400	0	114,400	0	
	Roadworks							1	2002	12		0	0	0	0.00	$0	Transport ways	3%	42,102	42,100	0	42,100	0	
	Earthworks							1	2002	12		0	0	0	0.00	$267,600	Earthmoving and site work	4%	267,626	267,600	0	267,600	0	
	Resource Consent							1	2002	12	80	79	2093	91	0.13	$0		11%	86,866	86,900	11,500	75,400	950	
																Subtotal				**1,884,600**	**283,100**	**1,601,500**	**23,590**	
Ridgeway Reservoir Tank	**Ridgeway Reservoir Tank**																							
	Reservoir	185						1	2000	14	80	66	2080	80	0.18	$0	Other construction	3%	52,791	52,800	9,200	43,600	660	
	Pipework and fittings							1	2000	14	80	66	2080	80	0.18	$0	Pipelines	0%	27,176	27,200	4,800	22,400	340	
	Valves and mechanics							1	2000	14	40	26	2040	40	0.35	$0	Other fabricated metal products	1%	20,744	20,700	7,200	13,500	510	
	Earthworks							1	2000	14		0	0	0	0.00	$14,800	Earthmoving and site work	4%	14,782	14,800	0	14,800	0	
																Subtotal				**115,500**	**0**	**94,300**	**1,510**	

NCC TRANSFER STATION VALUATION

Pascoe Street

2014

0.5 | Overhead Factor = | 1.22

Asset Category	Asset Description	Notes	Dimensions	Units	Year	Quantity	Units	Age	Unit Rate ($)	Total Useful Life (Years)	Remaining Economic Life	Total Economic Life	ORC ($)	ODRC ($)	Annual Depreciation ($)	Opus Comment
Formation and site works	Formation	300mm site clearance below transfer stn area	3000	m2	1986	3000	m3	28	$20	na	na	na	$72,337	$72,337	$0	
	Subgrade	1000mm river fill below transfer stn area	3000	m2	1986	3000	m3	28	$26	na	na	na	$93,613	$93,613	$0	
	Subgrade	750mm quarry rock fill below transfer stn area	3000	m2	1986	2250	m3	28	$58	na	na	na	$159,567	$159,567	$0	
	Basecourse	250mm basecourse below transfer stn area	3000	m2	1986	913	m3	28	$65	80	52	80	$72,660	$47,229	$908	
	Asphalt	20mm asphalt around transfer stn area	3650	m2	1986	3650	m2	28	$24	18	2	30	$105,630	$7,042	$3,521	
	Landscaping	Trees & shrubs around transfer stn area	3000	m2	1986	3000	m2	28	$10	40	12	40	$37,570	$11,271	$939	
	Basecourse	250mm basecourse around reuse building	1300	m2	2005	325	m3	9	$65	80	71	80	$25,865	$22,955	$323	
	Asphalt	20mm asphalt around reuse building	1300	m2	2005	1300	m2	9	$24	18	9	18	$37,622	$18,811	$2,090	
	Basecourse	250mm basecourse around recycle centre	2100	m2	1996	600	m2	18	$65	80	62	80	$47,750	$37,007	$597	
	Asphalt	20mm asphalt around recycle centre	2100	m2	1996	2400	m2	18	$24	18	2	20	$69,455	$6,946	$3,473	
	Basecourse	250mm basecourse Vivian Place Entance drive	360	m2	1996	360	m2	18	$65	80	62	80	$28,650	$22,204	$358	
	Asphalt	20mm asphalt Vivian Place Entance drive	360	m2	1996	360	m2	18	$24	18	2	20	$10,418	$1,042	$521	
	Kerb and channel	Around transfer stn area	250	m	1986	250	m	28	$52	50	22	50	$15,917	$7,003	$318	
	Kerb and channel	Around recycle area	150	m	1996	150	m	18	$52	50	32	50	$9,550	$6,112	$191	
	Asphalt	20mm overlay of asphalt over existing A/C MPC area	1200	m2	2009	1200	m2	5	$16	20	15	20	$23,904	$17,928	$1,195	
