SOUTH WAIRARAPA DISTRICT COUNCIL

31 OCTOBER 2012

AGENDA ITEM C4

THREE POOLS REVIEW PROJECT

Purpose of Report

To inform the Council of the outcome of an independent report into the water quality, asset condition, community demand and long term sustainability of the three community pools owned by Council in Featherston, Greytown and Martinborough.

Recommendations

Officers recommend that the Council:

1. *Receive the information*
2. *Either; fund the pools as per the previous report with a 1 to 3 and out to 10 years expenditure table, OR*
3. *Close two of the pools and fund the third, OR*
4. *Keep the pools open on a reactive basis and adopt the Balanced Scorecard/matrix to decide when a pool is to be closed, as outlined in Appendix 5.*

1. Executive Summary

Opus International Consultants Limited was engaged to provide a report for the three pool complexes. The summary report (Appendix 4) outlines the findings of a three stage review that includes:

1. Operational performance against current New Zealand Standards for Pool Water Quality.
2. A review of the assets/infrastructure of the pool and then development of a maintenance schedule and plan.
3. A feasibility/needs analysis report.

There are a number of very high risk issues that need to be addressed relating to the running/operation of all the pools. These are listed in section 3.4 of the relative reports (Appendices 1-3). These items are major health/statutory risks and need to be addressed as soon as practical, with the majority having minimal cost implications.

The issues identified are:

- No pool water sampling plan that meets NZS 5826:2010.
- Lack of staff training in pool management and correct testing practices.
- Lack of an audit process by SWDC staff on the testing.
- No external lab sampling including microbiological analysis.

There are also a number of "high" and "moderate" items that need consideration. These are related to the lack of written procedures or manuals, pump maintenance and other training requirements.

Capital improvements related to operational performance noted in the three PRMPs are summarised below:

- To be implemented by October 2012 $ 15,500
- To be implemented by October 2013 $186,000
- To be implemented by October 2014 $ 18,000

The majority of the assets/improvements at the complexes are in average condition but are fit for purpose. A 10 year maintenance plan/schedule has been prepared, giving cost estimates for work that should be undertaken to keep the assets in their existing condition. The items requiring attention, preferably before the pools open this year ("Year 1" in the Maintenance Programme) are:

Main pool covers	$ 7,611.76	**Featherston**
Remedial works to training pool and dividing wall	$16,611.72	
Re-tiling and fibre glassing pool surrounds	$26,000.00	
Seal overflow tank	$ 8,570.00	
Wash down grandstand	$ 464.00	
Chemical wash gazebo roof	$ 69.60	
Changing shed repainting	$ 4,272.00	
Repair Office wall linings	$ 50.20	**Martinborough**
Replace pump house steel bandits	$ 200.00	
Seal Pool overflow tank	$ 8,570.00	
Non-slip coat toddler pool	$ 2,795.80	
New Pool covers	$13,230.25	
Overflow tank sealing	$ 8,570.00	**Greytown**
Repaint fascia	$ 696.00	
Clear spouting and wash down eaves exterior	$ 560.00	
Wash down timber seating area	$ 560.00	
Total	**$98,831.33**	

The balance of the items in the Maintenance Plan have been grouped into 5 year and 10 year programmes. The total estimated value of this work is:

- 2-5 Year Plan $214,432
- 6-10 Year Plan $203,195

The totals above also include items and costs provided in the Thompsons Fibreglassing reports of April 2012. A breakdown of the values is contained in the individual reports in the Appendices.

The overall demand for the pools is mixed. Featherston has a very strong base of users from the swimming club and local schools, as does Greytown but to a lesser extent than Featherston. The information we have gathered indicates that Martinborough has lower demand as there is no swimming club operating and no feedback from schools in the area was provided.

Options considered for the future operation of the pools include:

1. Contracted Operation
2. Minimal maintenance to the pools in the long term
3. Amalgamation or sharing of aquatic services
4. Fully upgrading one and closing two of the pools
5. Closing all three pools
6. Adopt a reactive maintenance programme and use a Balanced Scorecard matrix to identify when a pool has reached end of operational life.

Options 1, 2 and 5 have fatal flaws as they are not considered best practice for asset management or service delivery and will not fulfill the Council's role as a service provider in the long term.

Option 3 will need to be considered in the long term, but has significant political and community engagement implications that are outside the current scope of the project.

2. Background

South Wairarapa District Council (SWDC) currently owns and maintains three community pools in the South Wairarapa; Featherston, Greytown and Martinborough.

The day to day management of the pools is the responsibility of the Council's Facilities Management (FM) contractor, City Care.

The pools are scheduled to open 1 December 2012 and close on 17 March 2013. The admission fee structure is set by Council with adults paying $3.00 and others paying $2.00.

The balance of the capital improvements at each complex is described in section 4.2 of the summary report, attached as Appendix 4.

3. Discussion

3.1 Options

A number of alternatives for the provision of aquatic services in the South Wairarapa in the long term have been considered as follows:

1. Contracted Operation	Pools operated under existing arrangement. Leave the pools as they are apart from carrying out immediate H&S and statutory maintenance requirements.	Asset deterioration will lead to closure in the medium term. Will likely be unacceptable to pool users and a source of continued community dissatisfaction.

2. Minimal Maintenance	Completing only the maintenance required to protect the asset and ensure continued running of the pool.	Asset deterioration will lead to closure in the long term. Will likely be unacceptable to pool users and a source of continued community dissatisfaction.
3. Amalgamation / Shared Service Provision	Joining with another LA to provide a community pool	Political and community accessibility issues. Council may be heading down this path for other services.
4. Upgrading One Pool, Closing Two	Using Council LTP funding available to undertake a complete upgrade of one of the pools to indoor and heated and close the other two.	Political and community issues. Financial benefits in the longer term. Overall improved service provided. Transport requirements/costs for the other towns' users.
5. Closing All Three Pools	Closing all three pools permanently.	Unlikely to be acceptable as it conflicts with Council's responsibility to provide services.
6. Balanced Scorecard	Undertake reactive /statutory maintenance and use an annual Balance Scorecard on each pool as a decision making tool as to whether to keep a pool open. The probable outcome will be the upgrading of the last pool.	Continues to provide pool services to the communities but accepts the on-going financial commitment of three pools is unsustainable.

Please refer to the summary report in Appendix 4 for definitions and analysis of Options 1-5 and a separate report in Appendix 5 for Option 6.

Initial analysis concluded Options 1, 2 and 5 have fatal flaws in the long term and Option 3 needs to be considered in a broader context. Initial investigations show Option 4 as a possible acceptable outcome, although Option 6 gives a long term balance between operational/financial constraints and community-related benefits.

3.2 Consultation

Consultation was undertaken with the swimming clubs and local schools via a user survey. Responses were received from:

- Jo Johnson – President, Featherston Amateur Swimming Club
- Leeane Flack – St Teresa's Primary School
- Phil Robertson – Principal, Featherston School
- Donald Yee - Sports Co-ordinator, Kuranui College
- Gary Dewhurst – Secretary Greytown Swimming
- Max Stevens - Martinborough Community Board

A summary of the survey responses is available.

3.3 Financial Considerations

Financial implications and assumptions are contained in the Summary Report (Appendix 4) section 5.4.3.

	Greytown	Featherston	Martinborough
Capital Improvement Plan Year 1	$5,000	$5,500	$5,000
Capital Improvement Plan Year 2	$25,800	$123,000	$35,000
Capital Improvement Plan Year 3	$6,000	$6,000	$6,000
Maintenance Programme Year 1	$10,386	$63,599	$24,846
Maintenance Programme Years 2 - 5	$183,337	$8,068	$23,027
Maintenance Programme Year 6 - 10	$14,415	$45,842	$142,938
Total	**$244,938**	**$252,009**	**$236,811**

Therefore the total estimated cost to keep all three pools operational at a compliant level of service over 10 years, excluding the contract costs payable to the Contractor, is **$733,758**.

3.4 Legal Considerations

Renegotiation of contracts will require legal expenses to be incurred.

4. Supporting Information

4.1 LTP/Annual Plan

References to the LTP are contained in the Summary Report (Appendix 4) section 5.4.3.

5. Appendices

Appendix 1 – SWDC 3 Pools Review Report - Featherston

Appendix 2 – SWDC 3 Pools Review Report - Greytown

Appendix 3 – SWDC 3 Pools Review Report - Martinborough

Appendix 4 – SWDC 3 Pools Review Report - Summary

Appendix 5 – SWDC 3 Pools Project Balanced Scorecard Report

Contact Officer: Mark Allingham, Group Manager, Infrastructure & Services
Reviewed By: Dr Jack Dowds, Chief Executive Officer

Appendix 1 - SWDC 3 Pools Review Report - Featherston

SOUTH WAIRARAPA DISTRICT COUNCIL

THREE POOLS REVIEW PROJECT

FEATHERSTON POOL

South Wairarapa District Council

Three Pools Review Project

Featherston Pool

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Contents

1 Executive Summary

Opus International Consultant Limited has been engaged to provide a report into the Featherston pool complex. This report outlines the findings of a three stage review that includes;

1. Operational performance against current New Zealand Standards for Pool Water Quality,
2. A review of the assets/infrastructure of the pool and resulting maintenance schedule and plan, and
3. A feasibility/needs analysis.

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool. These are listed in section 3.4, and more fully in the full Pool Risk Management Plan (PRMP) attached as Appendix 1. These items are major health/statutory risks and need to be addressed as soon as practical, with the majority having minimal cost implications:

- No pool water sampling plan that meets NZS 5826:2010
- Lack of staff training in pool management and correct testing practices
- Lack of an audit process by SWDC staff on the testing
- No external lab sampling including microbiological analysis

There are also a number of "high" and "moderate' items that need consideration. These are related to the lack of written procedures or manuals, pump maintenance and other training requirements.

Capital Improvements noted by the PRMP are summarised below:

- To be implemented by October 2012 $ 5,500
- To be implemented by October 2013 $123,000
- To be implemented by October 2014 $ 6,000

The assets/improvements at the complex are in a low but acceptable state of repair. A 10 year maintenance plan/schedule has been prepared, giving cost estimates for work that should be undertaken to keep the assets in their existing condition. The items requiring attention, preferably before the pool open this year are:

Main pool covers	$ 7,611.76
Remedial works to training pool and dividing wall	$16,611.72
Re-tiling and fibre glassing pool surrounds	$26,000.00
Seal overflow tank	$ 8,570.00
Wash down grandstand	$ 464.00
Chemical wash gazebo roof	$ 69.60
Changing shed repainting	$ 4,272.00
Total	**$63,599.08**

The balance of the items in the Maintenance Plan have been grouped into 5 year and 10 year programmes. The total estimated value of this work is:

- 2-5 Year Plan $ 8,068
- 6-10 Year Plan $45,842

The totals above also include items and costs provided in the Thompsons Fibreglassing report of April 2012.

The overall demand for the pool is relatively strong based around the Swimming Club and significant use by schools. User feedback has noted the water temperature issues, and an upgrade of the changing facilities/toilets is desired.

2 Background

South Wairarapa District Council (SWDC) currently owns and maintains three community pools in the South Wairarapa; Featherston, Greytown and Martinborough.

The day to day management of the pools is the responsibility of the Council's Facilities Management (FM) contractor, Transfield. It should be noted that this contract has been reviewed and is currently being tendered. The management of the pools will remain part of the FM contract with the new contractor commencing operations on 12 October 2012.

The pools generally open in November and close in March, between the hours of 2.00 - 5.15pm weekdays and 1.00 – 5.30pm weekends. The admission fee structure is set by Council with adults paying $3.00 and others paying $2.00.

The Featherston swimming pool is located in Johnston Street, Featherston. It was built in the 1950's and little has changed from its original design. The pool complex currently consists of:

- Main lane pool
- Intermediate pool
- Toddlers pools

For a description of the pools including a layout plan please see the Introduction section of the PRMP in Appendix 1.

The balance of the improvements at the complex are described in section 4.2 of this report.

SWDC have engaged Opus International Consultants Limited to provide a three stage approach to the review of the swimming pool assets:

1. The current operation against New Zealand standards for pool quality as reflected in a PRMP with an associated improvement plan.
2. A review of the assets/improvements contained within the complexes (paths, offices, changing rooms, fencing, spectator seating, etc) to provide the basis of a maintenance schedule with costs and a programme of works.
3. A feasibility study including current use of the pool(s), user needs, financial implications, local and regional influences, including future requirements and possible development option analysis.

3 Stage 1: Pool Risk Management Plan

3.1 Introduction

This Pool Risk Management Plan (PRMP) has been prepared for the Featherston Pool to identify and manage the public health risks to pool users. Featherston Pool is a public summer pool which is used for recreational swimming and swim training. The buildings and pool facilities are owned by South Wairarapa District Council (SWDC) and Council is responsible for the asset management, maintenance and upgrading of the pool complex. The operation of the pool is undertaken by Transfield Services, under contract to SWDC. The full report is attached as Appendix 1.

3.2 Compliance Requirements

To comply with NZS 5826:2010 the following chemical water quality criteria and chemical testing frequencies must be met.

Chemical water quality criteria (from Table 1 NZS5826:2010)

Characteristic or chemical	Most desirable value	Lowest value	Highest value
pH	7.4 – 7.6	7.2	8.0
Alkalinity (as $CaCO_3$) (with sodium hypochlorite)	60-120 mg/L	50 mg/L	200 mg/L
Calcium hardness	See saturation index (SI)	40 mg/L	300 mg/L
Free available chlorine (FAC) (pool with chlorine alone)	2.5 – 5.0 mg/L	1.5 mg/L	7.0 mg/L
Combined available chlorine (CAC)	< 0.5 mg/L	Not detectable	1.5 mg/L
Cyanuric Acid	30-60 mg/L	25 mg/L	100 mg/L
Total dissolved solids (TDS) swimming pools	< 1,000 mg/L above make-up water	-	3000 mg/L

Required frequency of chemical testing (from Tables 2 & 3 NZS5826:2010)

Chemical test	Frequency of testing
pH	Prior to use and then every 3 hours
Alkalinity	Weekly
Calcium hardness	Monthly
Free available chlorine (FAC)	Prior to use and then every 3 hours
Total chlorine	Daily
Cyanuric Acid	At beginning of season, then fortnightly
Total dissolved solids (TDS)	At beginning of season, then weekly

3.3 Evaluation against Standards

A qualitative risk assessment approach has been taken following the guidance notes in Appendix K of NZS 5826:2010 allowing the prioritisation of improvement needs and development of the Improvement Schedule.

On 12 July 2012, prior to the preparation of the plan, a pool site visit and meeting was held with the Transfield Services operator of the Featherston Pool.

Risk tables identifying the risk events, event causes, risk levels, preventive measures in place and the preventive measures that could be put in place were prepared based on the site visit and meetings. Analysis of the risk levels was undertaken using the risk assessment procedure outlined in Section 10 below. From this information the improvement schedule was prepared.

The Featherston Pool owner (SWDC) and operator (Transfield Services) are responsible for agreeing the implementation of the Improvement Plan within the timeframes recommended, subject to funding constraints and the availability of resources.

Contingency Plans have been prepared to provide guidance if control measures fail to prevent the occurrence of a risk event. The Pool Operator is responsible for implementation of the Contingency Plans if they are required.

Separate risk tables have been prepared for:

- Pool surround
- Water in pool
- Pool water sampling/testing/recording
- Pressure sand filtration (Main pool)
- Pressure sand filtration (Learners pool)
- Chlorine disinfection
- Alkalinity and pH management
- Recirculation pumps
- Other

The following parameters are monitored at the Featherston Pool, FAC, total chlorine, pH, alkalinity, cyanuric acid.

Analysis is undertaken before the pool opens each morning and then intermittently during the day. To achieve compliance with NZS 5826:2010, it will be necessary to prepare a sampling plan which adheres to the parameters and frequencies above. Samples will need to be collected and analysed according to the sampling plan. Sampling for the above parameters should be undertaken with a photometer except for TDS which requires a TDS meter.

The following microbiological monitoring is required for compliance with NZS 5826:2010. Microbiological monitoring is required at the beginning of the season, then monthly and when the pool does not comply with disinfection parameters over a period of 12 hours.

Test	**Level**
Standard plate count	Less than 200/mL
Faecal coliforms of ***Escherichia coli (E. coli)***	Less than 1/100mL
Staphylococcus aureus	Less than 100/100mL
Pseudomonas aeruginosa	Less than 10/100mL

Currently, microbiological monitoring is not undertaken at the Featherston pool.

3.4 Very High Risk Table

Those risks that have been identified as being “Very High” are listed in the following table. The full list of risks should be reviewed.

