

03 August 2026

[REDACTED]  
[REDACTED]

Kia ora [REDACTED]

Local Government Official Information Request – SR.110786 – Dave Hume Pool, Katikati

I refer to your official information request received by Western Bay of Plenty District Council (Council) on 3 July 2026 where you have requested information pertaining to the refurbishment of Dave Hume Pool, Katikati.

The answers to your questions are set out below:

1. All engineering, structural, condition assessment and consultant reports prepared in relation to the Dave Hume Pool prior to refurbishment.  
Please refer to Attachment 1 for a copy of this information.
2. Any reports identifying defects, maintenance issues, leakage, structural concerns, plant failures or other matters that required remediation.  
At Dave Hume Pool, no structural issues or leaks were discovered prior to the project or during. The pool was structurally sound, and the plant, pool and liner system, and pool surrounds were upgraded during the bulkhead and liner project. Therefore, this request is refused under section 17(e) of the Local Government Official Information Act 1987, where the information does not exist.
3. The business case, options analysis or feasibility reports comparing refurbishment with demolition, replacement or enclosure of the facility.  
Please see Attachment 2 for the following documents:
  - a) 2011 - Feasibility report - Visitor Solutions.
  - b) 2019 – Feasibility Report - Watershed.
  - c) 2019 – Discussion Paper – Recreation and Leisure Strategy.
  - d) 2019 – Discussion Paper Notes – Swimming Pool Level of Service Workshop Outcomes.
  - e) 2020 - Feasibility Report – Job Brief

4. Council reports and agendas relating to the decision to refurbish the Dave Hume Pool.

The original upgrade plan was to include a fabric enclosed roof structure which would also meet Council's adopted Level of Service – to provide a public indoor pool facility all year around. Unfortunately, during the procurement and detailed design stages (of the roof structure and associated HVAC systems required to operate a safe indoor facility), the cost estimates exceeded available funding.

Therefore, Council decided to accept a reduced level of service upgrade. This included:

- Extending the swim season from 6 ½ to 9 months, rather than 12 months.
- The addition of a bulkhead in the main pool to provide a separate Learn to Swim facility with independent water treatment system.
- Installation of a vinyl pool liner to replace the need for regular and costly repaints.
- The upgrading or replacement of main pool water treatment sanitation and filtration systems or components that were nearing their expiry.

More information on the decision to refurbish the Dave Hume Pool can be found in Attachment 6 (Full Deliberations Pack), of the report titled '*Deliberations on the Long Term Plan 2024-34 and related matters.*' This report was part of the Annual Plan and Long Term Plan Committee Meeting Agenda held on 26 August 2024.

A link to the report attachment has been provided below for your convenience:

[https://westernbayofplenty.infocouncil.biz/Open/2024/08/APLTP\\_20240826\\_AGN\\_2869\\_AT\\_WEB.htm](https://westernbayofplenty.infocouncil.biz/Open/2024/08/APLTP_20240826_AGN_2869_AT_WEB.htm)

5. The Council resolution approving the refurbishment project.

The resolution can be found on [page 62 of the Council meeting agenda](#), held on 26 September 2024.

6. The scope of works undertaken, including details of the refurbishment completed. The Capital project to upgrade the pool with a bulkhead and liner included:

- Division of existing 33.5m pool into a 25m lap pool, ~1.5m bulkhead and a new 7m indoor Learn-to-swim pool.
- Associated plant equipment for the new pools including filtration systems, pool heating systems and water attenuation for discharge.
- Re-lining of all 3 pools (Main pool divided into 2 and existing outdoor Learn-to-swim pool).
- New gutter system which increased the dept of the main pools by 200mm
- Upgrade the existing Learn-to-swim pool to be compliant with current NZS5826 Standard Operating Guidelines.
- Increasing the pump depth for bore.
- Replace all concrete around the pools and gym area
- Add heaters to the changing rooms, reception area for extended summer season

- Insulation to be added to the changing room and reception roofs
- Provide new pool covers for all pools.
- New water heat exchanger for all pools
- New sand filtration systems for the new pools.
- Installation of a disability hoist that for the new learn to swim or the lane pool
- Upgrades to reception entry and changing room doors.
- Re-paint existing pool kerb and fixing any existing broken plaster.
- New double-glazed windows in the changing rooms
- New reinjection geothermal bore and consent

Separate from the upgrade project, the following items were completed:

- New outdoor gym
- Painted the whole facility inside and out, even down to the little storage sheds (excluding mural)
- Refreshed all the gardens

7. The final project cost and, if available, a breakdown of the major components of that cost.

To date, Council has spent \$2,637,171 on capital costs associated with the Project - Bulkhead and pool liner. The contract has not been completed so there is not a final cost yet but is anticipated to be near \$2.7m.