	Asphalt	20mm overlay of asphalt over existing A/C Recycling Centre area	1031	m2	2009	1031	m2	5	$18	20	15	20	$23,124	$17,343	$1,156	
	Asphalt	20mm overlay of asphalt over existing A/C Vival Street Entrance	290	m2	2009	290	m2	5	$25	20	15	20	$8,921	$6,690	$446	
	Subtotal								$0				**$842,553**	**$555,100**	**$16,037**	
									$0							
Transfer Stn Basement	Container loading pit	Excavation 3m	92m2 x 3	m3	1986	276	m3	28	$15	na	na	na	$5,089	$5,089	$0	
	Hopper pits	Excavation 3m	166m2 x 3	m3	1986	498	m3	28	$15	na	na	na	$9,183	$9,183	$0	
	Container loading pit	4.5m x 250mm concrete retaining walls	22 x 4.5 x 0.25	m3	1986	25	m3	28	$639	100	72	100	$19,503	$14,042	$195	
	Container loading pit	250mm concrete slab on sand blinding and basecourse	92m2 x 0.25	m3	1986	23	m3	28	$512	100	72	100	$14,354	$10,335	$144	
	Hopper pits	4.5m x 250mm concrete retaining walls	54 x 4.5 x 0.25	m3	1986	61	m3	28	$639	100	72	100	$47,586	$34,262	$476	
	Hopper pits	250mm concrete slab on sand blinding and basecourse	166m2 x 0.25	m3	1986	42	m3	28	$512	100	72	100	$26,212	$18,872	$262	
	Container bay	1.25 x 0.15m concrete retaining walls & 0.2m x 0.85m footing	0.35m2 x 40	m3	1986	14	m3	28	$383	100	72	100	$6,542	$4,710	$65	
	Container bay	250mm basecourse	36	m3	1986	36	m3	28	$64	80	52	80	$2,804	$1,822	$35	
	Container bay	20mm asphalt pavement	145	m2	1986	145	m2	28	$23	20	2	30	$4,106	$274	$137	
	Water Level Alarm	Sump alarm?		no.		1	no.	5	$754	10	5	10	$920	$460	$92	
	Sump Pump	1 x 75mm Tsurumi submersible cutter pump 1.5kw	75mm 1kW	no.	2013	1	no.	1	$4,999	5	4	5	$6,099	$4,879	$1,220	
	Subtotal								$0				**$142,397**	**$103,928**	**$2,626**	
									$0							
Transfer Stn Structure	Wall	2.4m blockwall	29 x 2.4	m2	1986	70	m2	28	$181	50	22	50	$15,485	$6,813	$310	
	Roof	Steel portal frame, RHS purlins & ribbed steel roof cladding	450	m2	1986	450	m2	28	$278	50	22	50	$152,633	$67,159	$3,053	
	Handrails around pit perimeters	1m high 2x 50mm galvanised tube rails	40	m	1986	40	m	28	$153	50	22	50	$0	$0	$0	Removed in 2010 and replaced with substantial upgraded perimeter barrier system-refer photos
	Hand and vehicle rails around hopper perim	16 posts at 2.2m high, 4 posts at 1.2m high, 32mm of horizontal galvanised tubes 150	72	m	2010	72	m	4	$153	60	56	60	$13,458	$12,561	$224	New system installed to replace old barriers
	Car stop	Black and yellow plastic ground mounted car stop adjacent to pit	12	ea	2010	12	ea	4	$153	60	56	60	$2,243	$2,093	$37	Installed as part of handrail upgrade-refer photos
	Lighting	Fluorescent				12	no.	7.5	$377	15	7.5	15	$5,520	$2,760	$368	
	Lighting	Spot				22	no.	7.5	$251	15	7.5	15	$6,747	$3,374	$450	
	Subtotal								$0				**$196,086**	**$94,759**	**$4,442**	
									$0							
Hopper Structure	Steel lining, framing & support beam	10mm plate, 100x50 and 50x25 RHS @ 500ctrs, 250 PFC support beam				2	No.	12.5	$46,329	25	12.5	25	$113,044	$56,522	$4,522	Supply & Fab $66k , Install $10k , Life based on normal wear &tear, no direct damage fron