Pool Water Sampling / Testing / Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed ?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results inaccurate	3.1	Inappropriate/ incorrect sampling/non representative sampling frequency	Poor records/data entry checks not signed off Unacceptable number of errors detected during checks Process control failures Unexplained test failures Checks of sampling procedures not undertaken	Pool is sampled each morning. Pool is sampled intermittently throughout day. Staff receive on the job sampling training	No	Very high (Likely x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC
Monitoring results inaccurate	3.2	Inadequate/ out of date or incorrect test equipment	Results are considered unusual, or not reproducible or inaccurate	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment.	PO SWDC
Monitoring results inaccurate	3.3	Inadequate reagents	Results are considered unusual, or not reproducible Reagent preparation records identify reagents are too old	Reagents are stored with photometer. Test strips are used for most sampling.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents.	PO SWDC

Pool Water Sampling / Testing / Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed ?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results inaccurate	3.4	Inappropriate analysis method or technique	Results are considered unusual, or not reproducible Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO SWDC PO
Monitoring results don't provide suitable information	3.5	Inadequate or incorrect monitoring records	Poorly kept monitoring records (illegible writing, incorrect entries etc) Monitoring records are not able to be analysed for trends	Written records are provided to Council	Partially Only hard copy records are retained	Very high (Likely x major)	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC

Pool Water Sampling / Testing / Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed ?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results inaccurate	3.6	Failure of staff to follow sampling and analytical methods and other related quality assurance procedures	Poor agreement in samples/results compared with a suitable analytical laboratory Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques. Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010. Investigate implementing a programme of monthly external lab sampling and analysis to provide verification of sampling results. Implement monthly microbiological sampling	PO SWDC SWDC SWDC

Alkalinity and pH Management								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed ?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**

Alkalinity and pH Management								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed ?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Rapid changes in pool water pH	7.1	Changes in pool water pH over time due to chemical dosing (chlorine) and bathing load	pH level more than 8.0 or less than 7.2 Inadequate chlorination effectiveness Plaster and concrete etching, corrosion of metals Eye discomfort Cloudy water Scale formation	Some pH monitoring is undertaken Hydrochloric acid dosing is adjusted automatically to maintain pH at a constant level Sodium bicarbonate is dosed manually as required to buffer pH.	Partially	Very high (Possible x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC

3.5 Improvement Schedules

The improvement schedules below outline improvements that have been recommended for preventing, reducing or eliminating pool water quality risks at the Featherston Pool. Possible improvements to the pool water quality have been identified in the 'Additional Measures That Could Be Put in Place' column of the risk tables for event causes that are not deemed to be fully managed. The option identified to improve the management of each unmanaged risk has then been included in the improvement schedule. It should be noted that costs are estimates only. Each project is ranked according to the priority to which projects should be completed.

Key to organisations responsible:

- SWDC – Pool Owner, South Wairarapa District Council.
- PO – Pool Operator, Transfield Services.

Recommended Operational Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH management	3.1, 6.2, 6.3, 7.1	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010.	PO	Staff time	October 2012
2	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH Management	3.1, 3.4, 3.6, 6.2, 6.3, 7.1	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO	Staff time	October 2012
3	Very high	Pool water sampling, testing, recording	3.5, 3.6	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC	Staff time	October 2012
4	Very high	Pool water sampling, testing, recording	3.6	Investigate implementing a programme of monthly external lab sampling and analysis, including microbiological analysis, to provide verification of sampling results.	SWDC	$200/mth	
5	High	Water in pool	2.10	Calculate the pool turnover time for both pools to ensure it is less than one hour for the toddlers pool and less than three hours for the main pool.	PO SWDC	Staff time	October 2012
6	Moderate	Water in pool	2.1, 2.2, 2.3	Prepare written vomit, diarrhoea and faecal incident procedures and train all relevant staff in the procedures	PO SWDC	Staff time	October 2012
7	Moderate	Water in pool Other	2.5, 9.2, 9.3	Prepare a pool management manual which outlines the roles and numbers of staff required and pool operational procedures	SWDC	Staff time	October 2012
8	Moderate	Other	9.6, 9.7	Prepare a pool operations manual which details how to operate and backwash the filters, adjust the chlorine and pH levels and undertake other	SWDC	Staff time	October 2013

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
				operational tasks.			
9	Moderate	Pressure sand filtration (main pool and toddlers pool) Recirculation pumps	4.2, 5.2, 8.1	Implement programme of pump maintenance.	PO SWDC	Staff time	October 2013
10	Moderate	Other	9.1	Investigate the need for Pool Manager and/or Operator to complete further training eg ***US 25981 Manage public pool water quality in a simple public pool***	PO	$2,000	October 2013
11	Moderate	Other	9.1	Ensure senior lifeguards have attended basic formal training course eg ***US 20046 Monitor public swimming pool water quality and safe storage of chemicals***	PO	$2,000	October 2013
12	Moderate	Other	9.5	Review the way in which the pool asset is managed and how input from the pool operator is incorporated into the planning of upgrades, maintenance and management of the pool asset.	SWDC	Staff time	October 2014

Recommended Capital Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording	3.2, 3.3, 3.4	Purchase appropriate testing equipment.	PO SWDC	$5,000	October 2012
2	High	Water in pool	2.9	Install float switch in the balance tank to automatically top up the pool when water is lost.	SWDC	$500	October 2012
3	Moderate	Pool surround	1.1, 2.7	Investigate separating the paddling pool from the	SWDC	$500 -	October

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
		Water in pool		toddlers pool and providing a separate filtration and chlorination system for the paddling pool or filling the paddling pool daily (or 2x daily) from the main pool and manually boosting the chlorine level.		$3,000	2013
4	Moderate	Water in pool Pressure sand filtration (main pool)	2.4, 2.6, 4.3, 4.4	Investigate the effectiveness of the main pool sand filters. Replace the filters if they cannot perform to the required standard	SWDC	Up to $120,000	October 2013
5	Moderate	Pressure sand filtration (main pool and toddlers pool) Recirculation pumps	4.2, 5.2, 8.1	Install alarms on pumps to indicate if they stop operating.	SWDC	$1,000	October 2014
6	Moderate	Chlorine disinfection	6.1, 6.2	Install a chlorine failure alarm on the dosing systems in both pools	SWDC	$5,000	October 2014

4. Stage 2: Maintenance Schedule and Programme

4.1 Background

A visual inspection of the pool compound was undertaken on the 12th of July 2012 to evaluate the condition of the existing physical assets and establish a schedule of maintenance and repair work based on these observations.

The report provided by South Wairarapa District Council prepared by Thompsons Fibreglassing has been used to provide recommendations for the swimming pools as this work falls outside the scope of Opus' expertise.

4.2 Asset / Improvement Descriptions

As outlined below in the table under section 4.4, the current pool buildings are generally fit-for-purpose and are generally in keeping with their age and use. Minor works are recommended to be undertaken to maintain the functionality of the current facilities.

4.3 Health & Safety Issues

Compliance issues with the existing filtering and dosing systems are outlined under section 1.

No issues have been identified that require emergency works considered necessary to address health and safety concerns.

No dedicated accessible shower or WC facilities were noted. Should any consentable work be undertaken in the future incorporating at least one accessible unisex bathroom would be required.

4.4 Schedule and Programme with Costs

Attached as Appendix 2.

5 Stage 3: Pool Use & User Feedback

5.1 Introduction

There are several key reasons why Local Government provides aquatic facilities delivering services for residents:

1. **Link to Community Outcomes in Long Term Plans** - aquatic facilities contribute to achieving the community outcomes and the strategic directions of Councils (these may be expressed in a variety of documents such as Recreation Plans and Strategies). Clear linkages between service delivery through aquatic facilities and community outcomes can be made.

2. **Water Safety** – safety of residents, especially children, has historically been a major reason for Local Government provision of swimming pools. Drowning is the third highest cause of unintentional death in New Zealand and although the number of fatalities has decreased over the past 15 years, New Zealand still has a high proportion of drownings per head of population. Facilities are needed in the District to meet water safety and swim education needs for both children and adults.
   (i) Water Safety New Zealand (WSNS) is leading a national 'learn to swim' public awareness campaign to address a concerning rise in drowning. The Local Government Association is a member of water Safety New Zealand.
   (ii) Another priority for WSNZ is to address a steady decline in the swimming ability of New Zealand's youth. The Sealord Swim For Life initiative, a key WSNZ programme, is a national project established to:
   (iii) • Provide all children with access to the water;
   (iv) • Facilitate the delivery of quality swim and survive programmes in primary schools;
   (v) • Foster a culture that produces generations of New Zealand families that are water safe.

3. **Accessibility and Inclusiveness** - The nature of water as a supportive medium for active recreation means that aquatic facilities are highly inclusive catering for residents with a wide range of abilities and of all ages.

4. **Supervised Recreation Opportunity** - Pools provide a safe and inclusive place in which to recreate. Public aquatic facilities are required to have lifeguards on duty during public sessions. Aquatic facilities (and libraries) are usually the only fully supervised leisure facilities provided by Local Government in New Zealand and for this reason are particularly attractive to school age residents and their parents/ caregivers.

5.2 Background

Three surveys were returned on the use of the Featherston Pool:

- Jo Johnson – President, Featherston Amateur Swimming Club
- Leeane Flack – St Teresa's Primary School
- Phil Robertson – Principal, Featherston School

5.3 User Feedback

Featherston Amateur Swimming Club

- The Featherston Amateur Swimming has a current membership of 100 that is increasing due to both less swimming education in school curriculums and a strong 'learn to swim' (LTS) focus. For the past three years they have also been offered adult swimming and this subsidises some children whose parents wouldn't normally be able to afford it. Most swimmers fall in the 6-10 age bracket. They do not have many adult members, possibly due to the opening hours.

- They have a strong Committee and links to schools from which to draw members. The Committee has successfully fund-raised for pool improvements including a solar water heating system, a pool dividing wall and starting blocks. They cite the fund-raising environment as challenging due to the current economic climate and the size of the District. Making LTS affordable is a Club priority.

- They operate from the pool three days a week from 5:00 to 7:30 pm.

- The pool is the only FINA approved 25 metre in the District.

- The Club considers the pool is a major asset for the town and is greatly appreciated by the club and community. They list their priorities as:

    1. Ensure a safe environment for all community users.

    2. To keep costs of 'Learn to Swim' programmes down to encourage more children to learn to swim.

    3. To supply good quality education to all ages of swimmers.

- Overall the Club seems generally happy with the pool's operation, but consider the toilets/changing rooms need attention.

St Teresa's Primary School

- St Teresa's has a swimming numbers around 122 (we assume this is the entire school roll) of mainly 5 to 13 year olds.

- They use the pool four days a week, generally between 11:00am and 2:00pm.

- Similar to the swimming club's concerns, the school considers the changing areas are in need of a "spruce up". Use of the pool covers to maintain heat was noted.

- The school runs the South Wairarapa Primary School Swimming Champs that attract 11 schools (200+ students) from around the District, due to the complex having the only 25 metre pool. It also hosts the Featherston Cluster swimming sports which is made up of 3 schools and 150 children.

Featherston School

- Featherston School has 76 student swimmers and use the pool Monday to Friday for 8 weeks at the beginning of school year from noon until 1:00pm. Their key priorities are:

- How the pool is managed/operated.
- Condition of changing rooms - need upgrading very basic things such as lighting.
- The toilets also need a "tidy up".
- The school notes that the pool is always clean and tidy. ***"Children enjoy swimming in this pool and gives them experience that they may not find elsewhere".*** They like the "grandstand" as it keeps children out of sun during sports days and general swimming, as well as the ramp being available for wheel chair access.

Summary
The Featherston Pool has a major role in the town as well as the greater District for LTS and school swimming sports. Key strengths of the facility are a strong Club that has fund-raining capability and commitment to affordable LTS opportunities. It also serves a key role in hosting primary school swimming events.

Limitations are around the asset condition – particularly the toilet/changing facilities and some operational issues. The pools covers need to be used to conserve heat/reduce cost of heating water.

Normally it is a short seasonal use due to the water temperature.

5.4 Recommendations

Undertake wider community consultation via an "Annual Swimming Pool User Survey" to better understand needs and usage.

Consider engaging with the Featherston Swimming Club to discuss scope, funding and fundraising for future possible development.

6 Summary Conclusions and Recommendations

Below is a summary of the findings and recommendations of this report.

6.1 Conclusions

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool such as no water sampling plan, proper training or lab testing.

The assets/improvements at the complex are average condition and are fit for purpose.

The overall demand for the pool is due to the Featherston Swimming Club being robust and a number schools use the pool when the weather and water temperature permit.

6.2 Recommendations

1. That the Improvement Plan identified in the PRMP in Appendix 1 be implemented.

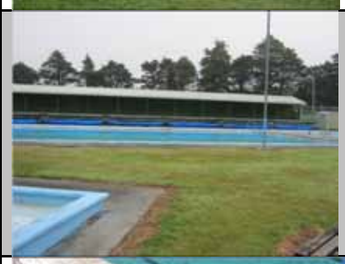
2. That the maintenance work identified in Year 1 of the Maintenance Programme in Appendix 2 be carried out.

3. That the balance of the work identified in the Maintenance Programme be planned over the next 2-10 years.

4. Undertake wider community consultation and engage with the Featherston Swimming Club to discuss scope, funding and fundraising for future development.

APPENDIX 1: POOL RISK MANAGEMENT PLAN

APPENDIX 2: DETAILED MAINTENANCE SCHEDULE & PROGRAMME

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
Exterior									
	Pool	Main Pool	The main pool is generally is in average physical condition (note also main pool surrounds item below). Serious water quality compliance issues have been highlighted both by Thompsons Fibreglassing and by Opus in Section 1	Training pool at the end of the main pool requires remedial work to delaminating fibreglass. Additional fibreglassing is also required to the new wall dividing this pool from the main area.	Lump sum	$16,611.72	1 year		
		Intermediate Pool	Appears in good condition with no signs of leaks				2-5 years Will require repainting in keeping with the current maintenance cycle.		
		Toddler's Pool	Average condition. Has no filter or circulation system				2-5 years Will require repainting in keeping with the current maintenance cycle.		
		Pool covers	Covers are in poor condition and were not in use at the time of site visit.		3 x covers Lump sum	$7,611.76	1 year	Costs provided by the Thompson Fibreglassing report	
		Main pool surrounds	Tiles in very poor condition. Lifting in many places and exposing the edge of the pool fibreglass creating a point of entry for leaks under the lining.		Lump sum	$26,000.00	1 year	We recommend this work be undertaken as soon as possible. Delaying this work creates risk that the existing pool fibre glassing will sustain further damage through water ingress that will require the entire pool to be relined at much greater cost	 
		Pool overflow tank	The tank requires sealing to the walls and floor to prevent water and chemical loss.	Reseal the overflow tank in line with the Thompson Fibreglass report.	Lump Sum	$8,570.00	1 year		

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
	Fencing	Galvanised Steel chain link and timber paling fencing	Overall good condition. Galvanised steel chain link fencing in very good condition. Wind break material is loose from the chain link fence. Timber fencing bounding the reserve beyond is in adequate condition.	Mino maintenance works to re-fix the wind break material to the chain link fence.			Monitor the condition of the fencing on at least an annual basis and make repairs as necessary.	We note that the security wire on the road boundary is pitched the wrong way for preventing break-ins.	
	Planting	Trees	Deciduous trees dropping significant leaf litter	Negotiate to remove trees close to property boundary				There are a number of significant trees surrounding the pool creating maintenance issues with leaf litter.	
	Grandstand	Structure and Cladding	Very good condition. Grandstand completed in 2008. Condensation dripping from spouting expansion joints and dripping onto deck below forming slippery patches.	Wash-down prior to the beginning of the swimming season. Spouting requires cleaning to remove debris	80m^2	$5.80/m^2 Total: $464.00	1 year		
	Grandstand	Timber seats	Very good condition. Grandstand completed in 2008. All timber noted as being CCA H3.2 treated.						
	Ancillary Building	Steel garden shed	Poor condition. Colorsteel cladding is warped and dented. Original door is missing – replaced with plywood sheet.	Replace the garden shed with an off the shelf like for like replacement.	Lump Sum	$1,000.00	2-5 years		
	Ancillary Building	Trellis Gazebo	Generally good condition. The lack of spouting from roof is accelerating degradation of timber posts and bottom of trellis cladding. Shaded location has allowed significant lichen growth	Monitor condition of trellis and timber posts. Repair popped nails etc and replace trellis cladding as required. Chemical wash down of roofing to remove lichen	24m^2 Trellis reclad Lump sum 12m^2 Roof chemical wash	$1,100.00 $5.80/m2 Total: $69.60	5 -10 years 1 year		

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
	Ancillary Building	Covered Seating and Chemical store	Appears in very good condition						
	Paving	Concrete paving	Sections of paving are very uneven in places. Up to 25mm vertical displacement presenting a tripping hazard.	Replacement of concrete paving recommended	600m^2	$74/m2 Total: $44,400.00	5 - 10 years		
	Changing Sheds and Office	Cladding and Joinery	A mix of concrete masonry, fibre cement sheet, corrugated iron and timber weatherboard. Average condition overall. Timber doors on the west face of the changing shed are especially poor.	Timber joinery requires addressing in the near future. The cladding paintwork is adequate for the next few years.	180m^2	$18.60/m^2 Total: $3,348.00	2-5 years	The age and type of sheet cladding is unknown. Therefore there is a risk it may be asbestos bearing and further testing may be warranted if work affecting the cladding is proposed.	
	Outbuildings	Cladding and Joinery	A mix of concrete masonry, fibre cement sheet, corrugated iron and timber weatherboard. Average condition overall. Timber weatherboard cladding is in the worst condition.	Weatherboard cladding should be repainted within a two year timeframe to minimise risk to integrity.	200m^2	$18.60/m^2 Total: $3,720.00	2-5 years		
Internal									
	Changing Sheds	Walls/Floors/ Ceilings	Painted timber sarking partitions and concrete masonry walls in average overall condition. Bare concrete floors, no ceiling linings. Vandalism on many walls.	Repaint prior to season opening to remove vandalism. (only offending walls may be necessary) Provide on-going monitoring of condition and repaint as necessary.	240m^2	$17.80/m^2 Total: $4,272.00	1 year	NOTE: Rates provided are worst case to allow to repaint all internal walls. There was evidence of break-ins and associated litter and vandalism. Overall security measures could be addressed further outside of these recommendations.	