8. Details of the funding sources used for the project.

| Source               | Dollar value |
|----------------------|--------------|
| Lotteries Commission | \$ 250,000   |
| TECT                 | \$ 400,000   |
| KK Lions             | \$ 5,000     |
| DHP Trust            | \$ 65,000    |
| Total Grants         | \$ 720,000   |

Council's capital contribution will be approximately \$1,980,000.

9. Any procurement or tender reports associated with the refurbishment.

Council are withholding all tender documents received for this project under section 7(2)(b)(ii) of the Local Government Official Information and Meetings Act 1987, where withholding the of the information is necessary to protect information where releasing the information would be likely to prejudice the commercial position of the person who supplied it.

However, Attachment 3 provides you with a redacted copy of the Procurement Plan for your information. The redactions have been applied pursuant to the following sections of the Local Government Official Information and meetings Act 1987:

- section 7(2)(a) – Protect the privacy of the natural persons.
- section 7(2)(i) – To enable Council to carry on, without prejudice or disadvantage, commercial negotiations.

10. Any post-construction reports confirming the outcome of the refurbishment or the expected future life of the facility.

Council do not hold any post-construction reports of the refurbishment of Dave Hume Pool. Therefore, this element of your request is refused under section 17(e) of the Local Government Official Information Act 1987, whereby the information requested, does not exist.

We can advise that the expected future life of the facility is now another 20 years.

11. If any of the requested information is already publicly available, I would appreciate being directed to the relevant documents or webpages.

Please see the following web pages:

- [Dave Hume Pool Improvements | Your Place Western Bay of Plenty](#)
- [Pool Development Project - DAVE HUME SWIMMING POOL TRUST](#)

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at freephone 0800 802 602 or at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz).

Ngā mihi



Brad Singh  
General Manager  
Infrastructure Services





# **Dave Hume Pool, Katikati**

## **Pool Assessment Assessment No. 1**

June 2016

**Prepared for: Western Bay of Plenty Council**



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# Introduction

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The Dave Hume Pool was opened in 1973.

The facility caters for many different sectors of the community, including schools, organised groups and community organisations.

There is a large 33m Main Pool and a Small Pool.

Watershed has been engaged to review the current condition and functionality of these swimming pool facilities to ensure these are fit for purpose.

This review document has been structured into the following sections:

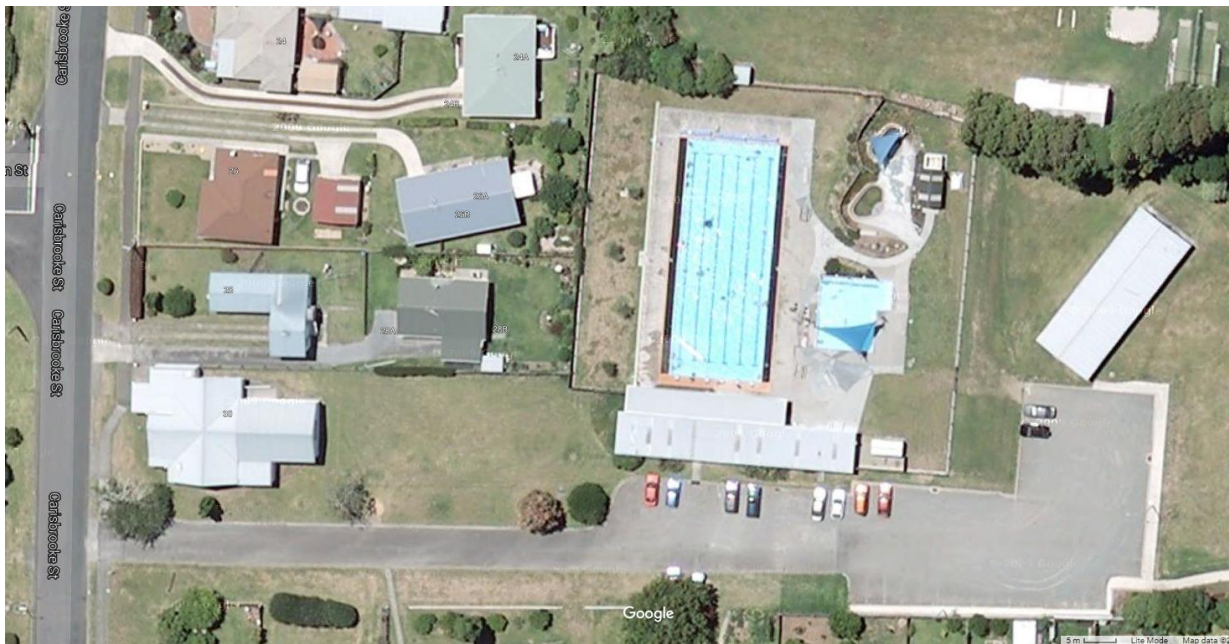
- Full condition assessment of the current facilities and operations, including a full review of the plant.
- Pool water testing review.
- Review of current disinfection system and upgrade options.
- Recommendations and indicative costs in relation to identified needs within the condition assessment review.
- Proposed scope of upgrade works, with discussion around the installation of a mobility ramp and lane rope configuration options.