	Subtotal								$0				**$113,044**	**$56,522**	**$4,522**	
									$0							
Compactor	Ram	Fulton Hogan Engineering Dunedin Model No 203			1986	2	no.	28	$62,487	27	2	30	$152,469	$10,165	$5,082	
	Ram casing, framing and supports				1986	2	no.	28	$38,302	35	7	35	$93,457	$18,691	$2,670	
	Ram rod				2007	1	no.	7	$18,571	20	13	20	$22,656	$14,727	$1,133	
	Compactor floor				2007	1	no.	7	$19,731	35	28	35	$24,072	$19,258	$688	
	Compactor floor				2010	1	no.	4	$15,325	35	31	35	$18,696	$16,559	$534	
	Hydraulics pumps & hoses					2	no.	5	$12,497	10	5	10	$30,494	$15,247	$3,049	
	Hydraulic oil	2 x 900 Litre tanks				2	no.	7.5	$1,277	15	7.5	15	$3,115	$1,558	$208	
	Electrics	2 x 20hp electric motors plus four smaller motors				2	no.	2.5	$6,285	5	2.5	5	$15,334	$7,667	$3,067	
	Subtotal								$0				**$360,294**	**$103,871**	**$16,431**	
									$0							
Hoist & Crane System	Gantry support frame	Steel beams and posts			1998	1	no.	16	$229,813	40	24	40	$280,372	$168,223	$7,009	Frame supply & fab $133k,Wheels bearings etc $27k,site install $20k
	Mobile gantry structure	Hoist support beam on rollers, safety walkway and spreader beam - 25 tonne SWL			1986	1	no.	28	$81,711	40	12	40	$99,688	$29,906	$2,492	Appears to have a transverse carrage as well
	Gear boxes				2007	4	no.	7	$3,717	25	18	25	$18,137	$13,059	$725	
	Hoist	4 x 2.5 tonne Kito chain hoist.				4	no.	3.5	$5,110	7	3.5	7	$24,939	$12,469	$3,563	With no details of work hrs etc have provided general life figure
	Chains	100 m				1	no.	3.5	$12,767	7	3.5	7	$15,576	$7,788	$2,225	Will require regular rating tests so need to be conservative with life assessment
	Crane hook locks				2007	2	no.	7	$9,285	20	13	20	$22,656	$14,727	$1,133	
	Electrical control mechnaism					1	no.	2.5	$12,569	5	2.5	5	$15,334	$7,667	$3,067	
	Subtotal								$0				**$476,702**	**$253,839**	**$20,214**	
									$0							
Hydraulic Arms	Hydraulic Arms	Lift capacity - Tracgrip RM20 (design lift 300kg @ 6m reach)				2	no.	3.5	$3,407	7	3.5	7	$8,313	$4,156	$1,188	These are no longer available on the local market,costs are based on aquiring 2nd hand ar
	Hydraulics system	Photo 2 x small power packs				2	no.	3.5	$3,407	7	3.5	7	$8,313	$4,156	$1,188	
	Operating controls	Operator booths & controls			1986	2	no.	28	$17,035	25	2	30	$41,564	$2,771	$1,385	
	Hydraulic arm beam supports	Steel I beams			2004	2	no.	10	$5,451	50	40	50	$13,301	$10,641	$266	Steel UB 100kg/m
	Subtotal								$0				**$71,491**	**$21,724**	**$4,027**	
									$0							
Storage Containers	Haz Chem containers (x2)	Volume - 1.5m3 each				2	no.	5	$975	10	5	10	$2,380	$1,190	$238	nominal value
	Agri/Haz container	Volume - 17m3				1	no.	5	$4,389	10	5	10	$5,355	$2,677	$535	Modified 3m shipping container ,with shelving and inside bunding