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
		Fixtures	Timber seating; 1 x male shower, 1 x male WC and 1 x urinal. 1 x Female shower, 2 x female WC all in fair condition. Appear 'fit-for-purpose'.				Monitor condition of fixtures and fitting regularly and replace or repair as required	Fixtures were not tested during inspection.	
	Sick Bay	Linings/ Fixtures	Timber joinery units are in poor condition reflective of their age. Masonry block walls and paintwork in fair condition.	Replace joinery unit in the long term. Minor maintenance to repair loose power outlet.	3m	$206.00/m Total: $618.00	10 years		
	Site Office	Internal Linings	Average condition in keeping with age and use.						
		Fixtures	Joinery units in Average condition in keeping with age and use.	Replace joinery unit in the long term.	4m	$206.00/m Total: $824.00	10 years		

YEAR	COMPONENTS	COST	NOTES
1	Main pool covers	$7,611.76	
	Remedial works to training pool and dividing wall	$16,611.72	
	Re-tiling and fibre glassing pool surrounds	$26,000.00	
	Seal overflow tank	$8,570.00	
	Wash down grandstand	$464.00	
	Chemical wash gazebo roof	$69.60	
	Changing shed repainting	$4,272.00	
	SUB-TOTAL	**$63,599.08**	
2-5	Replace steel garden shed	$1,000.00	
	Repaint changing shed cladding	$3,348.00	
	Repaint outbuilding claddings	$3,720.00	

	SUB-TOTAL	**$8,068.00**
6-10	Replace concrete paving	$44,400.00
	Replace sick bay joinery units	$618.00
	Replace site office joinery	$824.00
	SUB-TOTAL	**$45,842.00**
	GRAND TOTAL	**$117,509.08**

NOTES:
Rates have been taken from the Rawlinsons Construction Handbook 2011 and the Thompsons Fibreglassing 'Featherston Pool Report'

APPENDIX 3: POOL USER SURVEYS

Appendix 2 - SWDC 3 Pools Review Report - Greytown

SOUTH WAIRARAPA DISTRICT COUNCIL

THREE POOLS REVIEW PROJECT

GREYTOWN POOL

South Wairarapa District Council

Three Pools Review Project

Greytown Pool

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Reference: 5-P0521.00
Status: FINAL

Contents

1 Executive Summary

Opus International Consultants Limited has been engaged to provide a report into the Greytown pool complex. This report outlines the findings of a three stage review that includes;

1. Operational performance against current New Zealand Standards for Pool Water Quality,
2. A review of the assets/infrastructure of the pool and resulting maintenance schedule and plan, and
3. A feasibility/needs analysis.

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool. These are listed in section 3.4, and more fully in the full Pool Risk Management Plan (PRMP) attached as Appendix 1. These items are major health/statutory risks and need to be addressed as soon as practical, with the majority having minimal cost implications:

- No pool water sampling plan that meets NZS 5826:2010
- Lack of staff training in pool management and correct testing practices
- Lack of an audit process by SWDC staff on the testing
- No external lab sampling including microbiological analysis

There are also a number of "high" and "moderate" items that need consideration. These are related to the lack of written procedures or manuals, pump maintenance and other training requirements.

Capital Improvements noted in the PRMP are summarised below:

- To be implemented by October 2012 $ 5,000
- To be implemented by October 2013 $28,500
  (does not include skimmer repair cost as this is in year 2-5 below)
- To be implemented by October 2014 $ 6,000

The assets/improvements at the complex are fit for purpose and in average condition, with major issues around the pool itself. A 10 year maintenance plan/schedule has been prepared, giving cost estimates for work that should be undertaken to keep the assets in their existing condition. The items requiring attention, preferably before the pool opens this year are:

Overflow tank sealing	$8,570.00
Repaint fascia	$ 696.00
Clear spouting and wash down eaves exterior	$ 560.00
Wash down timber seating area	$ 560.00
Total	**$10,386.00**

The balance of the items in the maintenance plan have been grouped into 5 year and 10 year programmes. The total estimated value of this work is:

- 2-5 Year Plan $183,337
- 6-10 Year Plan $ 14,415

The totals above also include items and costs provided in the Thompsons Fibreglassing report of April 2012.

The overall demand for the pool is moderate as an active though small Swimming Club as well as school use. User feedback has noted the water temperature, as it is an outdoor pool, being the main concern/restriction.

2 Background

South Wairarapa District Council (SWDC) currently owns and maintains three community pools in the South Wairarapa; Featherston, Greytown and Martinborough.

The day to day management of the pools is the responsibility of the Council's Facilities Management (FM) contractor, Transfield. It should be noted that this contract has been reviewed and is currently being tendered. The management of the pools will remain part of the FM contract with the new contractor commencing operations on 12 October 2012.

The pools generally open in November and close in March, between the hours of 2.00 - 5.15pm weekdays and 1.00 – 5.30pm weekends. The admission fee structure is set by Council with adults paying $3.00 and others paying $2.00.

The Greytown swimming pool is located in Kuratawhiti Street, Greytown. It was built in the 1950's and little has changed from its original design. The pool complex currently consists of:

- Main lane pool
- Toddlers pool

For a description of the pools including a layout plan please see the Introduction section of the Pool Risk Management Plan (PRMP) section of the report.

The balance of the improvements at the complex is described in section 4.2 of this report.

SWDC have engaged Opus International Consultants Limited to provide a three stage approach to the review of the swimming pool assets:

1. The current operation against New Zealand standards for pool quality as reflected in a PRMP with an associated improvement plan.
2. A review of the assets/improvements contained within the complexes (paths, offices, changing rooms, fencing, spectator seating, etc) to provide the basis of a maintenance schedule with costs, and a programme of works.
3. A feasibility study including current use of the pool(s), user needs, financial implications, local and regional influences, including future requirements and possible development option analysis.

3 Stage 1: Pool Risk Management Plan

3.1 Introduction

This Pool Risk Management Plan (PRMP) has been prepared for the Greytown Pool to identify and manage the public health risks to pool users. Greytown Pool is a public summer pool which is used for recreational swimming and swim training. The buildings and pool facilities are owned by South Wairarapa District Council (SWDC) and Council is responsible for the asset management, maintenance and upgrading of the pool complex. The operation of the pool is undertaken by Transfield Services, under contract to SWDC.

3.2 Compliance Requirements

To comply with NZS 5826:2010 the following chemical water quality criteria and chemical testing frequencies must be met.

Chemical water quality criteria (from Table 1 NZS5826:2010)

Characteristic or chemical	Most desirable value	Lowest value	Highest value
pH	7.4 – 7.6	7.2	8.0
Alkalinity (as $CaCO_3$) (with sodium hypochlorite)	60-120 mg/L	50 mg/L	200 mg/L
Calcium hardness	See saturation index (SI)	40 mg/L	300 mg/L
Free available chlorine (FAC) (pool with chlorine alone)	2.5 – 5.0 mg/L	1.5 mg/L	7.0 mg/L
Combined available chlorine (CAC)	< 0.5 mg/L	Not detectable	1.5 mg/L
Cyanuric Acid	30-60 mg/L	25 mg/L	100 mg/L
Total dissolved solids (TDS) swimming pools	< 1,000 mg/L above make-up water	-	3000 mg/L

Required frequency of chemical testing (from Tables 2 & 3 NZS5826:2010)

Chemical test	Frequency of testing
pH	Prior to use and then every 3 hours
Alkalinity	Weekly
Calcium hardness	Monthly
Free available chlorine (FAC)	Prior to use and then every 3 hours
Total chlorine	Daily
Cyanuric Acid	At beginning of season, then fortnightly
Total dissolved solids (TDS)	At beginning of season, then weekly

3.3 Evaluation against Standards

A qualitative risk assessment approach has been taken following the guidance notes in Appendix K of NZS 5826:2010 allowing the prioritisation of improvement needs and development of the Improvement Schedule.

On 12 July 2012, prior to the preparation of the plan, a pool site visit and meeting was held with the Transfield Services operator of the Greytown Pool.

Risk tables identifying the risk events, event causes, risk levels, preventive measures in place and the preventive measures that could be put in place were prepared based on the site visit and meetings. Analysis of the risk levels was undertaken using the risk assessment procedure outlined in Section 10 below. From this information the improvement schedule was prepared.

The Greytown Pool owner (SWDC) and operator (Transfield Services) are responsible for agreeing the implementation of the Improvement Plan within the timeframes recommended, subject to funding constraints and the availability of resources.

Contingency Plans have been prepared to provide guidance if control measures fail to prevent the occurrence of a risk event. The Pool Operator is responsible for implementation of the Contingency Plans if they are required.

Separate risk tables have been prepared for:

- Pool surround
- Water in pool
- Pool water sampling/testing/recording
- Pressure media filtration (Main pool)
- Pressure diatomaceous earth filtration (Learners pool)
- Chlorine disinfection
- Alkalinity and pH management
- Recirculation pumps
- Other

The following parameters are monitored at the Greytown Pool, FAC, total chlorine, pH, alkalinity, cyanuric acid.

Analysis is undertaken before the pool opens each morning and then intermittently during the day. To achieve compliance with NZS 5826:2010, it will be necessary to prepare a sampling plan which adheres to the parameters and frequencies above. Samples will need to be collected and analysed according to the sampling plan. Sampling for the above parameters should be undertaken with a photometer except for TDS which requires a TDS meter.

The following microbiological monitoring is required for compliance with NZS 5826:2010.

Microbiological monitoring is required at the beginning of the season, then monthly and when the pool does not comply with disinfection parameters over a period of 12 hours.

Test	Level
Standard plate count	Less than 200/mL
Faecal coliforms of ***Escherichia coli (E. coli)***	Less than 1/100mL
Staphylococcus aureus	Less than 100/100mL
Pseudomonas aeruginosa	Less than 10/100mL

Currently, microbiological monitoring is not undertaken at the Greytown pool.

3.4 Very High Risk Table

Those risks that have been identified as being "Very High" are listed in the following table. The full list of risks should be reviewed.

Pool Water Sampling/Testing/Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results inaccurate	3.1	Inappropriate/ incorrect sampling/non representative sampling frequency	Poor records/data entry checks not signed off Unacceptable number of errors detected during checks Process control failures Unexplained test failures Checks of sampling procedures not undertaken	Pool is sampled each morning. Pool is sampled intermittently throughout day. Staff receive on the job sampling training	No	Very high (Likely x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC
Monitoring results inaccurate	3.2	Inadequate/ out of date or incorrect test equipment	Results are considered unusual, or not reproducible or inaccurate	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment.	PO SWDC
Monitoring results inaccurate	3.3	Inadequate reagents	Results are considered unusual, or not reproducible Reagent preparation records identify reagents are too old	Reagents are stored with photometer. Test strips are used for most sampling.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents.	PO SWDC
Monitoring results inaccurate	3.4	Inappropriate analysis method or technique	Results are considered unusual, or not reproducible Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO SWDC PO

Pool Water Sampling/Testing/Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results don't provide suitable information	3.5	Inadequate or incorrect monitoring records	Poorly kept monitoring records (illegible writing, incorrect entries etc) Monitoring records are not able to be analysed for trends	Written records are provided to Council	Partially Only hard copy records are retained	Very high (Likely x major)	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC
Monitoring results inaccurate	3.6	Failure of staff to follow sampling and analytical methods and other related quality assurance procedures	Poor agreement in samples/results compared with a suitable analytical laboratory Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques. Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010. Investigate implementing a programme of monthly external lab sampling and analysis to provide verification of sampling results. Implement monthly microbiological sampling	PO SWDC SWDC SWDC

Alkalinity and pH Management								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Rapid changes in pool water pH	7.1	Changes in pool water pH over time due to chemical dosing (chlorine) and bathing load	pH level more than 8.0 or less than 7.2 Inadequate chlorination effectiveness Plaster and concrete etching, corrosion of metals Eye discomfort Cloudy water Scale formation	Some pH monitoring is undertaken Hydrochloric acid dosing is adjusted automatically to maintain pH at a constant level Sodium bicarbonate is dosed manually as required to buffer pH.	Partially	Very high (Possible x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC

3.5 Improvement Schedule

The improvement schedules below outline improvements that have been recommended for preventing, reducing or eliminating pool water quality risks at the Featherston Pool. Possible improvements to the pool water quality have been identified in the 'Additional Measures That Could Be Put in Place' column of the risk tables for event causes that are not deemed to be fully managed. The option identified to improve the management of each unmanaged risk has then been included in the improvement schedule. It should be noted that costs are estimates only. Each project is ranked according to the priority to which projects should be completed.

Key to organisations responsible:

- SWDC – Pool Owner, South Wairarapa District Council.
- PO – Pool Operator, Transfield Services.

Recommended Operational Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH management	3.1, 6.2, 6.3, 7.1	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010.	PO	Staff time	October 2012
2	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH Management	3.1, 3.4, 3.6, 6.2, 6.3, 7.1	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO	Staff time	October 2012
3	Very high	Pool water sampling, testing, recording	3.5, 3.6	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC	Staff time	October 2012
4	Very high	Pool water sampling, testing, recording	3.6	Investigate implementing a programme of monthly external lab sampling and analysis, including microbiological analysis, to provide verification of sampling results.	SWDC	$200/mth	
5	High	Water in pool	2.10	Calculate the pool turnover time for both pools to ensure it is less than one hour for the toddlers pool and less than three hours for the main pool.	PO SWDC	Staff time	October 2012
6	Moderate	Water in pool	2.1, 2.2, 2.3	Prepare written vomit, diarrhoea and faecal incident procedures and train all relevant staff in the procedures	PO SWDC	Staff time	October 2012
7	Moderate	Water in pool Other	2.5, 9.2, 9.3	Prepare a pool management manual which outlines the roles and numbers of staff required and pool operational procedures	SWDC	Staff time	October 2012
8	Moderate	Other	9.6, 9.8	Prepare a pool operations manual which details how to operate and backwash the filters, adjust the chlorine and pH levels and undertake other operational tasks.	SWDC	Staff time	October 2013

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
9	Moderate	Pressure media filtration (main pool and toddlers pool) Recirculation pumps	4.2, 5.2, 8.1	Implement programme of pump maintenance.	PO SWDC	Staff time	October 2013
10	Moderate	Other	9.1	Investigate the need for Pool Manager and/or Operator to complete further training eg ***US 25981 Manage public pool water quality in a simple public pool***	PO	$2,000	October 2013
11	Moderate	Other	9.1	Ensure senior lifeguards have attended basic formal training course eg ***US 20046 Monitor public swimming pool water quality and safe storage of chemicals***	PO	$2,000	October 2013
12	Moderate	Other	9.5	Review the way in which the pool asset is managed and how input from the pool operator is incorporated into the planning of upgrades, maintenance and management of the pool asset.	SWDC	Staff time	October 2014

Recommended Capital Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording	3.2, 3.3, 3.4	Purchase appropriate testing equipment.	PO SWDC	$5,000	October 2012
2	High	Water in pool	2.8, 2.9	Repair main pool skimmers so that the pool is drained evenly	SWDC	$70,000	October 2013
3	Moderate	Other	9.7	Remove house paint from pool and resurface the pool with an appropriate product.	SWDC	$20,000	October 2013
4	Moderate	Water in pool	2.4, 2.6, 2.7, 5.1, 5.3	Investigate the effectiveness of the toddlers pool DE filter. Replace the filter and pump if they are unable to perform to the required standard	SWDC	$8,500	October 2013
5	Moderate	Pressure media filtration (main pool and toddlers pool)	4.2, 5.2, 8.1	Install alarms on pumps to indicate if they stop operating.	SWDC	$1,000	October 2014

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
		Recirculation pumps					
6	Moderate	Chlorine disinfection	6.1, 6.2	Install a chlorine failure alarm on the dosing systems in both pools	SWDC	$5,000	October 2014

4 Stage 2: Maintenance Schedule and Programme

4.1 Background

A visual inspection of the pool complex was undertaken on the 12th of July 2012 to evaluate the condition of the existing physical assets and establish a schedule of maintenance and repair work based on these observations.

The report provided by South Wairarapa District Council prepared by Thompsons Fibreglassing has been used to provide recommendations for the swimming pools as this work falls outside the scope of Opus' expertise.

4.2 Asset / Improvement Descriptions

As outlined below in the table under section 4.4, the current pool buildings are generally fit-for-purpose and are generally in keeping with their age and use. Minor works are recommended to be undertaken to maintain the functionality of the current facilities.

4.3 Health & Safety Issues

Compliance issues with the existing filtering and dosing systems are outlined under section 3.2 and 3.3.

No issues have been identified that require emergency works considered necessary to address health and safety concerns.

No dedicated accessible shower or WC facilities were noted. Should any consentable work be undertaken in the future incorporating at least one accessible unisex bathroom would be required. The current facilities have two female WC's, one male WC, one male urinal and one external shower. We believe a one further male WC and two female WC's would be needed to comply with the number of fixtures required under the current New Zealand Building Code section G1/AS1 however there is no compulsion to meet this requirement in the future.

4.4 Schedule and Programme with Costs

Attached as Appendix 2.

5 Stage 3: Pool Use & User Feedback

5.1 Introduction

There are several key reasons why Local Government provides aquatic facilities delivering services for residents:

1. **Link to Community Outcomes in Long Term Plans** - aquatic facilities contribute to achieving the community outcomes and the strategic directions of Councils (these may be expressed in a variety of documents such as Recreation Plans and Strategies). Clear linkages between service delivery through aquatic facilities and community outcomes can be made.