# Pool Details

Dave Hume Pool, Katikati

Location: Carisbrooke Street, Katikati 3129



|                |                    |                                          |
|----------------|--------------------|------------------------------------------|
| Main Pool      | Dimensions:        | 33.53m (L) x 12.85m (W) x 0.94-1.14m (D) |
|                | Pool Volume:       | 448,000 Litres (448m <sup>3</sup> )      |
| Learners' Pool | Pool Dimensions:   | 10m (L) x 8m (W) x 0.75-0.9m (D)         |
|                | Step Dimensions:   | 4m (L) x 2m (W) x 0-0.75 (D)             |
|                | Total Pool Volume: | 69,000 Litres (69m <sup>3</sup> )        |



# Poolside and Equipment

The following information is an overview of the current condition of items associated with the pool operations.

## Pool Covers

The thermal pool covers for the Main Pool consist of three sections, which are stored on a single and double mobile reel system. These were well stored under the eaves of the building for the winter season.

The covers were in good condition, with some minor fraying around the edges, which will have been caused by rolling the covers on/ off the reels.



The Small Pool also has thermal pool covers. These covers had been removed from the reels, folded and placed within the plant room for the off-season. Visually these covers appeared to also be in good condition.

However, we did note the unusual set up of the Small Pool cover reels which were located out over the side of the pool. The height from the floor of the pool to the reel (without the cover on) is 1650mm, which we foresee as a dangerous height in relation to an adult who would generally be in the pool swimming with children. We appreciate that when the pool is in use the covers will be on the reels, however the corners and structure around these is still exposed.



There was a small amount of corrosion on the structure which will need to be monitored to ensure there is no further deterioration.







## Concourse Shade/Seating

The Main Pool has a grassed embankment area along the boundary and around the end of the pool. The current size of the trees on the embankment is not yet sufficient to provide a source of shade. However, we did note that these were Olive trees, which are renowned for dropping large amounts of debris. This debris also has the potential to be detrimental to the filtration system, therefore we recommend that these are removed prior to them becoming larger and problematic.



The Small Pool has shade sail poles which we assume are used to provide shade during the summer. The layout of these poles indicates that the majority of the pool would be covered, once the sails are in place.

The paint on the lower level of the poles is faded and these will need to be scheduled for painting over the coming 2-3 years.



Further shade sails are located over the grass areas where spa pools were previously located. However, this location is very sheltered and it does not allow for any direct sight lines to either of the pools.



There is a lack of seating around the concourse of the Small Pool. This is surprising given the pool is designed to be used by young children. The New Zealand Recreation Association (NZRA), refers to a 'Pool Alone Policy' which states that: Children under eight must be actively supervised by a caregiver 16 or over. Actively supervised means watching your child at all times and being able to provide immediate assistance.



To encourage people to abide by this guideline, further seating options are required.



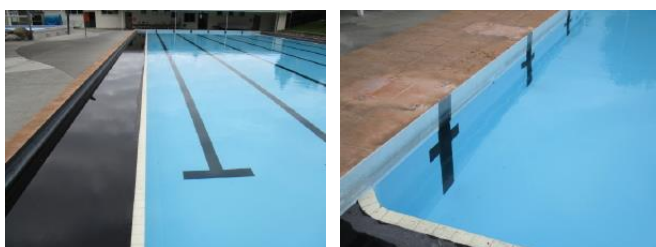
## Concourse Area

The concourse has “faded” in areas. This appears to be from either the chemicals that have been used to wash down the concrete or from pool water being splashed onto the concourse.



## Pool Surface

The Main Pool paint is one year old and is already in average condition. We also noted there was chlorine granules on the floor of the pool where the pool has been manually dosed. Although it is highly likely that this is only used during the winter, we do not recommend that this method of dosing is used as this will accelerate the deterioration of the pool paint.