	White 6m x 3m container	Steel - (3 x 2.4 x 2.4 Flammable 3 Haz container plus 3 x 2.4 2.4 storage shed).				1	no.	3.5	$4,389	7	3.5	7	$5,355	$2,677	$765	Modified 3m shipping container , life reduced for potential corrosive environment
	LPG Cage	Dimensions 1.47 x 1.47 x 1.99				1	no.	3	$1,021	6	3	6	$1,246	$623	$208	Chain link fence compound
	PCB Drum	800 x 600mm chemical resistant drum.				1	no.	11.5	$122	23	11.5	23	$149	$74	$6	Price based on UN standard containers
	Oxidizer cabinet	2.9m3 1.2 x .850 x 2m wood				1	no.	3	$1,915	6	3	6	$2,336	$1,168	$389	Not sure about this one,presumed it is the photo of w/c sized shed with a/c unit in side , p
	General storage Container	6 x 2.4m				1	no.	5	$3,192	10	5	10	$3,894	$1,947	$389	standard unmodified 6m shipping container
	Steel Transportation Bins	Steel Bins for Transporting waste from transfer station to landfill			2006	6	no.	8	$45,000	30	22	30	$329,400	$241,560	$10,980	
	Steel Transportation Bins	Additional steel bin for transporting waste from Trasfer station to landfill			2010	1	no.	4	$45,000	30	26	30	$54,900	$47,580	$1,830	
	Subtotal								$0				**$405,015**	**$299,497**	**$15,341**	
									$0							
Recyclables Sorting Area	Access way to Full Circle	Paved areas, types 200mm depth concrete double reinforced $24,889.00				1	no.	20	$32,616	40	20	40	$39,792	$19,896	$995	
	Glass Bay Walls	3 x 4m x 3.8m x 2.3m h concrete walls	28 x 2.3	m2		65	m2	25	$192	50	25	50	$15,187	$7,593	$304	
	Glass Bay Slab	200mm thick 12 x 4m	16 x 4 x 0.2m	m3		12.8	m3	25	$447	50	25	50	$6,978	$3,489	$140	Measured dimensions differ from those originally recorded
	Concrete pad to front of glass bays.	12 x 6m x .2m double reinforced $9,516.00	10 x 16 x 0.2m	m3		32	m3	20	$575	40	20	40	$22,430	$11,215	$561	Measured dimensions differ from those originally recorded
	Lighting and electrics	night lights				2	no.	7.5	$251	15	7.5	15	$613	$307	$41	
	Lighting and electrics	fluorescent				1	no.	7.5	$377	15	7.5	15	$460	$230	$31	
	Scales	Industrial large scales (capable of measuring up to 3 tonne)-groundmount	ea		1995	1	no.	19	$5,000	30	11	30	$6,100	$2,237	$203	Not included in original inventory-unit rate estimated
	Bins-various	Steel mesh bins for transporting recyclable materials-medium size	ea		1986	15	no.	28	$750	40	12	40	$13,725	$4,118	$343	Not included in original inventory-unit rate estimated
	Bins-various	Steel mesh bins for transporting recyclable materials-large size	ea		1986	15	no.	28	$1,000	40	12	40	$18,300	$5,490	$458	Not included in original inventory-unit rate estimated
	Bins-various	Solid steel bins for transporting recyclable materials	ea		1986	10	no.	28	$1,500	40	12	40	$18,300	$5,490	$458	Not included in original inventory-unit rate estimated
	Recycling deposit bay	Added in 2013. Steel mesh wall with holes for rcyclables deposit.	ea		2013	1	no.	1	$54,000	20	19	20	$65,880	$62,586	$3,294	Not included in original inventory-unit rate estimated