2. **Water Safety** – safety of residents, especially children, has historically been a major reason for Local Government provision of swimming pools. Drowning is the third highest cause of unintentional death in New Zealand and although the number of fatalities has decreased over the past 15 years, New Zealand still has a high proportion of drownings per head of population. Facilities are needed in the District to meet water safety and swim education needs for both children and adults.
    (i) Water Safety New Zealand (WSNS) is leading a national 'learn to swim' public awareness campaign to address a concerning rise in drowning. The Local Government Association is a member of water Safety New Zealand.
    (ii) Another priority for WSNZ is to address a steady decline in the swimming ability of New Zealand's youth. The Sealord Swim For Life initiative, a key WSNZ programme, is a national project established to:
        - Provide all children with access to the water;
        - Facilitate the delivery of quality swim and survive programmes in primary schools;
        - Foster a culture that produces generations of New Zealand families that are water safe.

3. **Accessibility and Inclusiveness** - The nature of water as a supportive medium for active recreation means that aquatic facilities are highly inclusive catering for residents with a wide range of abilities and ages.

4. **Supervised Recreation Opportunity** - Pools provide a safe and inclusive place in which to recreate. Public aquatic facilities are required to have lifeguards on duty during public sessions. Aquatic facilities (and libraries) are usually the only fully supervised leisure facilities provided by Local Government in New Zealand and for this reason are particularly attractive to school age residents and their parents/ caregivers.

5.2 Background

Two surveys were returned:

- Donald Yee - Sports Co-ordinator, Kuranui College
- Gary Dewhurst – Secretary Greytown Swimming

5.3 User Feedback

Kuranui College

- The College uses the Pool for its annual College Swimming Sports but also travel to the Carterton Pool on a regular basis as it is heated. Noted that if the Greytown Pool was heated then numbers would increase immensely.

- Numbers using the pool are around 50 and are mainly in the 11-15 year old bracket.

Greytown Swimming Club

- Current membership of the Club is 54 of mainly 6-15 year olds. Use of the pool is three days per week (Monday, Tuesday and Thursday) from 5:00 pm to 8:00 pm.

- It has an increasing membership and a strong base of volunteers, with an active Management Committee. They cite the main barriers to Club growth as being:

    1. Water temperature.
    2. It's an outdoor pool unheated pool.
    3. Limited seasonal opening.

- The Club notes its long association with the Pool since the first pool was opened in 1916.

- ***"The water temperature, the fact the pool is an uncovered outdoor pool, along with the weather, is the main factors affecting the Club's activities. However, the Club is only one group using the pool, the local primary school (300+ students), the local secondary school (500+ students), the local residents and visitors to the town are also key stakeholders, and their views should also be canvassed. Visitors to the adjacent campground are known to use the pool over the summer holiday period."***

- The Club recommends that the Council should prepare an aquatic facilities plan that looks at community needs and options available. It supports the Council "***working on finding cost effective solutions to the problems facing the Greytown Pool, particularly the issue of heating the pool."***

Summary

Survey returns suggest that the water temperature limits the use of this pool. Feedback also suggests a strong Swimming Club with increasing membership and proven ability to successfully fundraise for pool development. School use and wider causal use by the community is also important to bear in mind.

5.5 Recommendations

Undertake wider community consultation via an "Annual Swimming Pool User Survey" to better understand needs and usage.

Consider engaging with the Greytown Swimming Club to discuss scope, funding and fundraising for future possible development.

6 Summary Conclusions and Recommendations

Below is a summary of the findings and recommendations of this report.

6.1 Conclusions

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool such as no water sampling plan, proper training or lab testing.

The assets/improvements at the complex are fit for purpose and in average condition. The majority of the work require is in the pool itself and associated infrastructure, requiring significant investment over the next 10 years.

The water temperature limits the use of this pool. Feedback also suggests a strong Swimming Club with increasing membership and proven ability to successfully fundraise for pool development

6.2 Recommendations

1. That the improvement plans identified on the PRMP in Appendix 1 be implemented.

2. That the maintenance work identified in year 1 of the Maintenance Programme in Appendix 2 be carried out.

3. That the balance of the work identified in the Maintenance Programme to planned for and carried out over the next 2–10 years.

4. That wider consultation be undertaken to better understand user needs and engagement with the Greytown Swimming Club.

APPENDIX 1: POOL RISK MANAGEMENT PLAN

APPENDIX 2: DETAILED MAINTENANCE SCHEDULE & PROGRAMME

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
Exterior									
	Pool	Main Pool Skimmers	The pools full length skimming troughs have been infilled and the pool currently only skims from one corner	To comply with NZS 4441/11:1.1 the pool must have full length skimmers. The existing pool edge should be cut down, a new trough install both sides and the pool fibreglassed.	Lump Sum	Total: $170,343.00	1-5 years	NOTE: Recommendations and costs based on Thompsons Fibreglassing Report. The timing of the work is recommended to take place as soon as possible however the scale of the work may dictate its feasibility.	
	Pool	Toddler's Pool	Appears in fair condition. Pump and filter require replacing	Pump and filter require replacing		Costs covered in Section 1	1 year	No sun shading is provided over or immediately adjacent to the toddler's pool	
	Pool	Over Flow tank	In poor condition – has large amounts of grout missing and the concrete is spalling.	Make good and seal the overflow tank	Lump Sum	Total: $8,570.00	1 year	NOTE: Recommendations and costs based on Thompsons Fibreglassing Report.	
	Pool	Covers	No covers are present at the Greytown Pool						
	Cladding	Entrance Building outside compound	Mix of plaster and weatherboard. Appears in overall good condition.	Repaint all as required on a 5-10 year cycle. Minor damage as shown in image may be repaired at time of repaint.	150m^2	24.30/m^2 Total: $3,645.00	5-10 years		 
	Cladding	Entrance Building inside Compound	Mix of plaster, weatherboard, corrugated iron and concrete masonry. Fair condition	Repaint all as required on a 5-10 year cycle	200m^2	24.30/m^2 $4,860.00	5-10 years		 

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
	Cladding	Fascia	Poor condition. Paint peeling on all sides	Repaint required. The good condition of the surrounding cladding draws attention to the poor repair of the fascias. Pay extra care to preparation work to ensure the new paint lasts	120m	$5.80/m Total: $696.00	1 year Repaint 5-10 year cycles in conjunction with claddings		
	Roof	Roof and Spouting	Roof of entrance building appears in very good condition. Spouting is blocks and requires cleaning	Clear spouting of blockages. Wash down of spouting and fascia throughout facility to remove green algae growth.	100m2	$5.60/m2 $560.00	1 year		 
	Windows and Doors	Timber Joinery	Timber joinery in fair condition. Paintwork peeling in places. High level steel bird mesh corroded and often broken		100m^2	$38.00/m^2 Total: $3,800.00	2-5 years Repaint 5-10 year cycles in conjunction with claddings	Discretion may be used to evaluate re-painting of windows with some windows worse than others. The figures provided here are a conservative estimate to cover repainting all at the same time.	
		Steel Security gates	Poor condition. Were not in use at time of inspection. Badly corroded.	If they are considered useful and necessary we recommend replacement	2 gates	$860.00 each Total: $1,720.00	2-5 years		
	Fencing	Timber Paling	Generally good condition. Top plate de-nailing n places	Minor repairs as required. Yearly inspections to monitor overall condition					 

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
	Grandstand	Timber seating	Fair condition. Have been painted so will require on-going maintenance to preserve appearance	Repaint all as required on a 5 year cycle to maintain appearance	380m	$3.80/m $1,444.00	2-5 years	No shade protection provided	
	Covered Seating	Timber seating and structure	Overall good condition for apparent age. No damage or wear evident.	Full wash down recommended to remove algae staining	100m^2	5.60/m^2 Total: $560.00	1 year		 
	Paving	Concrete paving	Fair condition	Waterblast recommended	600m^2	5.60/m^2 Total: $3,360.00	2-5 years		 
	Lighting	Flood lights	Appear in poor condition. It is unknown if they are in working order.	Replace luminaires to all poles	4 No	$1,220.00	$4,880.00	10 year	
Internal									
	Changing Sheds	Walls/Floors/ Ceilings	Adequate condition in keeping with the age of facility	Repaint walls as required. Monitor damage to concrete upstands and repair should damage worsen	150m^2	$17.80/m^2 Total: $2,670.00	2- 5 years	No accessible facilities provided. Areas estimated for painting limited to the half-height walls. No allowance for any work above this.	 

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
		Fixtures	3 x WC (1 male 2 female) and 1x Urinal. 1x Exterior shower. All in average condition but fit-for-purpose	Yearly inspections on condition and replace or repair as required.				Fixtures were not tested during inspection	
	Site Office	Internal Linings/glazing	Adequate condition in keeping with the age of facility	Repaint window joinery as required.	Rates covered elsewhere		5-10 years		
		Fixtures	The joinery units are in average condition. Considered fit for current purpose however replacement for aesthetic reasons may be justified within a 10 year period.		5m of Joinery unit	$206.00/m Total: $1,030.00	5-10 years		

YEAR	COMPONENTS	COST	NOTES
1	Overflow tank sealing	$8,570.00	
	Repaint Fascia	$696.00	
	Clear spouting and wash down eaves exterior	$560.00	
	Wash down timber seating area	$560.00	
	SUB-TOTAL	**$10,386.00**	
2-5	Main pool skimming and fibre glassing	$170,343.00	
	Repaint timber windows and doors	$3,800.00	
	Replace Security gates	$1,720.00	
	Repaint grandstand seating	$1,444.00	
	Water blast concrete paving	$3,360.00	
	Changing shed interior repaint	$2,670.00	
	SUB-TOTAL	**$183,337.00**	
6-10	Exterior painting	$8,505.00	
	Replace Flood lighting	$4,880.00	
	Replace office joinery units	$1,030.00	
	SUB-TOTAL	**$14,415.00**	
	GRAND TOTAL	**$208,138.00**	

APPENDIX 3: POOL USER SURVEYS

Appendix 3 - SWDC 3 Pools Review Report - Martinborough

SOUTH WAIRARAPA DISTRICT COUNCIL

THREE POOLS REVIEW PROJECT

MARTINBOROUGH POOL

South Wairarapa District Council

Three Pools Review Project

Martinborough Pool

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Contents

1 Executive Summary

Opus International Consultants Limited has been engaged to provide a report into the Martinborough pool complex. This report outlines the findings of a three stage review that includes;

1. Operational performance against current New Zealand Standards for Pool Water Quality,
2. A review of the assets/infrastructure of the pool and resulting maintenance schedule and plan, and
3. A feasibility/needs analysis.

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool. These are listed in section 3.4, and more fully in the full Pool Risk Management Plan (PRMP) attached as Appendix 1. These items are major health/statutory risks and need to be addressed as soon as practical, with the majority having minimal cost implications:

- No pool water sampling plan that meets NZS 5826:2010
- Lack of staff training in pool management and correct testing practices
- Lack of an audit process by SWDC staff on the testing
- No external lab sampling including microbiological analysis

There are also a number of "high" and "moderate" items that need consideration. These are related to the lack of written procedures or manuals, pump maintenance and other training requirements.

Capital Improvements noted in the PRMP are summarised below:

- Intended completion date October 2012 $ 5,000
- To be implemented by October 2013 $35,000
- To be implemented by October 2014 $ 6,000

The assets/improvements at the complex are in a low but acceptable state of repair. A 10 year maintenance plan/schedule has been prepared, giving cost estimates for work that should be undertaken to keep the assets in their existing condition. The items requiring attention, preferably before the pool opens this year are:

Repair Office wall linings	$ 50.20
Replace pump house steel bandits	$ 200.00
Seal Pool overflow tank	$ 8,570.00
Non-slip coat toddler pool	$ 2,795.80
New Pool covers	$13,230.25
Total	**$24,846.25**

The balance of the items in the maintenance plan have been grouped into 5 year and 10 year programmes. The total estimated value of this work is:

- 2-5 Year Plan $ 23,027
- 6-10 Year Plan $142,938

The totals above also include items and costs provided in the Thompsons Fibreglassing report of April 2012.

The overall demand for the pool has not been establish during the project as there is no swimming club currently operating in Martinborough and no feedback from schools was provided.. User feedback has noted a number of improvements that could be made.

2 Background

South Wairarapa District Council (SWDC) currently owns and maintains three community pools in the South Wairarapa; Featherston, Greytown and Martinborough.

The day to day management of the pools is the responsibility of the Council's Facilities Management (FM) contractor, Transfield. It should be noted that this contract has been reviewed and is currently being tendered. The management of the pools will remain part of the FM contract with the new contractor commencing operations on 12 October 2012.

The pools generally open in November and close in March, between the hours of 2.00 - 5.15pm weekdays and 1.00 – 5.30pm weekends. The admission fee structure is set by Council with adults paying $3.00 and others paying $2.00.

The Martinborough swimming pool is located in Princess Street, Martinborough. It was built in the 1950's and little has changed from its original design. The pool complex currently consists of:

- Main lane pool
- Intermediate pool
- Toddlers pools

For a description of the pools including a layout plan please see the Introduction section of the PRMP in Appendix 1.

The balance of the improvements at the complex are described in section 4.2 of this report.

SWDC have engaged Opus International Consultants Limited to provide a three stage approach to the review of the swimming pool assets:

1. The current operation against New Zealand standards for pool quality as reflected in a PRMP with an associated improvement plan.
2. A review of the assets/improvements contained within the complexes (paths, offices, changing rooms, fencing, spectator seating, etc) to provide the basis of a maintenance schedule with costs, and a programme of works.
3. A feasibility study including current use of the pool(s), user needs, financial implications, local and regional influences, including future requirements and possible development option analysis.

3 Stage 1: Pool Risk Management Plan

3.1 Introduction

This Pool Risk Management Plan (PRMP) has been prepared for the Martinborough Pool to identify and manage the public health risks to pool users. The Martinborough Pool is a public summer pool which is used for recreational swimming and swim training. The buildings and pool facilities are owned by South Wairarapa District Council (SWDC) and Council is responsible for the asset management, maintenance and upgrading of the pool complex. The operation of the pool is undertaken by Transfield Services, under contract to SWDC.

3.2 Compliance Requirements

To comply with NZS 5826:2010 the following chemical water quality criteria and chemical testing frequencies must be met.

Chemical water quality criteria (from Table 1 NZS5826:2010)

Characteristic or chemical	Most desirable value	Lowest value	Highest value
pH	7.4 – 7.6	7.2	8.0
Alkalinity (as $CaCO_3$) (with sodium hypochlorite)	60-120 mg/L	50 mg/L	200 mg/L
Calcium hardness	See saturation index (SI)	40 mg/L	300 mg/L
Free available chlorine (FAC) (pool with chlorine alone)	2.5 – 5.0 mg/L	1.5 mg/L	7.0 mg/L
Combined available chlorine (CAC)	< 0.5 mg/L	Not detectable	1.5 mg/L
Cyanuric Acid	30-60 mg/L	25 mg/L	100 mg/L
Total dissolved solids (TDS) swimming pools	< 1,000 mg/L above make-up water	-	3000 mg/L

Required frequency of chemical testing (from Tables 2 & 3 NZS5826:2010)

Chemical test	Frequency of testing
pH	Prior to use and then every 3 hours
Alkalinity	Weekly
Calcium hardness	Monthly
Free available chlorine (FAC)	Prior to use and then every 3 hours
Total chlorine	Daily
Cyanuric Acid	At beginning of season, then fortnightly
Total dissolved solids (TDS)	At beginning of season, then weekly

3.3 Evaluation against Standards

A qualitative risk assessment approach has been taken following the guidance notes in Appendix K of NZS 5826:2010 allowing the prioritisation of improvement needs and development of the Improvement Schedule.

On 12 July 2012, prior to the preparation of the plan, a pool site visit and meeting was held with the Transfield Services operator of the Martinborough Pool.

Risk tables identifying the risk events, event causes, risk levels, preventive measures in place and the preventive measures that could be put in place were prepared based on the site visit and meetings. Analysis of the risk levels was undertaken using the risk assessment procedure outlined in Section 10 below. From this information the improvement schedule was prepared.

The Martinborough Pool owner (SWDC) and operator (Transfield Services) are responsible for agreeing the implementation of the Improvement Plan within the timeframes recommended, subject to funding constraints and the availability of resources.

Contingency Plans have been prepared to provide guidance if control measures fail to prevent the occurrence of a risk event. The Pool Operator is responsible for implementation of the Contingency Plans if they are required. Separate risk tables have been prepared for:

- Pool surround
- Water in pool
- Pool water sampling/testing/recording
- Pressure sand filtration (Main pool)
- Pressure sand filtration (Learners pool)
- Pressure sand filtration (Toddlers pool)
- Chlorine disinfection (Main pool and learners pools)
- Chlorine disinfection (Toddlers pool)
- Alkalinity and pH management
- Recirculation pumps
- Other

The following parameters are monitored at the Martinborough Pool, FAC, total chlorine, pH, alkalinity, cyanuric acid.

Analysis is undertaken before the pool opens each morning and then intermittently during the day. To achieve compliance with NZS 5826:2010, it will be necessary to prepare a sampling plan which adheres to the parameters and frequencies above. Samples will need to be collected and analysed according to the sampling plan. Sampling for the above parameters should be undertaken with a photometer except for TDS which requires a TDS meter.

The following microbiological monitoring is required for compliance with NZS 5826:2010. Microbiological monitoring is required at the beginning of the season, then monthly and when the pool does not comply with disinfection parameters over a period of 12 hours.

Test	**Level**
Standard plate count	Less than 200/mL
Faecal coliforms of ***Escherichia coli (E. coli)***	Less than 1/100mL
Staphylococcus aureus	Less than 100/100mL
Pseudomonas aeruginosa	Less than 10/100mL

Currently, microbiological monitoring is not undertaken at the Martinborough pool.

3.4 Very High Risk Table

Those risks that have been identified as being “Very High” are listed in the following table. The full list of risks should be reviewed.