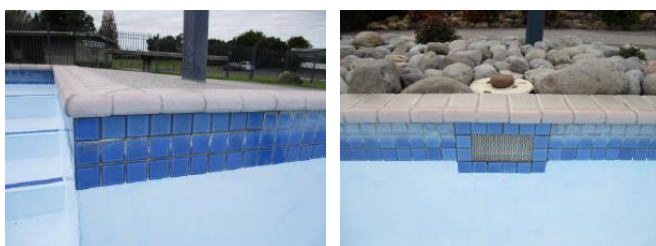


The Small Pool was empty at the time of our visit which enabled us to easily assess the condition of the pool paint. From a distance the pool paint appears to be in a reasonable condition, although on closer inspection the pool paint is actually breaking down with small flakes starting to lift from the surface.

The paint issues are consistent across both pools, and appear to be from the base (previous) coat failing. This is most likely due to the pool surface not being correctly prepared prior to painting.



The mosaic tiles have inconsistently faded. The band is three tiles wide, and some of these have faded above the water line and some have faded below it. Some of these tiles also appear to have been replaced. Although their visual appearance is average, the tiles themselves appear to be in good condition.



## Concourse Lighting

There are several different types of lights around the concourse which have obviously been replaced over time. Due to the number of lights around the facility, it would appear that these have been installed for security purposes, rather than to provide a sufficient source of light to enable the pool to be used during hours of darkness.



## Diving Blocks

The diving blocks had been removed from the end of the pool, and these were stored for the off-season. There is discolouration on the headwall where these have been removed from.







However, the depth of the pool is 1.14m at this point which is not a sufficient depth for dive blocks to be installed. NZS 4441:2008 specifies that the pool depth is to be “at least 1.35m for 6m from the wall where starting platforms” (dive blocks) are installed.

Given the extent of the community and school groups who use the pool, we would assume that these would be extensively used, therefore is a need to ensure that these can be used compliantly.



# Compliance

## Pool Depth Signage

There are no depth signs displayed around the Main or Small Pools, nor is there any signage displayed around the facility or within the changing facilities to indicate the depth of the pool.

NZS 4441:2008 states ‘ the depth of the water shall be clearly marked at the deepest point, at the shallowest point, at the point where the depth is 1.5m, and at points opposite egress points from the changing rooms to the pool’.



## Chemical Signage Plant Room

There is chemical signage displayed on the interior of the Main Pool plant room door. The UN Number and Hazchem Code is compliant for Hydrochloric Acid and Sodium Hypochlorite. However, there was no signage displayed for CO2 Gas.

We feel there is little benefit in having the chemical signage displayed on the interior of the door, particularly given the door should remain closed at all times due to the storage of chemicals, plant and equipment. The signage needs to be displayed on the exterior of the Plant Room doors so it is visible.

This signage also needs to be installed on the exterior of the plant room door on the side of the car park as this door is used for chemical deliveries via the access plinth.





## Fire Extinguishers

Both of the two fire extinguishers within the Plant Rooms have expired. These were last tested in December 2012.





# Pool Plant, Circulation, Filtration, Disinfection and Heating

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## Water Circulation

### Main Pool

The Main Pool circulation system is indicative of a pool which was built in 1973, with wide overflow 'channels' down each side of the pool tank. These channels are painted black so the water which flows over the channels is heated prior to entering the balance tank via a return pipe located centrally along the channel (as shown below).



The balance tank is located at the deep end of the pool (outside the changing rooms). Access to the balance tank is via a manhole located along the head wall.

Water is pulled from the balance tank by the lift pump into the plant room, into the vacuum DE filter tank, through the duty pump prior to the water being heated and treated and returned to the pool via inlets located down each side of the pool tank.

The lift and duty pumps are both in a functional condition, however we did note that the pipework was complicated, with more bends than required which increases the demand on the pumps. Additionally, there was a water supply plumbed non compliantly directly into the top of the lint strainer.



### Small Pool

The Small Pool circulation system comprises of two skimmers which are located beneath the pool cover reels. Water is pulled through these skimmers back to the plant room by a circulation pump which is located within the Small Pool plant room. The water is filtered via one Waterco S1200 diameter pressure sand filter.



Once the filtered water has been heated and treated, it is returned to the pool via six supply inlets which appear to have been retrofitted in the wall of the pool tank.