	Subtotal												**$207,765**	**$122,650**	**$6,826**	
Fences & Signs	Site Fencing 1.8m	50 mm chain netting plus one wire	409.6			409.6	no.	15	$208	30	15	30	$103,948	$51,974	$3,465	
	Site Fencing 1.8m (replaced in 2010)	50 mm chain netting plus one wire	21.4		2010	21.4	no.	4	$182	30	26	30	$4,752	$4,118	$158	
	Site Fencing 1.4m	50 mm chain netting plus one wire	70			70	no.	15	$182	30	15	30	$15,544	$7,772	$518	
	Site Signage	31 large and small (does not include Recycling Centres)				31	no.	4	$255	8	4	8	$9,657	$4,829	$1,207	
	Safety Rail	Saftety Rail around 2 compactor hoppers			2009	2	no.	5	$8,160	30	25	30	$19,910	$16,592	$664	
	Subtotal								$0				**$153,812**	**$85,285**	**$6,012**	
									$0							
Water, Wastewater & Drainage	Stormwater Pipes								$0		2	2	$103,084	$103,084	$51,542	
	Stormwater Nodes (sump, mhole)								$0		2	2	$49,147	$49,147	$24,574	
	Drainage grills around hoppers	Total length, width 107m x 330 mm	107	m	1986	73	m	28	$166	80	52	80	$14,782	$9,608	$185	
	Drainage grills around hoppers	Total length, 34m replaced in 2010	107	m	2010	34	m	4	$166	80	76	80	$6,885	$6,540	$86	
	Sewer Pipes								$0		2	2	$14,855	$14,855	$7,428	
	Sewer Nodes (mhole, access point)								$0		2	2	$7,046	$7,046	$3,523	
	Water Pipes								$0		2	2	$48,100	$48,100	$24,050	
	Water Nodes (hydrants, toby, valve)								$0		2	2	$9,702	$9,702	$4,851	
	Sump Catchers	Sump catchers for stormwater sumpes to stop fine material entering the stormwater system			2010	19	no.	4	$379	30	26	30	$8,784	$7,613	$293	
	Subtotal								$0				**$262,384**	**$255,695**	**$116,531**	
								0	$0							
Buildings	"Old" Recycle Building	Hi stud, timber frame, steel clad, concrete slab, large openings	170	m2	1995	170	m2	19	$725	50	31	50	$150,421	$93,261	$3,008	
	"New" Recycle Centre	Elevated building, steel frame, steel stud, conveyor belt	80	m2	2005	80	m2	9	$725	50	41	50	$70,786	$58,045	$1,416	
	Re-use building	Hi stud, timber frame, steel clad, concrete slab, large openings	340	m2	1995	340	m2	19	$725	50	31	50	$300,842	$186,522	$6,017	
	Long Storage Shed	Steel frame, iron clad shed, open on long side	60	m2	1986	60	m2	28	$423	50	22	50	$30,969	$13,626	$619	
	Transfer Station Fee Kiosk	Small timber clad site shed	18	m2	1986	18	m2	28	$1,571	50	22	50	$34,508	$15,184	$690	
	Office, smoko building	Timber clad L-shape building	40	m2	1986	40	m2	28	$1,571	50	22	50	$76,685	$33,741	$1,534	
	Fire Sprinkler System (Old/ Recycle Bldg)	New asset 2012 as advised by Andrew Bingham. RL set to same as Old Recycle build	1	ea	2011	1	ea	3	$79,380	34	31	34	$96,844	$88,299	$2,848	New asset added 2012
	"New" Recycle Centre Building 2	Iron clad steel portal frame building located adjacent to building 1 (12.2 x 14)	170.8	m2	2005	171	m2	9	$689	50	41	50	$143,739	$117,866	$2,875	Separate building to Building 1-should be identified as a separate building