Pool Water Sampling/Testing/Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results inaccurate	3.1	Inappropriate/ incorrect sampling/non representative sampling frequency	Poor records/data entry checks not signed off Unacceptable number of errors detected during checks Process control failures Unexplained test failures Checks of sampling procedures not undertaken	Pool is sampled each morning. Pool is sampled intermittently throughout day. Staff receive on the job sampling training	No	Very high (Likely x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC
Monitoring results inaccurate	3.2	Inadequate/ out of date or incorrect test equipment	Results are considered unusual, or not reproducible or inaccurate	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment.	PO SWDC
Monitoring results inaccurate	3.3	Inadequate reagents	Results are considered unusual, or not reproducible Reagent preparation records identify reagents are too old	Reagents are stored with photometer. Test strips are used for most sampling.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents.	PO SWDC
Monitoring results inaccurate	3.4	Inappropriate analysis method or technique	Results are considered unusual, or not reproducible Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Purchase appropriate testing equipment and reagents. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO SWDC PO

Pool Water Sampling/Testing/Recording								
Event	**No.**	**Cause**	**Indicators**	**How is risk managed (Preventative measures)**	**Risk managed?**	**Residual risk taking account of preventative measures**	**Additional measures that could be put in place**	**Resp.**
Monitoring results don't provide suitable information	3.5	Inadequate or incorrect monitoring records	Poorly kept monitoring records (illegible writing, incorrect entries etc) Monitoring records are not able to be analysed for trends	Written records are provided to Council	Partially Only hard copy records are retained	Very high (Likely x major)	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC
Monitoring results inaccurate	3.6	Failure of staff to follow sampling and analytical methods and other related quality assurance procedures	Poor agreement in samples/results compared with a suitable analytical laboratory Variable results in sample analysed by two staff members	Transfield Services Operator undertakes morning tests with a portable photometer. Other testing is undertaken using test strips.	No	Very high (Likely x major)	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques. Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010. Investigate implementing a programme of monthly external lab sampling and analysis to provide verification of sampling results. Implement monthly microbiological sampling	PO SWDC SWDC SWDC

Alkalinity and pH Management

Event	No.	Cause	Indicators	How is risk managed (Preventative measures)	Risk managed?	Residual risk taking account of preventative measures	Additional measures that could be put in place	Resp.
Rapid changes in pool water pH	9.1	Changes in pool water pH over time due to chemical dosing (chlorine) and bathing load	pH level more than 8.0 or less than 7.2 Inadequate chlorination effectiveness Plaster and concrete etching, corrosion of metals Eye discomfort Cloudy water Scale formation	Some pH monitoring is undertaken Hydrochloric acid dosing is adjusted automatically to maintain pH at a constant level in the main pool and leaners pool. Hydrochloric acid is manually dosed to maintain pH in the toddlers pool. Sodium bicarbonate is dosed manually as required to buffer pH.	Partially	Very high (Possible x major)	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010. Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO PO SWDC

Other

Event	No.	Cause	Indicators	How is risk managed (Preventative measures)	Risk managed?	Residual risk taking account of preventative measures	Additional measures that could be put in place	Resp.
Pool Operational failure	11.7	Knowledge of pool operation is held by one person	Only one person knows how to operate of maintain pool equipment	Two people are trained to operate the pool treatment system	Partially	Very high (Possible x major)	Prepare a pool operations manual which details how to operate and backwash the filters, adjust the chlorine and pH levels and undertake other operational tasks.	SWDC PO

3.5 Improvement Schedules

The improvement schedules below outline improvements that have been recommended for preventing, reducing or eliminating pool water quality risks at the Featherston Pool. Possible improvements to the pool water quality have been identified in the 'Additional Measures That Could Be Put in Place' column of the risk tables for event causes that are not deemed to be fully managed. The option identified to improve the management of each unmanaged risk has then been included in the improvement schedule. It should be noted that costs are estimates only. Each project is ranked according to the priority to which projects should be completed.

Key to organisations responsible:

- SWDC – Pool Owner, South Wairarapa District Council.
- PO – Pool Operator, Transfield Services.

Recommended Operational Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH management	3.1, 7.2, 7.3, 8.2, 9.1	Prepare a sampling plan that meets the requirements of the pool water standard NZS 5826:2010.	PO	Staff time	October 2012
2	Very high	Pool water sampling, testing, recording Chlorine disinfection Alkalinity and pH Management	3.1, 3.4, 3.6, 7.2, 7.3, 8.2, 9.1	Provide training for staff in the significance and importance of pool water sampling and correct sampling techniques.	PO	Staff time	October 2012
3	Very high	Pool water sampling, testing, recording	3.5, 3.6	Set up a Council audit process of pool water quality results to ensure the correct number of samples are taken and results comply with the pool water standard NZS 5826:2010.	SWDC	Staff time	October 2012
4	Very high	Pool water sampling, testing, recording	3.6	Investigate implementing a programme of monthly external lab sampling and analysis, including microbiological analysis, to provide verification of sampling results.	SWDC	$200/mth	

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
5	High	Water in pool	2.8	Calculate the pool turnover time for both pools to ensure it is less than one hour for the toddlers pool and less than three hours for the main pool.	PO SWDC	Staff time	October 2012
6	Moderate	Water in pool	2.1, 2.2, 2.3	Prepare written vomit, diarrhoea and faecal incident procedures and train all relevant staff in the procedures	PO SWDC	Staff time	October 2012
7	Moderate	Water in pool Other	2.5, 11.2, 11.3	Prepare a pool management manual which outlines the roles and numbers of staff required and pool operational procedures	SWDC	Staff time	October 2012
8	Moderate	Other	11.6, 11.7	Prepare a pool operations manual which details how to operate and backwash the filters, adjust the chlorine and pH levels and undertake other operational tasks.	SWDC	Staff time	October 2013
9	Moderate	Pressure sand filtration (main pool) Pressure sand filtration (learners pool) Pressure sand filtration (toddlers pool) Recirculation pumps	4.2, 5.2, 6.2, 10.1	Implement programme of pump maintenance.	PO SWDC	Staff time	October 2013
10	Moderate	Other	11.1	Investigate the need for Pool Manager and/or Operator to complete further training eg ***US 25981 Manage public pool water quality in a simple public pool***	PO	$2,000	October 2013
11	Moderate	Other	11.1	Ensure senior lifeguards have attended basic formal training course eg ***US 20046 Monitor public swimming pool water quality and safe storage of chemicals***	PO	$2,000	October 2013
12	Moderate	Other	11.5	Review the way in which the pool asset is managed and how input from the pool operator is incorporated into the planning of upgrades, maintenance and management of the pool asset.	SWDC	Staff time	October 2014

Recommended Capital Improvements

Priority	Risk level	Pool area	Reference to risk table	Proposed works	Organisation responsible	Expected cost	Intended completion date
1	Very high	Pool water sampling, testing, recording	3.2, 3.3, 3.4	Purchase appropriate testing equipment.	PO SWDC	$5,000	October 2012
2	Moderate	Water in pool Pressure sand filtration (learners pool) Pressure sand filtration (toddlers pool) Recirculation pumps	2.4, 2.6, 2.7, 5.1, 5.3, 6.1, 6.3,	Investigate the effectiveness of the learners pool and toddlers pool sand filters. Replace the filters and pumps if they are unable to perform to the required standard.	SWDC	$20,000	October 2013
3	Moderate	Recirculation pumps	10.3	Investigate the suitability of the pumps to provide adequate circulation in all three pools. Replace the pumps if they are unable to perform to the required standard.	SWDC	$15,000	October 2013
4	Moderate	Pressure sand filtration (main pool) Pressure sand filtration (learners pool) Pressure sand filtration (toddlers pool) Recirculation pumps	4.2, 5.2, 6.2, 10.1	Install alarms on pumps to indicate if they stop operating.	SWDC	$1,000	October 2014
5	Moderate	Chlorine disinfection	7.1, 7.2	Install a chlorine failure alarm on the dosing systems in the main pool and learners pool.	SWDC	$5,000	October 2014

4 Stage 2: Maintenance Schedule and Programme

4.1 Background

A visual inspection of the pool complex was undertaken on the 12th of July 2012 to evaluate the condition of the existing physical assets and establish a schedule of maintenance and repair work based on these observations.

The report provided by South Wairarapa District Council prepared by Thompsons Fibreglassing has been used to provide recommendations for the swimming pools as this work falls outside the scope of Opus' expertise.

4.2 Asset / Improvement Descriptions

As outlined below in the table under section 4.4, the current pool buildings are generally fit-for-purpose and are generally in keeping with their age and use. Minor works are recommended to be undertaken to maintain the functionality of the current facilities.

4.3 Health & Safety Issues

Compliance issues with the existing filtering and dosing systems are outlined under section 3.2/3.3.

No issues have been identified that require emergency works considered necessary to address health and safety concerns.

There is a profiled sheet cladding at roof level over both sets of changing rooms that may be asbestos based. This cannot be confirmed without further information or testing however the age, application and appearance suggest it is likely to be asbestos bearing. Should it ever be removed, a specialist licensed contractor will be required to manage the dismantling and disposal of the cladding.

No dedicated accessible shower or WC facilities were noted. Should any consentable work be undertaken in the future incorporating at least one accessible unisex bathroom would be required. The current facilities have two female WC's and two female showers, one male WC, one male urinal and two male showers. We believe a further male WC would be needed to comply with the number of fixtures required under the current New Zealand Building Code section G1/AS1 however there is no compulsion to meet this requirement in the future.

The adequacy of the sun shade structures has been questioned. Conversations with the Transfeild maintenance Contractor suggest the size and orientation of grandstand shade cover makes it ineffective. We note there is no shade provided around the toddlers' pool.

4.4 Schedule and Programme with Costs

Attached as Appendix 2.

5 Stage 3: Pool Use & User Feedback

5.1 Introduction

There are several key reasons why Local Government provides aquatic facilities delivering services for residents:

1. **Link to Community Outcomes in Long Term Plans** - aquatic facilities contribute to achieving the community outcomes and the strategic directions of Councils (these may be expressed in a variety of documents such as Recreation Plans and Strategies). Clear linkages between service delivery through aquatic facilities and community outcomes can be made.

2. **Water Safety** – safety of residents, especially children, has historically been a major reason for Local Government provision of swimming pools. Drowning is the third highest cause of unintentional death in New Zealand and although the number of fatalities has decreased over the past 15 years, New Zealand still has a high proportion of drownings per head of population. Facilities are needed in the District to meet water safety and swim education needs for both children and adults.
    (i) Water Safety New Zealand (WSNS) is leading a national 'learn to swim' public awareness campaign to address a concerning rise in drowning. The Local Government Association is a member of water Safety New Zealand.
    (ii) Another priority for WSNZ is to address a steady decline in the swimming ability of New Zealand's youth. The Sealord Swim For Life initiative, a key WSNZ programme, is a national project established to:
        - Provide all children with access to the water;
        - Facilitate the delivery of quality swim and survive programmes in primary schools;
        - Foster a culture that produces generations of New Zealand families that are water safe.

3. **Accessibility and Inclusiveness** - The nature of water as a supportive medium for active recreation means that aquatic facilities are highly inclusive catering for residents with a wide range of abilities and ages.

4. **Supervised Recreation Opportunity** - Pools provide a safe and inclusive place in which to recreate. Public aquatic facilities are required to have lifeguards on duty during public sessions. Aquatic facilities (and libraries) are usually the only fully supervised leisure facilities provided by Local Government in New Zealand and for this reason are particularly attractive to school age residents and their parents/ caregivers.

5.2 Background

One survey was returned:

- Max Stevens - Martinborough Community Board

A swimming club was operating out of this pool approximately 10 years ago but is now in recess. Funds are being held in Trust.

No evidence of school-based use has been provided.

5.3 User Feedback

The pool is heated by solar panels but covers need replacing and appears that there have been issues in them not being used (possibly too hard to put on?) thus reducing water temperature (as well as saving on cleaning and chemicals). More use is predicted should the water temperatures being able to be maintained and improved.

Priorities considered are:
1. Improve heating (maintain and use pool covers).
2. Fix leak and seal overflow tank.
3. Provide shade/BBQ area.

An issue around the filtration plant not meeting current NZS has also been raised.

Summary
The main concerns raised through the survey are with the Pool are with heating and shade. There were also some concerns regarding the Council's contractor's role to "attract and enhance" swimming as well as carry out basic operational tasks such as use and maintenance of the pool covers. Reinvigoration of the Swimming Club would benefit the use of the pool.

The User Surveys are attached as Appendix 3.

It is not known who currently uses the pool from the community consultation carried out. Note that Martinborough is the smallest of the three South Wairarapa towns.

5.2 Recommendations

That additional consultation needs to be undertaken to identify the full user demand for the pool. This can be done via an "Annual Swimming Pool User Survey", preferably during the summer.

Identify the reasons why the Swimming Club went into recess.

6 Summary Conclusions and Recommendations

Below is a summary of the findings and recommendations of this report.

6.1 Conclusions

There are a number of very high-risk issues that need to be addressed related to the running/operation of the pool such as no water sampling plan, proper training or lab testing.

The assets/improvements at the complex are average condition and are fit for purpose.

The overall demand for the pool is varied as there is no Swimming Club currently operating in Martinborough.

6.2 Recommendations

1. That the improvement plan identified in the PRMP in Appendix 1 be implemented.

2. That the maintenance work identified in year 1 of the Maintenance Programme in Appendix 2 be carried out.

3. That the balance of the work identified in the Maintenance Programme be planned for over the next 2-10 years.

4. That additional consultation needs to be undertaken to identify the full user demand for the pool.

5. Identify the reasons why the Swimming Club went into recess.

APPENDIX 1: POOL RISK MANAGEMENT PLAN

APPENDIX 2: DETAILED MAINTENANCE SCHEDULE & PROGRAMME

Component Group	Component Type	Component Name	Condition Evaluation	Recommendations	Estimated Quantities	Unit Rate	Maintenance Programme	General Notes	Photos
Exterior									
	Pools	Main Pool		The overflow tank requires resealing to reduce water loss, additional pipe feed into pool. Consideration should be given to fibreglassing the pool lining to remove the need to repaint every two years	Lump sums	Overflow tank sealing: $8,570.00 New pipe feed: $12,000.00 Fibreglass: $94,600.00	1 year 5 year 10 year		
		Intermediate Pool	Appears in fair condition with no signs of leaks. Filter system not adequate	Re-configure existing filters to incorporate this pool	Lump Sum	Has been identified in Stage 1.	1 year		
		Toddlers Pool	The pool condition is good. The Thompsen report indicates this has recently been re-fibreglassed and gel coated however the new work has left the pool very slippery	Apply a new non-slip coating to pool	Lump sum	$2,795.80	1 year		
		Covers	All covers are damaged and were not in use at the time of inspection	New covers and reels for the main pool and the intermediate pool	Lump sum	$13,230.25	1 year		 
	Fencing	Colorsteel fencing	The colorsteel sheets appear in generally good condition. Paint peeling from timber post and rail fence supporting colorsteel sheets.	Repaint timber posts and rails	300m	$5.80/m Total $1,740.00	1-2 Years 5 yearly repaint of timber surfaces		 

	Fencing	Galvanised Steel chain link fencing	No evidence of concrete footings visible around posts. No mowing strip to the perimeter of the fence line. Galvanised steel posts with minor rust	Touch up areas of rust with Rust-Arrest and a galvanised primer paint. Repair posts with new footing and a continuous concrete mowing strip to perimeter	Concrete 4m^3	\$319.00/m^3 Total \$1,276.00	2-5 years Yearly inspection and touch-ups of any rust		
	Planting	Trees	Deciduous trees dropping significant leaf litter	Negotiate to remove trees close to property boundary				There are a number of significant trees surrounding the pool creating maintenance issues with leaf litter.	
	Grandstand	Grandstand shade roof	Generally good condition. Evidence of recent repair to the galvanised steel roof structure. Minor hole in fabric at one location	Monitor condition and schedule a replacement within 10 years	60m^2	\$250/m^2 Total \$15,000.00	10 years for replacement. Monitor condition each year for change	Could be increased in size to offer better sun protection (not included in rate estimate)	 
	Grandstand	Timber seats	Generally good condition	Monitor condition each year				Seats/grandstand is east facing. Anecdotal evidence suggests the shade cloth roof provides little shade during the summer months.	
	Paving	Concrete paving	Significant cracking to some areas of older trowel finish concrete. The overall condition of the exposed aggregate concrete surrounding the main pool is fair. Differences in levels between sections of paving present possible tripping hazards and are creating spaces for weeds to establish.	Full replacement recommended	350m^2	\$74/m2 Total: \$25,900.00	10 years for replacement		 
	Pool Surround	Tiles	Appear generally sound condition. Minor localised damage in places.		24m^2	\$112.00 Total: \$2,688.00	10 years for replacement. Coordinate with paving		 

	Changing Sheds	Cladding	Concrete Masonry – Generally good. Paint is in good condition Colorsteel – Mansard type cladding sections of door head height appear in fair condition Unknown profiled panel – appears either a fibre cement product or possibly an asbestos bearing material. Stained in places with moisture staining sheet edges	Repaint all as required on a 5-10 year cycle	200m^2	$18.60/m^2 Total: $3,720.00	5-10 years		 
		Roof	Clearlite skylights warped and failing in changing sheds. Some repair work has been carried out with replacement sheets provided in places.	Replace all Clearlite with new within 2 years	25m^2	$58.00/m^2 Total: $1,450.00	2 years	NOTE: Evaluation was a visual inspection from ground level and internally only.	 
	Office	Cladding	Concrete Masonry and fibre cement sheet – Generally good condition. Paint is in good condition	Repaint all as required on a 5-10 year cycle	30m^2	$18.60/m^2 Total: $558.00	5-10 years		
Internal									
	Female Changing	Walls/Floors	Adequate condition in keeping with the age of facility	Repaint walls as required	120m^2	$17.80/m^2 Total: $2,136.00	5 years		
		Ceilings	Rotting timber roof framing members, underside of damaged clearlite (as above),		30m	$16.60/m Total: $498.00	2 years	Costs do not include for removal/reinstatement or replacement of roofing to enable rafters to be replaced	
		Fixtures	2 xWCs + 2x Showers, rubber matting,					Fixtures were not tested during inspection.	

			timber seating all in fair condition. Appear 'fit-for-purpose'						
	Male Changing	Walls/Floors	Adequate condition in keeping with the age of facility	Repaint walls as required	120m^2	\$17.80/m^2 Total: \$2,136.00	5 years		
		Ceilings	Clearlite and underside of galvanised steel roofing iron	As per external works section					
		Fixtures	2x showers, 1 x WC and 1x Urinal. All in average condition but fit-for-purpose					Fixtures were not tested during inspection	  
	Pump Shed	Roof	Clearlite roofing forms condensation that is dripping into pump room and staining the framing.	Extract ventilation to reduce condensation build-up	Lump sum	\$750.00	2 years		
		Fixtures	Steel bandit ties have been used to secure pipes – now corroding.	Replace galvanised steel bandits with stainless steel or plastic ties	Lump sum	\$200.00	1 year	Condition and compliance of the pumps, filters and processes are more fully detailed in the PRMP.	

	Site Office	Internal Linings	Painted concrete masonry walls in generally fair condition. Damage to plasterboard wall linings. Painted concrete floor showing wear.	Patch and repaint damage wall linings Repaint floor Repaint walls	2m^2 15m^2 30m^2	$25.10/m^2 Total: $50.20 $16.90/m^2 Total: $253.50 $17.80/m2 $534.00	1 year 5 years 5 years		
		Fixtures	Evidence of a break-in. The joinery units are in average condition. Considered fit for current purpose however replacement for aesthetic reasons may be justified within a 10 year period.		5m Joinery unit	$206.00/m Total: $1,030.00	5-10 years		

YEAR	COMPONENTS	COST	NOTES
1	Repair Office wall linings	$50.20	
	Replace pump house steel bandits	$200.00	
	Seal Pool overflow tank	$8,570.00	
	Non-slip coat toddler pool	$2,795.80	
	New Pool covers	$13,230.25	
	SUB-TOTAL	**$24,846.25**	
2-5	Repaint office floor	$253.50	
	Pump room ventilation	$750.00	
	Chainlink Fence repair	$1,276.00	
	Interior repainting	$5,059.50	
	Replace clearlite roofing	$1,450.00	
	Replace rotten timber roof framing	$498.00	
	Timber fence post repaint	$1,740.00	
	Main Pool new pipe feed	$12,000.00	
	SUB-TOTAL	**$23,027.00**	
6-10	Replace office joinery	$1,030.00	
	Exterior repainting	$3,720.00	
	Grandstand Shade Roof	$15,000.00	
	Concrete Paving	$25,900.00	
	Pool tiles	$2,688.00	
	Main Pool Fibreglassing	$94,600.00	
	SUB-TOTAL	**$142,938.00**	
	GRAND TOTAL	**$190,811.25**	

APPENDIX 3: POOL USER SURVEYS

Appendix 4 - SWDC 3 Pools Review Report - Summary

SOUTH WAIRARAPA DISTRICT COUNCIL

THREE POOLS REVIEW PROJECT

SUMMARY REPORT

South Wairarapa District Council

Three Pools Review Project

Summary Report

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Contents

1 Executive Summary

Opus Internationals Consultant Limited has been engaged to provide a report into the three pool complexes. This report outlines the findings of a three stage review that includes;

1. Operational performance against current New Zealand Standards for Pool Water Quality,
2. A review of the assets/infrastructure of the pool and resulting maintenance schedule and plan, and
3. A feasibility/needs analysis.

There are a number of very high-risk issues that need to be addressed related to the running/operation of all the pools. These are listed in section 3.4 of the relative reports, and more fully in the full Pool Risk Management Plans (PRMPs). These items are major health/statutory risks and need to be addressed as soon as practical, with the majority having minimal cost implications:

- No pool water sampling plan that meets NZS 5826:2010
- Lack of staff training in pool management and correct testing practices
- Lack of an audit process by SWDC staff on the testing
- No external lab sampling including microbiological analysis

There are also a number of "high" and "moderate" items that need consideration. These are related to the lack of written procedures or manuals, pump maintenance and other training requirements.

Capital Improvements related to operational performance noted in the three PRMPs are summarised below:

- To be implemented by October 2012 $ 15,500
- To be implemented by October 2013 $186,000
- To be implemented by October 2014 $ 18,000

The majority of the assets/improvements at the complexes are in average condition but are fit for purpose. A 10 year maintenance plan/schedule has been prepared, giving cost estimates for work that should be undertaken to keep the assets in their existing condition. The items requiring attention, preferably before the pools open this year ("Year 1" in the Maintenance Programme) are:

Main pool covers	$ 7,611.76	Featherston
Remedial works to training pool and dividing wall	$16,611.72	
Re-tiling and fibre glassing pool surrounds	$26,000.00	
Seal overflow tank	$ 8,570.00	
Wash down grandstand	$ 464.00	
Chemical wash gazebo roof	$ 69.60	
Changing shed repainting	$ 4,272.00	
Repair Office wall linings	$ 50.20	Martinborough
Replace pump house steel bandits	$ 200.00	
Seal Pool overflow tank	$ 8,570.00	
Non-slip coat toddler pool	$ 2,795.80	
New Pool covers	$13,230.25	
Overflow tank sealing	$ 8,570.00	Greytown
Repaint fascia	$ 696.00	
Clear spouting and wash down eaves exterior	$ 560.00	
Wash down timber seating area	$ 560.00	
Total	**$98,831.33**	

The balance of the items in the Maintenance Plan have been grouped into 5 year and 10 year programmes. The total estimated value of this work is:

- 2-5 Year Plan $214,432
- 6-10 Year Plan $203,195

The totals above also include items and costs provided in the Thompsons Fibreglassing reports of April 2012. A breakdown of the values is contained in Appendix 1 and more fully in the individual reports.

The overall demand for the pools is mixed. Featherston has a very strong basis of users from the swimming club and local schools, as does Greytown but to a lesser extent. The information we have gathered indicated Martinborough has lower demand as there is no swimming club operating and no feedback from schools in the area was provided.

Options considered for the future operation of the pools include:

1. Contracted Operation
2. Minimal maintenance to the pools
3. Amalgamation or Sharing of aquatic services
4. Fully upgrading one and closing two of the pools
5. Closing all three pools.
6. Reactive maintenance / Balanced Scorecard approach.

Options 1, 2 and 5 have fatal flaws as they are not considered best practise for asset management or service delivery and will not fulfil the Council's role as a service provider in the long term. Option 3 will need to be considered going forward but has significant political and community engagement implications that are outside the current scope of the report.

An evaluation of Option 4 showed Featherston Pool as being the most appropriate pool to upgrade. The Balanced Scorecard approach also has major benefits, outlined in a separate paper.

It is recommended full community consultation and financial analysis is undertaken of the preferred option(s).

2 Background

South Wairarapa District Council (SWDC) currently owns and maintains three community pools in the South Wairarapa; Featherston, Greytown and Martinborough.

The day to day management of the pools is the responsibility of the Council's Facilities Management (FM) contractor, Transfield. It should be noted that this contract has been reviewed and is currently being tendered. The management of the pools will remain part of the FM contract with the new contractor commencing operations on 12 October 2012.

The pools generally open in November and close in March, between the hours of 2.00 - 5.15pm weekdays and 1.00 – 5.30pm weekends. The admission fee structure is set by Council with adults paying $3.00 and others paying $2.00.

For a description of the pools, including layout plans, please see the Introduction section of the PRMPs in the respective reports.

The balance of the Capital Improvements at each complex is described in section 4.2 of this report.

SWDC have engaged Opus International Consultants Limited to provide a three stage approach to the review of the swimming pool assets:

1. The current operation against New Zealand standards for pool quality as reflected in a PRMP with an associated Improvement Plan.
2. A review of the assets/improvements contained within the complexes (paths, offices, changing rooms, fencing, spectator seating, etc) to provide the basis of a Maintenance Schedule with costs and a Works Programme.
3. A feasibility study including current use of the pool(s), user needs, financial implications, local and regional influences, including future requirements and possible development option analysis.

3 Stage 1: Pool Risk Management Plans

3.1 Introduction

This Pool Risk Management Plan (PRMP) has been prepared for the three pools to identify and manage the public health risks to pool users. They are all public summer pools which are used for recreational swimming, school use, swim training and Learn to Swim. The buildings and pool facilities are owned by South Wairarapa District Council (SWDC) and Council is responsible for the asset management, maintenance and upgrading of the pool complexes. The current operation of the pools is undertaken by Transfield Services, under contract to SWDC. The full Plans are appended to their respective reports. The pools are generally open from Labour Weekend until March the following year.

3.2 Compliance Requirements

To comply with NZS 5826:2010 the following chemical water quality criteria and chemical testing frequencies must be met.

Chemical water quality criteria (from Table 1 NZS5826:2010)

Characteristic or chemical	Most desirable value	Lowest value	Highest value
pH	7.4 – 7.6	7.2	8.0
Alkalinity (as $CaCO_3$) (with sodium hypochlorite)	60-120 mg/L	50 mg/L	200 mg/L
Calcium hardness	See saturation index (SI)	40 mg/L	300 mg/L
Free available chlorine (FAC) (pool with chlorine alone)	2.5 – 5.0 mg/L	1.5 mg/L	7.0 mg/L
Combined available chlorine (CAC)	< 0.5 mg/L	Not detectable	1.5 mg/L
Cyanuric Acid	30-60 mg/L	25 mg/L	100 mg/L
Total dissolved solids (TDS) swimming pools	< 1,000 mg/L above make-up water	-	3000 mg/L

Required frequency of chemical testing (from Tables 2 & 3 NZS5826:2010)

Chemical test	Frequency of testing
pH	Prior to use and then every 3 hours
Alkalinity	Weekly
Calcium hardness	Monthly
Free available chlorine (FAC)	Prior to use and then every 3 hours
Total chlorine	Daily
Cyanuric Acid	At beginning of season, then fortnightly
Total dissolved solids (TDS)	At beginning of season, then weekly

3.3 Evaluation against Standards

A qualitative risk assessment approach has been taken following the guidance notes in Appendix K of NZS 5826:2010 allowing the prioritisation of improvement needs and development of the Improvement Schedule.

On 12 July 2012, prior to the preparation of the plan, a pool site visit and meeting was held with the Transfield Services operator of the pools.

Risk tables identifying the risk events, event causes, risk levels, preventive measures in place and the preventive measures that could be put in place were prepared based on the site visit and meetings. Analysis of the risk levels was undertaken using the risk assessment procedure outlined in Section 10 of the PRMPs. From this information the improvement schedule was prepared.

The owner (SWDC) and operator (Transfield Services) are responsible for agreeing the implementation of the Improvement Plan within the timeframes recommended, subject to funding constraints and the availability of resources.

Contingency Plans have been prepared to provide guidance if control measures fail to prevent the occurrence of a risk event. The Pool Operator is responsible for implementation of the Contingency Plans if they are required.

Separate risk tables have been prepared for:

- Pool surround
- Water in pool
- Pool water sampling/testing/recording
- Pressure sand filtration (Main pool)
- Pressure sand filtration (Learners pool)
- Chlorine disinfection
- Alkalinity and pH management
- Recirculation pumps
- Other

The following parameters are monitored at the pools, FAC, total chlorine, pH, alkalinity, cyanuric acid.

Analysis is undertaken before the pool opens each morning and then intermittently during the day. To achieve compliance with NZS 5826:2010, it will be necessary to prepare a sampling plan which adheres to the parameters and frequencies above. Samples will need to be collected and analysed according to the sampling plan. Sampling for the above parameters should be undertaken with a photometer except for TDS which requires a TDS meter.

The following microbiological monitoring is required for compliance with NZS 5826:2010. Microbiological monitoring is required at the beginning of the season, then monthly and when the pool does not comply with disinfection parameters over a period of 12 hours.

Test	**Level**
Standard plate count	Less than 200/mL
Faecal coliforms of ***Escherichia coli (E. coli)***	Less than 1/100mL
Staphylococcus aureus	Less than 100/100mL
Pseudomonas aeruginosa	Less than 10/100mL

Currently, microbiological monitoring is not undertaken at any of the pools.

4 Stage 2: Condition Audit of Improvements

4.1 Background

A visual inspection of all the pool complexes was undertaken on the 12th of July 2012 to evaluate the condition of the existing physical assets and establish a schedule of maintenance and repair work based on these observations.

The report provided by South Wairarapa District Council prepared by Thompsons Fibreglassing has been used to provide recommendations for the swimming pool tanks as this work falls outside the scope of Opus' expertise.

4.2 Improvements Description

As outlined in tables within the individual report sections 4.4, the current pool buildings are generally fit-for-purpose and are generally in keeping with their age and use. A number of maintenance work items have been recommended to be undertaken to maintain the functionality of the current facilities.

4.3 Health & Safety Issues

Compliance issues with the existing filtering and dosing systems are outlined within the PRMPs.

No issues have been identified that require emergency works considered necessary to address health and safety concerns.

No dedicated accessible shower or WC facilities were noted. Should any consentable work be undertaken in the future incorporating at least one accessible unisex bathroom would be required.

4.4 Maintenance Programme & Costs

A summary of the 10 year maintenance programmes for the three pools is attached as Appendix 1.

The full Maintenance Schedules and Programmes are attached to the individual reports.

5 Stage 3: Development Options / Feasibility

5.1 Background

There are several key reasons why Local Government provides aquatic facilities delivering services for residents:

1. **Link to Community Outcomes in Long Term Plans** - aquatic facilities contribute to achieving the community outcomes and the strategic directions of Councils (these may be expressed in a variety of documents such as Recreation Plans and Strategies). Clear linkages between service delivery through aquatic facilities and community outcomes can be made.

   See section 5.2.5 for relevant SWDC community outcomes.

2. **Water Safety** – safety of residents, especially children, has historically been a major reason for Local Government provision of swimming pools. Drowning is the third highest cause of unintentional death in New Zealand and although the number of fatalities has decreased over the past 15 years, New Zealand still has a high proportion of drownings per head of population. Facilities are needed in the District to meet water safety and swim education needs for both children and adults.

   Water Safety New Zealand (WSNZ) is leading a national 'learn to swim' public awareness campaign to address this concerning rise in drowning. The Local Government Association is a member of Water Safety New Zealand.

   Another priority for WSNZ is to address a steady decline in the swimming ability of New Zealand's youth. The Sealord Swim For Life initiative, a key WSNZ programme, is a national project established to:
   - Provide all children with access to the water;
   - Facilitate the delivery of quality swim and survive programmes in primary schools;
   - Foster a culture that produces generations of New Zealand families that are water safe.
   - Council facilities may be looked at to provide Learn to Swim programmes

3. **Accessibility and Inclusiveness** - The nature of water as a supportive medium for active recreation means that aquatic facilities are highly inclusive catering for residents with a wide range of abilities and ages.

4. **Supervised Recreation Opportunity** - Pools provide a safe and inclusive place in which to recreate. Public aquatic facilities are required to have lifeguards on duty during public sessions. Aquatic facilities (and libraries) are usually the only fully supervised leisure facilities provided by Local Government in New Zealand and for this reason are particularly attractive to school age residents and their parents / caregivers.

5.2 Research

5.2.1 General Trends

The following are some key trends related to aquatic facilities. The blue text links each trend with South Wairarapa strategies or provides additional local context:

Trend	Comment
Tackling Health Issues – Obesity and Sedentary Lifestyles	The emergence of the drive for increased physical activity to counter our increasingly sedentary lifestyles is having impact on aquatic facilities. These facilities are now important infrastructure contributing towards health and well-being outcomes at both the personal and community level. An increasingly attractive range of sedentary entertainment options targeted at young people are available. The "Active Wairarapa" Physical Activity Plan (2005-08) developed strategies to increase the level of physical activity in the Wairarapa. On average, 76% of people in the Wairarapa are physically active for more than 150 minutes each week, compared to a national average of 74%. [A Portrait of Health: Key results of the 2002/03 New Zealand Health Survey] Some key features of participation levels in the Wairarapa were: • Levels of regular physical activity are above the national average by 1 – 3%. • European men are, on average, less active than their national counterparts. • Maori men are the most active (86%). • Maori women are least active (66%) and are below the national average. • Overall, men (78%) are more active than women (74%).
Growth in Demand from Older Adults	Traditionally the target market for aquatic facilities has been young people (0-15 years). However, industry feedback indicates that there is significant growth in demand from the older adult market for low impact physical activity options because water is a supportive medium for exercise. This is requiring change in the level of comfort and the mix of facilities and services offered by aquatic facilities to meet the needs of older adults such as warm change facilities. Older adults have more discretionary time to use aquatic facilities at traditionally off peak times during the day. The District has an ageing population. There has been no evidence of demand for older adults use of the pools, potentially due to their limited season and water temperature issues.
Decline in Casual Use; Increase in Programmed Use	There has been a general decline in casual use of aquatic facilities in New Zealand. However, there has been an increase in programmed use of swimming pools due in part to the proliferation of activity options. These range from learn-to-swim and exercise programmes through to growth in aquatic sports such as underwater hockey, water polo and canoe polo in some parts of the country. There is strong swimming club use of two of the pools for Learn to Swim. Pool depth and temperature are not likely to support a broad range of aquatic activities. Demand for these activities is likely to be met by indoor heated facilities.