	Timber storage building 1	Relocated timber building used for storage-adjacent to Kiosk (3.5 x 6.5)	22.75	m2	1970	23	m2	44	$1,494	50	6	50	$41,922	$5,031	$838	Relocated buildings that don't appear to be on asset register
	Timber storage building 2	Relocated timber building used for storage-adjacent to Kiosk (3.5 x 6.5)	22.75	m2	1970	23	m2	44	$1,494	50	6	50	$41,922	$5,031	$838	Relocated buildings that don't appear to be on asset register
	Steel framed lean to	Steel frame, iron clad (roof only) lean to behind old recycle centre	27.2	m2	1986	28	m2	28	$300	50	22	50	$10,248	$4,509	$205	Appears to be made out of recycled materials, however is a key structure. Unit rate estimated based on basic condition of structure
	Subtotal												**$998,886**	**$621,114**	**$20,889**	
Totals													**$4,230,429**	**$2,573,987**	**$233,898**	

Nelson City Council Asset Valuation																
	Date of valuation	30/06/2014														
Item	**Description**	**Unit**	**Type**	**Quantity**	**Date Constructed**	**Life**	**Age**	**Rem. Life**	**Rate**	**RC**	**GRC**	**DRC**	**AD**			
36-1405	**Todd Bush**															
1	P & G	%	OH	7	30/04/2008		6.17		33,227	$ 2,326					Total overheads	
2	Stripping	m2	?	144	30/04/2008		6.17		3	$ 432	$ 624	$ 624			$ 14,786	
3	Bunds	m3	Bund	345	30/04/2008		6.17		10	$ 3,450	$ 4,985	$ 4,985			Percentage	
4	300mm ESD Rock	m3	Rock	26	30/04/2008	150	6.17	143.83	50	$ 1,300	$ 1,879	$ 1,801	$ 13		45%	
5	600mm RCRRJ pipe	m	Pipe	9.6	30/04/2008	80	6.17	73.83	575	$ 5,520	$ 7,976	$ 7,361	$ 100			
6	Concrete bedding layer	m2	Structure	144	30/04/2008	80	6.17	73.83	150	$ 21,600	$ 31,212	$ 28,805	$ 390			
7	Planting	m3	Planting	15	30/04/2008		6.17		10	$ 150	$ 217	$ 217				
8	Grass Secondary Spillway	m2	Planting	5	30/04/2008		6.17		5	$ 25	$ 36	$ 36				
9	Topsoiling & grassing	m2	Planting	150	30/04/2008		6.17		5	$ 750	$ 1,084	$ 1,084				
10	Miscellaneous	%	OH	10	30/04/2008		6.17		33,227	$ 3,323						
11	Design	%	OH	15	30/04/2008		6.17		36,550	$ 5,482						
12	Supervision	%	OH	10	30/04/2008		6.17		36,550	$ 3,655						
										$ 48,013	**$ 48,013**	**$ 44,913**	**$ 502**			
36-1384	**Sutton Detention Dam**	**Unit**	**Type**	**Quantity**	**Date Constructed**	**Life**	**Age**	**Rem. Life**	**Rate**	**RC**	**GRC**	**DRC**	**AD**			
1	P & G	%	OH	7	31/05/2007		7.09		29,380	$ 2,057					Total overheads	
2	Stripping	m2	?	450	31/05/2007		7.09		3	$ 1,350	$ 1,926	$ 1,926			$ 17,008	
3	Remove Oak Trees	ea	Tree	2	31/05/2007		7.09		500	$ 1,000	$ 1,427	$ 1,427			Percentage	
4	Bunds - excavation	m3	Bund	1110	31/05/2007		7.09		5	$ 5,550	$ 7,918	$ 7,918			43%	
5	300 100mm Rock	m3	Rock	100	31/05/2007	150	7.09	142.91	50	$ 5,000	$ 7,133	$ 6,796	$ 48			
6	1050mm Outlet MH	ea	MH	1	31/05/2007	80	7.09	72.91	5000	$ 5,000	$ 7,133	$ 6,501	$ 89			
7	450mm RCRRJ pipe	m	Pipe	11	31/05/2007	80	7.09	72.91	550	$ 6,050	$ 8,631	$ 7,866	$ 108			
8	Precast Headwall 450	ea	Structure	1	31/05/2007	80	7.09	72.91	930	$ 930	$ 1,327	$ 1,209	$ 17			