Trend	Comment
Co-location of Facilities	Co-location of facilities within a precinct to create a major recreation and sport destination is more commonplace. Some aquatic facilities have been located adjacent to major retail/commercial precincts. They are also likely to offer a greater level of comfort such as heated pools and modern amenities. As noted in the "Active Wairarapa" Plan, the Wairarapa has many small communities spread throughout the region. Community infrastructure is typically focused on a school and/or community hall, and associated open-space (rugby field/park). **The school along with the rugby and tennis clubs form the hub of activity.** The more isolated the community the greater degree of innovation and collaboration to offset the potential disadvantages of location. Volunteer involvement is essential but often reliant on a committed few, and constrains provision of opportunities.
Large Recreation Facilities with "wet" and "dry"	Creation of large complexes with several sport and recreation activity facilities (often "wet" and "dry") is increasingly common. These complexes usually share a common entry, reception and ancillary facilities to provide a high level of service, economies from sharing services, and sufficient critical mass to generate sustainable levels of patronage. It is likely that South Wairarapa residents travel to large recreational complexes in bigger towns to meet their aquatic recreational needs. The Genesis Energy Recreation Centre in Masterton is an example of this type of facility. It includes a gym, a Rapid River, Hydro slide, Speed Slide and Dive Well, two indoor 25m Lane Pools, indoor Spa and Sauna and adjoins the WWII Memorial Indoor Sports Stadium. This facility accommodates all types of sports and events.
Technological Advances	Innovation in the aquatics industry such as: • Moveable floor technology that varies water depth can be varied depending on the use of the pool to increase ranges of uses (in large aquatic centres only). • Solar heating panels. • Water treatment options. Some of the pools are using solar energy and best practice knowledge needs to be applied to the pools operations as recommended by the PRMPs.
School Pool Closures	Closure of school pools due to maintenance and operational issues has placed more demand on publically provided facilities. This study has not investigated the impact school pool closures have had on the use of the community pools. School use is a feature of all pools.
Management of Pools by Community Trusts	Some communities take a more active role in the operations and financial management of pools therefore is less reliant on local government to fund pools alone. Two examples of community involvement is similar sized communities are Central Hawkes Bay and Wairoa District Councils. Both communities have, through Trust arrangements and corporate sponsorship, covered indoor pool complexes. Carterton District Council (CDC) also has an indoor heated pool managed by a Trust next to CDC's outdoor pool complex.

Trend	Comment
Changing expectations around provision of services	As people experience pool facilities around the country with significantly higher levels of service than currently provided, their expectations become higher.

5.2.2 South Wairarapa Demographics and Implications

In considering pool redevelopment the main demographic considerations, with potential implications, are:

Key statistics	Implications for District Pool provision
Area of District: 2,484 km^2	
Town populations: Greytown – 2,000 Martinborough – 1,300 Featherston – 2,340	
Distance to Masterton: From Greytown = 23.5 km (23 mins) From Martinborough= 49 km (40 mins) From Featherston = 35.7 km (33 mins)	
The resident population in the district is around 9,300 and is expected to remain static over the next decade. The 'high projection' predicts a population of around 11,000 people by 2031.	Likely that there will not be demand for increased pool provision to match population demand. Pool demand needs to be considered in a wider geographic context that goes beyond District Council jurisdictional boundaries
In terms of population age distribution (projected to 2031) three key trends are predicted: In the 0-14 and 15-39 age groups is in decline. In the 40-64 age group has 'peaked' but is now in decline. In the 65+ age group is steadily increasing.	Changing population profiles means fewer young people are likely to use the pools in the future. School rolls appear to be falling in the District.
The median age is 42 (compared with 35 nationally) and is projected to increase over time. Life expectancy in the Wairarapa is expected to continue to increase for the period until 2026.	Ageing population may mean less demand for 'school use' and more demand for rehabilitation and leisure uses. Accessibility requirements may need to be higher e.g. ramps, hoists, wider doorways, handrails, accessible toilets.
Ethnic diversity is low, with Pacific and Asian groups significantly under NZ averages.	Some pools have provided specific programmes to meet the needs of ethnic groups. This does not appear to be an area of high need for the District.

Key statistics	Implications for District Pool provision
The District is judged to be less socio-economically deprived than NZ as a whole with 56% living in the (most well-off) lowest five deciles. Median personal income is almost the same as national rates but family incomes are 8% lower that NZ rates.	Affordability may be less of an issues in terms of increasing user pays/fees and charges. There will still be some sectors of the community for which affordability is an issue.
58.7% of households in South Wairarapa District have access to the internet, compared with 60.5% for all of NZ.	More reliance on the internet means that access to information on pools (such as ion the Council's website) is important to be up-to-date.
15.5% of households in the District had access to 3 or more motor vehicles, compared with 15.9% for all households in NZ.	Transport to pools is an important consideration in rurally-based Districts. Travel time and associated costs can be a barrier to accessing recreation facilities.

5.2.3 Community Outcomes

The Council's Vision is to:
Work with and for the South Wairarapa communities to affect the best possible social and economic outcomes which are based on valuing and respecting the people, the land and the resources.
Five community outcomes have been identified by the community in order to achieve this vision. The community outcomes seen as most relevant to this review are:

Community Outcomes	
Healthy & Economically Secure People	Working towards healthy and well housed people who are economically secure, active and involved in their community.
Vibrant and Strong Communities	A place where people feel safe are proud to live and have a sense of belonging.
A Place that is accessible and easy to get around	Well served by a range of transport options (including roading), local and regional services and telecommunications.

5.2.4 Key Issues

In the 2012/2022 LTP a number of key issues have been identified by stakeholders. Those of relevance to this project include:

<u>Pools</u>
- Provide Featherston Swimming Pool signage.
- Encourage utilisation of the District pools (some are under-utilised).
- Pools are cold and have limited opening hours.

<u>Amenities and Facilities</u>
- Always think of having three amenities in three towns – need to make decision? Lose spirit of community if only one.
- Centralisation of facilities.
- Investigate why facilities under-utilised and correct.
- Lack of awareness of district facilities.
- Promote facilities on Council website.

5.2.5 Amenities Activity Area

Pool provision falls within Council's 'Amenities' Significant Activity Area. Council's Statement of Service Performance relating to pools states:

Service Level	KPI	Baseline 2008/09	Performance Targets 2012/13 to 2021/22	How it will be measured
Clean safe public swimming pools can be accessed in the District	Council pools comply with NZ Swimming Pool water testing standards	90%	95%	Council record
	Ratepayers and resident's satisfaction with Council swimming pools	59%	70%	NRB survey 3 yearly

The 2008/09 baseline statistics highlight the communities' dissatisfaction with swimming pools.

5.3 Pool User Consultation

A Pool User Survey was undertaken to better understand the needs, use and issues for the identified pool users. The survey process was undertaken using a selective approach whereby only swimming clubs, schools and a community board were consulted. All survey returns have been included as appendices to the individual pool reports.

5.3.1 Featherston Pool

Three surveys were returned on the use of the Featherston Pool:

- Jo Johnson – President, Featherston Amateur Swimming Club
- Leeane Flack – St Teresa's Primary School
- Phil Robertson – Principal, Featherston School

Featherston Amateur Swimming Club

The Featherston Amateur Swimming has a current membership of 100 that is increasing due to less time for swimming education in school curriculums and a strong 'learn to swim' (LTS) focus. For the past 3 years they have been offered adult swimming and this subsidises some kids that's parents wouldn't have money to do otherwise. Most swimmers fall in the 6-10 age bracket. They do not have many adult members possibly due to the opening hours.

They have a strong Committee and links to schools to draw membership from. The Committee has successfully fund-raised for pool improvements including a solar water heating system, a pool dividing wall and starting blocks. They cite the fund-raising environment as challenging due to the current economic climate and the size of the District. Making LTS affordable is a Club priority.

They operate from the pool three days a week from 5:00 to 7:30 pm.

The pool is the only FINA approved 25 metre in the District.
The Club considers the Pool is a major asset for this town and is greatly appreciated by the club and community. They list their priorities as:

1. Ensure a safe environment of pool for all community users.

2. To keep costs of 'Learn to Swim' programmes down to encourage more children to learn to swim.
3. To supply good quality education to all ages of swimmers.

Overall the Club seems generally happy with the pool's operation but consider the toilets/changing rooms need attention.

St Teresa's Primary School
St Teresa's has a swimming population of 122 (assume this is the entire school roll) of mainly 5 to 13 year olds.

This school uses the pool for four days a week generally between 11:00 am and 2:00 pm.

Similar to the swimming club's concerns, the school considers the changing areas are in need of a "spruce up". Use of the pool covers to maintain heat was noted.

The school runs the South Wairarapa primary school swimming champs that attract 11 schools (200 + students) from around the District due to it being the only 25 metre pool. It also hosts the Featherston Cluster swimming sports (3 schools/150 children).

Featherston School
Featherston School has 76 student swimmers and use the pool Monday to Friday for 8 weeks at the beginning of school year from noon until 1:00 pm. Their key priorities are:

1. Pool operation
2. Condition of changing rooms - need revamp (very basic) such as lighting.
3. Toilets – need tidy up.

The school noted that the Pool is always clean and tidy. ***"Children enjoy swimming in this pool and gives them experience that they may not find elsewhere".*** They like the stand as it keeps children out of sun during sports day and general swimming, as well as the ramp being available for wheel chair access.

Summary
The Featherston Pool has a major role in the town as well as the greater District for LTS and school swimming sports. Key strengths of the facility are a strong Club that has fund-raining capability and commitment to affordable LTS opportunities. It also serves a key role in hosting primary school swimming events.

Limitations are around the asset condition – particularly the toilet/changing facilities and some operational issues. The pool covers need to be used to conserve heat/reduce cost of heating water

This pool has short seasonal use due to water temperature issues.

5.3.2 Greytown Pool

Two surveys were returned:
- Donald Yee - Sports Co-ordinator, Kuranui College
- Gary Dewhurst – Secretary Greytown Swimming

Kuranui College
The College uses the Pool for its annual College Swimming Sports but also travel to the Carterton Pool on a regular basis as it is heated. It was noted that if the Greytown Pool was heated then numbers would increase immensely.

Numbers using the pool are around 50 and are mainly in the 11-15 year old bracket.

Greytown Swimming Club
Current membership of the Club is 54 of mainly 6-15 year olds. Use of the pool is three days per week (Monday, Tuesday and Thursday) from 5:00 pm to 8:00 pm.
It has an increasing membership and a strong base of volunteers, with an active management committee. They cite the main barriers to Club growth as being:

1. Water temperature.
2. It's an outdoor pool unheated pool.
3. Limited seasonal opening.

The Club notes its long association with the Pool since the first pool was opened in 1916.

"The water temperature, the fact the pool is an uncovered outdoor pool, along with the weather, are the main factors affecting the Club's activities. However, the Club is only one group using the pool, the local primary school (300+ students), the local secondary school (500+ students), the local residents and visitors to the town are also key stakeholders, and their views should also be canvassed. Visitors to the adjacent campground are known to use the pool over the summer holiday period."

The Club recommends that the Council should prepare an aquatic facilities plan that looks at community needs and options available. It supports the Council "***working on finding cost effective solutions to the problems facing the Greytown Pool, particularly the issue of heating the pool."***

Summary
Survey returns suggest that the water temperature limits the use of this pool. Feedback suggests a strong swimming Club with increasing membership and proven ability to successfully fundraise for pool development. School use, and wider causal use by the community, is also important to bear in mind. Long term planning for aquatic facilities across the District is also recommended as well as addressing short-term operational requirements.

5.3.3 Martinborough Pool

One survey was returned:

- Max Stevens - Martinborough Community Board

A swimming club was operating out of this pool approximately 10 years ago but is now in recess. Funds are being held in Trust. They are relatively new pools (rebuilt in 1996) and in good condition.

The pool is heated by solar panels but covers need replacing and appears that there have been issues in them not being used (possibly too hard to put on?) thus reducing water temperature (as well as saving on cleaning and chemicals). More use is predicted should the water temperatures being able to be maintained and improved.

Priorities considered are:

1. Improve heating (maintain and use pool covers).
2. Fix leak and seal overflow tank.

3. Provide shade/BBQ area.

An issue around the filtration plant not meeting current NZS has also been raised.

Summary
The main concerns raised through the survey are with the Pool are with heating and shade. There were also some concerns regarding the Council's contractor's role to "attract and enhance" swimming as well as carry out basic operational tasks such as use and maintenance of the pool covers. Reinvigoration of a Swimming Club would benefit the use of the Pool.

It is not known who currently uses the pool from the community consultation carried out. Note that Martinborough is the smallest of the three south Wairarapa towns.

5.4 Options for the Future of South Wairarapa Pools

5.4.1 Options

A number of alternatives for the provision of aquatic services in the South Wairarapa in the long term have been considered. These are defined and discussed below:

Option	Description	Comment
1. Contracted Operation	Pools operated under existing arrangement. Leave the pools as they are apart from carrying out immediate H&S and statutory maintenance requirements.	Asset deterioration will lead to closure in the medium term. Will likely be unacceptable to pool users and a source of continued community dissatisfaction.
2. Minimal Maintenance	Completing only the maintenance required to protect the asset and ensure continued running of the pool.	Asset deterioration will lead to closure in the long term. Will likely be unacceptable to pool users and a source of continued community dissatisfaction.
3. Amalgamation / Shared Service Provision	Joining with another LA to provide a community pool	Political and community accessibility issues. Council may be heading down this path for other services.
4. Upgrading One Pool, Closing Two	Using Council LTP funding available to undertake a complete upgrade of one of the pools to indoor and heated and close the other two.	Political and community issues. Financial benefits in the longer term. Overall improved service provided. Transport requirements/costs for the other towns' users.
5. Closing All Three Pools	Closing all three pools permanently.	Unlikely to be acceptable as it conflicts with Council's responsibility to provide services.
6. Balanced Scorecard	Undertake reactive /statutory maintenance and use an annual Balance Scorecard on each pool as a decision making tool as to whether to keep a pool open. The probable outcome will be the upgrading of the last pool.	Continues to provide pool services to the communities but accepts the on-going financial commitment of three pools is unsustainable.

6.4.2 Option Analysis

Considering the demands, future requirements and community expectations as noted in the sections above, Option 4 needs to be given serious consideration as the best

way to provide the most appropriate aquatic services for the South Wairarapa in the long term. Options 1, 2 and 5 have fatal flaws as they are not considered best practise and will not fulfil the Councils role as a service provider in the long term. Option 3 will need to be considered going forward but has significant political and community engagement implications that are outside the current scope of the report.

Below is an evaluation of Option 4 above using a "high", "medium" and "low" (high being negative financial/community impact and/or risk, and low having less impact or risk) rating for each of the following criteria:

Operational Issues	The number and severity of the concerns raised by the PRMP.
Maintenance Requirements	The value of work identified in the Maintenance Programme.
Community Impact	The community, impact and needs for the pools.

Option 4 Evaluation Matrix

	Operational Issues	Maintenance Requirements	Community Impact
Featherston	High	Low	Low
Greytown	High	High	High
Martinborough	High	Medium	Medium

Results of the initial investigations lead us to the conclusion that the Featherston pool would be the most appropriate to upgrade given the lower capital costs and its already strong community support.

Further consideration would need to be given to the manner in which the other pools would be decommissioned and how users of the pool from the other town centres would be able to gain access to the facilities.

An upgrade to the Featherston pool would be required to meet the long term needs of users and the wider community. Developing it into an indoor heated pool, as well as upgrading the amenities would be required.

The major benefits of this Option are threefold;

- Total operating costs would reduce as the operation/management of an upgraded pool will be less than the three, even with year round costs.
- Increase in the ability to earn greater revenue from large user numbers and (assumed) increased admission charges.
- It would meet the needs of the wider community for a heated pool able to be used year round.

The use of the Balanced Scorecard approach has been detailed in a separate paper.

Horowhenua District Council constructed a new pool in Foxton in 2009. The construction costs were in the order of $1.3M, with the cost of the building being roughly $800k. A complete review of the Featherston pool would need to be undertaken to understand what parts of the pool complex should be kept, or if a complete new complex is more appropriate.

6.4.3 Financial Implications

Applicable financial commentary is noted below. Additional information is required to complete this portion of the review.

- Noted in the Long Term Plan is the consideration of options for the efficient heating of swimming pools. This item is to be considered during the early years of this LTP. This indicates an understanding of the main issue currently influencing pool use.
- Currently there is a weekly rates levy of $0.77 for pools for each urban household. Consideration should be given to raising this levy (dependant on which option is selected) to provide additional funding for the level of service desired by the community.
- The operating income is predicted to be $24,000 (this represents user fees and charges to all pools) for the year to 30/6/2013 with the operating costs being $267,000.
- A Swimming Pool renewals budget for all pools of $57,000 has been identified for the for the 2013 financial year. This presents a shortfall of $56,500 for both the Year 1 maintenance items and those identified in the PRMPs Capital Improvement Plans to be completed before opening this year.

The following table is the total estimated financial costs identified in both the PRMPs Capital Improvement Plans and the Maintenance Schedules:

	Greytown	Featherston	Martinborough
Capital Improvement Plan Year 1	$5,000	$5,500	$5,000
Capital Improvement Plan Year 2	$25,800	$123,000	$35,000
Capital Improvement Plan Year 3	$6,000	$6,000	$6,000
Maintenance Programme Year 1	$10,386	$63,599	$24,846
Maintenance Programme Years 2 - 5	$183,337	$8,068	$23,027
Maintenance Programme Year 6 - 10	$14,415	$45,842	$142,938
Total	**$244,938**	**$252,009**	**$236,811**

Therefore the total estimated cost to keep all three pools operational at a compliant level of service over 10 years, excluding the contract costs payable to the Contractor, is **$733,758**.

5.5 S.W.O.T Analysis

A Strengths, Weaknesses, Opportunities and Threats analysis for each of the pools is provided below:

Featherston

Strengths • Most swimming club members. • High use by schools. • Very strong swimming club. • Least amount of maintenance work required over the 10 years (using estimated figures). • Considered the best pool facilities. • Only FINA approved 25m pool.	Weaknesses • Weather has been noted as an issue – wind and temperature. • Lack of signage as noted in the LTP. • Highest total expenditure required.
Opportunities • Fundraising for future development is an option via the club.	Threats • Community reaction if the pool is closed. • Swimming Club numbers reduce. • Swimming Club loses driving force. • School use declines or choose to use other facilities (e.g. Carterton, Masterton)

Greytown

Strengths	Weaknesses
• Strong swimming club an school use. • Proximity to the public park and sports grounds. • Least amount of maintenance work required in the first year (using estimated figures). • Has historic value to the community.	• Major work required over 10 years to bring to standard. Majority in years 2-5. • Limited season.
Opportunities	**Threats**
• Fundraising for future development is an option via the club.	• Community reaction if the pool is closed. • Insufficient funding for repair of skimmers and pool re-surface. • More users utilise the heated pool in Carterton.

Martinborough

Strengths	Weaknesses
• Proximity to the campground. • Newest pool complex. • Least work required.	• No Swimming Club operating. • Major work required over 10 years to bring to standard.
Opportunities	**Threats**
• Increased use by schools.	• Community reaction if the pool is closed. • Reducing demand over time.

5.6 Recommendations

A full community consultation exercise is undertaken, ensuring:

- A careful approach is used if exiting a complex is an option being considered;
- A consultation plan is used.

The long term aquatic needs of the schools in the District should be further explored. In addition, private providers have not been identified.

The possibility of Option 3 - Amalgamation/Shared Service being appropriate and practical is further investigated.

If Option 4 - Upgrading One Pool is considered viable, a detailed analysis of the suitability of the Featherston pool complex is undertaken.

6 Summary Conclusions and Recommendations

Below is a summary of the findings and recommendations of this report.

6.1 Summary Conclusions

There are a number of very high-risk issues that need to be addressed related to the running/operation of all the pools. These are listed in section 3.4 of the relative reports, and more fully in the full Pool Risk Management Plans (PRMPs).

Capital Improvements noted in the three PRMPs are:

- To be implemented by October 2012 $ 15,500
- To be implemented by October 2013 $186,000
- To be implemented by October 2014 $ 18,000

The majority of the assets/improvements at the complexes are in average condition but are fit for purpose. The total cost (excluding Capital Improvement Plan items identified in the PRMPs) for all three pools in year 1 is **$98,831.33**.

The balance of the items in the Maintenance Plans have a total estimated value of:

- 2-5 Year Plan $214,432
- 6-10 Year Plan $203,195

The overall demand for the pools is mixed. Featherston has the strongest, Martinborough has the weakest.

Options considered for the future operation of the pools include:

1. Contracted Operation
2. Minimal maintenance to the pools
3. Amalgamation or Sharing of aquatic services with adjacent Councils
4. Fully upgrading one and closing two of the pools
5. Closing all three pools
6. Balanced Scorecard.

Options 1, 2 and 5 have fatal flaws in the long term and Option 3 needs to be considered in a broader context. Initial investigations show Option 4 as a possible acceptable outcome but the use of Option 6 gives the best long term balance between operational/financial constraints and community-related benefits.

6.2 Summary Recommendations

In the short term, to ensure pool operations continue, it is recommended South Wairarapa District Council:

1. Implement the Capital Improvement Plan items identified in the PRMPs as to be completed by October 2012.

2. Undertake the maintenance work identified in Year 1 of the Maintenance Programme in Appendix 1.

In considering the longer term provision of aquatic services in the District it is also recommended South Wairarapa District Council:

3. Consider the operational and financial implications for planning for the balance of the work identified in the Maintenance Programmes over the next 2-10 years.

4. Undertake full community consultation and more detailed financial analysis to arrive at the Council's preferred option(s) for pool provision and/or development.

5. Commission a detailed report into the Featherston pool complex to better understand the implications of a full upgrade, or whether a complete rebuild is required.

APPENDIX 1: Maintenance Programmes

Featherston

YEAR	COMPONENTS	COST	NOTES
1	Main pool covers	$7,611.76	
	Remedial works to training pool and dividing wall	$16,611.72	
	Re-tiling and fibre glassing pool surrounds	$26,000.00	
	Seal overflow tank	$8,570.00	
	Wash down grandstand	$464.00	
	Chemical wash gazebo roof	$69.60	
	Changing shed repainting	$4,272.00	
	SUB-TOTAL	**$63,599.08**	
2-5	Replace steel garden shed	$1,000.00	
	Repaint changing shed cladding	$3,348.00	
	Repaint outbuilding claddings	$3,720.00	
	SUB-TOTAL	**$8,068.00**	
6-10	Replace concrete paving	$44,400.00	
	Replace sick bay joinery units	$618.00	
	Replace site office joinery	$824.00	
	SUB-TOTAL	**$45,842.00**	
	GRAND TOTAL	**$117,509.08**	

Greytown

YEAR	COMPONENTS	COST	NOTES
1	Overflow tank sealing	$8,570.00	
	Repaint Fascia	$696.00	
	Clear spouting and wash down eaves exterior	$560.00	
	Wash down timber seating area	$560.00	
	SUB-TOTAL	**$10,386.00**	
2-5	Main pool skimming and fibre glassing	$170,343.00	
	Repaint timber windows and doors	$3,800.00	
	Replace Security gates	$1,720.00	

	Repaint grandstand seating	$1,444.00	
	Water blast concrete paving	$3,360.00	
	Changing shed interior repaint	$2,670.00	
	SUB-TOTAL	**$183,337.00**	
6-10	Exterior painting	$8,505.00	
	Replace Flood lighting	$4,880.00	
	Replace office joinery units	$1,030.00	
	SUB-TOTAL	**$14,415.00**	
	GRAND TOTAL	**$208,138.00**	

Martinborough

YEAR	COMPONENTS	COST	NOTES
1	Repair Office wall linings	$50.20	
	Replace pump house steel bandits	$200.00	
	Seal Pool overflow tank	$8,570.00	
	Non-slip coat toddler pool	$2,795.80	
	New Pool covers	$13,230.25	
	SUB-TOTAL	**$24,846.25**	
2-5	Repaint office floor	$253.50	
	Pump room ventilation	$750.00	
	Chainlink Fence repair	$1,276.00	
	Interior repainting	$5,059.50	
	Replace clearlite roofing	$1,450.00	
	Replace rotten timber roof framing	$498.00	
	Timber fence post repaint	$1,740.00	
	Main Pool new pipe feed	$12,000.00	
	SUB-TOTAL	**$23,027.00**	
6-10	Replace office joinery	$1,030.00	
	Exterior repainting	$3,720.00	
	Grandstand Shade Roof	$15,000.00	
	Concrete Paving	$25,900.00	

	Pool tiles	$2,688.00
	Main Pool Fibreglassing	$94,600.00
	SUB-TOTAL	**$142,938.00**
	GRAND TOTAL	**$190,811.25**

NOTES:
Rates have been taken from the Rawlinsons Construction Handbook 2011 and the Thompsons Fibreglassing 'Featherston Pool Report'

Appendix 5 - SWDC 3 Pools Project Balanced Scorecard Report

SWDC Three Pools Review Project

Balanced Scorecard

South Wairarapa District Council

Three Pools Review Project

Balanced Scorecard

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Background
The project to review the pools in the SWDC concluded that the long term viability of three pool facilities was questionable and the need to close two of them and upgrade the third should be seriously considered in the longer term. Additional work was required to identify the most appropriate way to manage the pools in a safe manner, while also accepting that future financial investment should be minimised. The future provision of pools services in the South Wairarapa needs to change to meet demand and user expectations, with limited funding opportunities.

A number of models have been considered to evaluate the on-going operation of the pools by addressing their performance against a number of factors where the on-going operation is considered either unsafe, not required or will need a financial input in excess of their economic value. They included; cost benefit analysis, an optimised decision making model and triple (or quadruple) bottom line.

A number of the models considered would provide a tool to assess performance levels and appropriate decisions to be made, but a Balanced Scorecard approach was considered the most appropriate as it has the flexibility required and ability to consider multiple areas of operation including levels of community use.

Rationale
The immediate closure of one, two or all of the pools without a robust decision-making model in place would likely be an unacceptable outcome for the affected communities. In an attempt to match the long term needs of the community, and SWDC's goal of reducing overall costs and minimising exposure to risk, a philosophy and decision making process around expenditure minimisation is required.

The desired outcome of the process is to identify and quantify the most appropriate time to consider closing a selected facility. The basic philosophy being applied is similar to a "Run to Failure" in that no (or minimal in this instance) maintenance work is carried out until a point of "failure" whereby the facility is closed.

In this instance 'failure' would mean when a facility receives a score below the threshold, as outlined in the process below.

Health & Safety and Statutory Obligations
Alongside the application of the above philosophy is the need for SWDC (and the District's FM Contractor) to abide by Council by-laws and polices as well as New Zealand statute and regulations. These include but are not limited to;

- Health & Safety in Employment Act 1992
- Building Act 2004
- Health Act 1956
- Hazardous Substances and New Organisms Act 1996

All maintenance (or other) work required to meet these obligations must be carried out as per standard industry best practise. It is critical operational staff understand these obligations and their links to the above philosophy. SWDC Asset Management policy and practice must also be considered.

A simple question should be posed when maintenance expenditure is considered:

"Am I obliged to carry out this work to comply with any rule, by-law, regulation, policy or statute?"

If the answer is "yes" then the work should be approved.

Methodology

To enable a quantitative scoring and review of performance, each pool is evaluated and scored against set criteria, as part of the Annual Plan process. This will be used to determine if the pools are to be opened later that year. The areas assessed are:

Operational Area	Definition	Weighting
Health & Safety	All reported issues that are considered H&S, not including water quality that affected users and/or operation of the pool.	20%
Water Quality Issues	The performance of the pool against the NZS Water Quality Standards, described in the full report.	10%
User Demand	The use the pool has had over the last season and any indications of future demand change.	30%
Financial Cost & Economic Impact	The total cost of maintenance and other outgoings to enable the pool to open. Overall impact on SWDC financial and community economic value.	40%

A weighted system acknowledges the factors listed above are not considered of equal value/importance by SWDC as they relate to the operation of the pool facilities.

Each of the ***Operational Areas*** have three ***Focus Areas*** for scoring. These are defined below and have a 1 to 5 scoring range, used to reflect relative performance in the given area:

Operational Area	*Focus Area*	*Weight*	*Focus Description*
Health & Safety (20%)	Accidents	10%	This indicator captures the number of times instances of injuries occurred.
	Complaints	5%	Is a rating of the complaints that are reported to either the pool operator or SWDC regarding the operation of the pool.
	Other H&S Issues	5%	Any other Health and Safety issues were identified that did not result in an injury.
Water Quality (10%)	Chlorine Level	5%	The number of times during the year the pool water quality was affected by the chlorine level being outside the acceptable range as defined in the NZS.
	pH Range	5%	The number of times during the year the pool water quality was affected by the Ph being outside the acceptable range as defined in the NZS.
User Demand (30%)	School Use	10%	The demand generated by use of the pool by the local schools. This should include the number of schools, frequency of use and total number of users.
	Club Membership Numbers	10%	The demand generated by use of the pool by the local swimming club. This should include the number of members, frequency of use and total number of users.

Operational Area	Focus Area	Weight	Focus Description
	General Community Use	10%	The demand generated by use of the pool by the local community. It should be the number of users throughout the season based on admission fees.
Financial & Economic Impact	Operational Expenditure	10%	The increase in total annual operational expenditure incurred in ensuring the pool remains open.
(40%)	Total economic impact	10%	The full economic impact on SWDC for the next season, given the income and expenditure disparity and other on-going economic factors.
	Capital Investment Required	20%	The capital expenditure required by SWDC to complete those items to bring the pool to an acceptable standard.

A spreadsheet is attached to provide for the calculation of a pool's performance score. An example image of the spreadsheet is included in Appendix 1.

This method allows past performance, as well as future demand and financial commitment required, to be used in the assessment. It also ensures the decision to continue operation take into account more than just financial impact, but considers other community and demand factors. The comments section of the evaluation should be used to note specific events or outside influences that may have impacted the performance of the pool but cannot be captured in the main sections.

Outcomes

As the results are calculated there are two likely outcomes; either the pool opens that for the season, or is considered for closure. The threshold for this decision is the critical element, and may be adjusted by Council management dependant on a number of factors. Initially a score of 40% could be considered the "tipping point" where discussions start with the community, users and Councillors as required.

Adding a 'fatal flaw' process should be considered, whereby if a single specific rating, a Focus Area or Operational Area falls below a set level then that also triggers the need for more detailed in-house discussions. This will afford Council the ability to provide a 'release valve' if operations are creating risks, or liabilities, without meeting the overall threshold.

Next Steps

A policy and process regarding "closure" (including a definition of this term) needs to be developed. It would need to cover the implications on:

- the contract for the management of the facility between SWDC and CityCare (and the sub-contract between CityCare and CLM),
- staff implications,
- the community need to still to be able to access the services elsewhere
- the short, medium and longer term plans for the building, land and infrastructure, and
- what happens to the financial 'savings' from a closed facility.

Appendix 1: Balanced Scorecard Example

SWDC Swimming Pool Scorecard

Pool: _____

Operational Area	Performance	Maximum
Health & Safety	8.00%	20%
Water Quality	2.00%	10%
User Demand	14.00%	30%
Financial & Economic Impact	14.00%	40%
Total Performance	**38.00%**	**100%**

Date: _____
Completed by (name): _____
Reviewed by (name): _____
For Season Ending (year): _____

Area	Focus	Weight	Focus Description	Ratings	Performance (out of 5)	Performance (%)
Health & Safety		20%				
	Accidents	10%	This indicator captures the number of times instances of injuries occurred.	5 – No incidents reported 4 – One incident reported 3 – Two incidents reported 1 – More than two incidents	1.00	2.00%
	Complaints	5%	Is a rating of complaints that are reported to either the pool operator or SWDC regarding the operation of the pool.	5 – No complaints recorded 4 – One complaint recorded 3 – Between two and four complaints recorded 2 - Between five and six complaints recorded 1 – More than six complaints recorded	3.00	3.00%
	Other H&S Issues	5%	Any other Health and Safety issues were identified that did not result in an injury.	5 – No incidents reported 4 – One incident reported 3 – Two incidents reported 2 - Three incidents reported 1 – More than three incidents reported	3.00	3.00%
Total Performance in Area			**Health & Safety**		**7.00**	**8.00%**
Water Quality		10%				
	Chlorine Level	5%	The number of times during the year the pool water quality was affected by the chlorine level being outside the acceptable range as defined in the NZS.	5 – No occurrences 4 – One occurrence 1 – More than one occurrence	1.00	1.00%
	pH Range	5%	The number of times during the year the pool water quality was affected by the Ph being outside the acceptable range as defined in the NZS.	5 – No incidents reported 4 – One incident reported 1 – More than one incident	1.00	1.00%
Total Performance in Area			**Water Quality**		**2.00**	**2.00%**
User Demand		30%				
	School Use	10%	The demand generated by use of the pool by the local schools. This should include the number of schools, frequency of use and total number of users.	5 – A significant increase in demand 4 – A measured increased demand 3 – No change in demand 2 - A measured decrease in demand 1 – A significant decrease in demand	3.00	6.00%
	Club Membership Numbers	10%	The demand generated by use of the pool by the local swimming club. This should include the number of members, frequency of use and total number of users.	5 – A significant increase in demand 4 – A measured increased demand 3 – No change in demand 2 - A measured decrease in demand 1 – A significant decrease in demand	2.00	4.00%
	General Community Use	10%	The demand generated by use of the pool by the local community. It should be the number of users throughout the season based on admission fees.	5 – A significant increase in demand 4 – A measured increased demand 3 – No change in demand 2 - A measured decrease in demand 1 – A significant decrease in demand	2.00	4.00%
Total Performance in Area			**User Demand**		**7.00**	**14.00%**
Financial & Economic Impact		40%				
	Operational Expenditure	10%	The increase in total annual operational expenditure being incurred in ensuring the pool remains open.	5 – Decrease in expenditure 4 – No additional expenditure required. 3 – Between $0k and $5k additional expenditure 2 - Between $5k and $10k additional expenditure 1 – Over $10 additional expen	3.00	6%
	Total economic impact	10%	The full economic impact on SWDC for the next season given the income and expenditure disparity and other on-going economic factors.	5 – Positive economic impact 4 – Minimal economic impact 3 – Acceptable economic impact 2 - Major economic impact 1 – Significant overall economic impact	2.00	4%
	Capital Investment Required	20%	What is the capital expenditure required by SWDC to complete those items to bring the pool to an acceptable standard.	5 – No investment required 4 – Between $0 and $20k investment required 3 – Between $20k and $50k investment required 2 - Between $50k and $100k investment required 1 – More than $100k inves	1.00	4%
Total Performance in Area			**Financial & Economic Impact**		**6.00**	**14%**
Comments						