9	Water stop	ea	Valve	1	31/05/2007	80	7.09	72.91	500	$ 500	$ 713	$ 650	$ 9			
10	Precast Headwall 1050	ea	Structure	1	31/05/2007	80	7.09	72.91	4000	$ 4,000	$ 5,706	$ 5,201	$ 71			
11	1050mm RCRRJ pipe	m	Pipe	6.5	31/05/2007	80	7.09	72.91	1010	$ 6,565	$ 9,366	$ 8,536	$ 117			
12	Topsoiling & grassing	m2	Planting	785	31/05/2007		7.09		5	$ 3,925	$ 5,599	$ 5,599				
13	Miscellaneous	%	OH	10	31/05/2007		7.09		39,870	$ 3,987						
14	Design	%	OH	15	31/05/2007		7.09		43,857	$ 6,579						
15	Supervison	%	OH	10	31/05/2007		7.09		43,857	$ 4,386						
										$56,878	**$56,878**	**$53,628**	**$458**			
36-1327	**Grampion Oaks Detention dam**	**Unit**	**Type**	**Quantity**	**Date Constructed**	**Life**	**Age**	**Rem. Life**	**Rate**	**RC**		**DRC**	**AD**		**Total overheads**	
1	P & G	%	OH	7	31/12/2004		9.50		153,726	$ 10,761					$ 97,189	
2	Stripping	m2	?	1700	31/12/2004		9.50		3	$ 5,100	$ 7,251	$ 7,251			Percentage	
3	Core	m3	?	1133	31/12/2004		9.50		22	$ 24,926	$ 35,437	$ 35,437			42%	
4	Shoulders	m3	Formation	1930	31/12/2004		9.50		12	$ 23,160	$ 32,926	$ 32,926				
5	1350mm Intlet & Grate MH	ea	MH	2	31/12/2004	80	9.50	70.50	4500	$ 9,000	$ 12,795	$ 11,276	$ 160			
6	2050mm Inlet MH	ea	MH	1	31/12/2004	80	9.50	70.50	6000	$ 6,000	$ 8,530	$ 7,517	$ 107			
7	1500mm Inlet MH	ea	MH	1	31/12/2004	80	9.50	70.50	4000	$ 4,000	$ 5,687	$ 5,011	$ 71			
8	2050mm Scruffy Dome	ea	steel structure	1	31/12/2004	50	9.50	40.50	4500	$ 4,500	$ 6,398	$ 5,182	$ 128			
9	1500mm Scruffy Dome	ea	steel structure	1	31/12/2004	50	9.50	40.50	3000	$ 3,000	$ 4,265	$ 3,455	$ 85			
10	750mm RCRRJ pipe	m	Pipe	35	31/12/2004	80	9.50	70.50	700	$ 24,500	$ 34,831	$ 30,695	$ 435			
11	750mm RCRRJ pipe conc bedding	m	pipe bedding	16	31/12/2004	80	9.50	70.50	300	$ 4,800	$ 6,824	$ 6,014	$ 85			
12	750mm RCRRJ pipe bedding	m	pipe bedding	15	31/12/2004	80	9.50	70.50	150	$ 2,250	$ 3,199	$ 2,819	$ 40			
13	Armour around intake	LS	Rock	1	31/12/2004	150	9.50	140.50	1000	$ 1,000	$ 1,422	$ 1,332	$ 9			
14	Toe Drain &Filter	m	Filter	83	31/12/2004	50	9.50	40.50	285	$ 23,655	$ 33,630	$ 27,239	$ 673			
15	Gobiblock & weir beam	m2	Structure	145	31/12/2004	80	9.50	70.50	123	$ 17,835	$ 25,356	$ 22,344	$ 317			
16	Aux Spillway fill	m3	Fill	500	31/12/2004	100	9.50	90.50	45	$ 22,500	$ 31,988	$ 28,949	$ 320			
17	675mm RCRRJ pipe	m	Pipe	60	31/12/2004	80	9.50	70.50	600	$ 36,000	$ 51,181	$ 45,102	$ 640			
18	750mm RCRRJ pipe bedding	m	pipe bedding	60	31/12/2004	80	9.50	70.50	150	$ 9,000	$ 12,795	$ 11,276	$ 160			
19	Topsoiling & grassing	m2	Planting	1850	31/12/2004		9.50		5	$ 9,250	$ 13,151	$ 13,151				
20	Miscellaneous	%	OH	10	31/12/2004		9.50		230,476	$ 23,048						
21	Design	%	OH	15	31/12/2004		9.50		253,524	$ 38,029						
22	Supervison	%	OH	10	31/12/2004		9.50		253,524	$ 25,352						
										$327,665	**$327,665**	**$296,974**	**$3,230**			

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