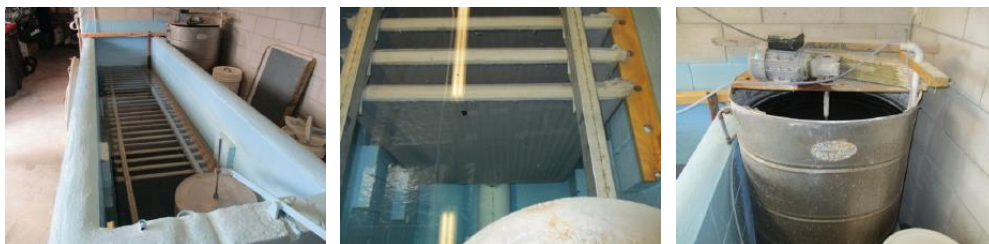


The two skimmers meet the requirements of NZS 4441:2008, for the surface area of the pool.

## Filtration

### Main Pool

The Main Pool filtration system comprises of a vacuum DE filter, which consists of 26 vertical elements. The DE slurry tank is located adjacent to the tank, which we noted had a small amount of corrosion on the top plate of the tank and mixer.



DE is currently being dosed into the filter element chamber, rather than the surge chamber end of the filter tank.

The pool was winterised at the time we were onsite, however we did note that due to the way the filter tank is constructed the board which is suppose to be inserted into the tank to separate the filter and surge tank sections would not fit the tank correctly.

#### Pool Specifications:

- Current Pool Volume: 448 m<sup>3</sup>
- Current Pool Surface Area: 430.8 m<sup>2</sup>
- Current IBL: 176



The following summary illustrates the current filtration area, compared with what is required for compliance with NZS 4441:2008;

| Main Pool | Current Filter Area  | Required Filter Area | Compliant |
|-----------|----------------------|----------------------|-----------|
|           | 28.08 m <sup>2</sup> | 81.7 m <sup>2</sup>  | No        |

The current filtration system is not compliant, with the current filter area being almost a third of the requirements specified in NZS 4441:2008.

## Small Pool

The Small Pool filtration system consists of one Waterco S1200J pressure sand filter.

The filter is in good condition, however the tank gasket does need to be replaced prior to the upcoming summer season to ensure no leaks develop around the neck of the filter tank.



Pool Specifications:

- Current Pool Volume: 69 m<sup>3</sup>
- Current Pool Surface Area: 88 m<sup>2</sup>
- Current IBL: 39

The following summary illustrates the current filtration area, compared with what is required for compliance with NZS 4441:2008;

| Small Pool | Current Filter Area | Required Filter Area | Compliant |
|------------|---------------------|----------------------|-----------|
|            | 1.13 m <sup>2</sup> | 2.58 m <sup>2</sup>  | No        |

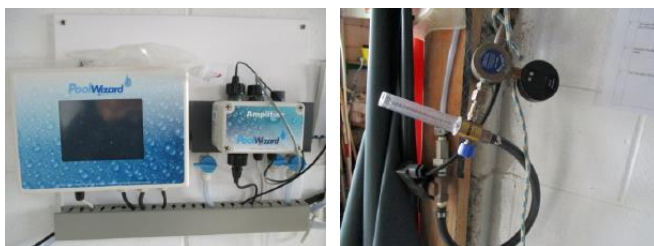
The current filtration system is not compliant, with the current filter area being less than 50% of the requirements specified in NZS 4441:2008.

## Disinfection and pH Control

### Main Pool

The current disinfection system consists of a Pool Wizard water management system. The fully automated system has a water sampling station which controls the Sodium Hypochlorite and CO<sub>2</sub> dosing.





The Small Pool has a similar set up, with disinfection also being via Sodium Hypochlorite, however pH is controlled with Hydrochloric Acid.



We were advised onsite that the biggest issue and cost associated with these systems is how Sodium Hypochlorite is purchased. Currently it is delivered to site in 20 litre containers, which is uneconomical, particularly given the volume which would be used through the season.

With reference to the site water test sheets, the Main Pool is recorded as using a new 20 litre container every 1-2 days. Due to the small volume of the container, there is also a check in place on the water test sheet to ensure the level of the container is regularly checked throughout the day.

The plant room has good access, with a concrete path on the side of the car park which could be used for larger volumes of chemicals to be delivered.

Additionally, the 20 litre containers require staff to handle the chemical more often compared to either purchasing Sodium Hypochlorite in a larger volume or using a different source of disinfection.

## Heating

Both pools are heated via bore water, through large heat exchangers located within the Plant Room.

The Main Pool heat exchanger has been plumbed into the system with a variety of different types of pipework. Domestic and sewage pipes have been used, which are not fit for purpose.



We were not advised of any apparent concerns with this source of heating.



# Pool Water Testing Review

On review of the water test results viewed whilst onsite, we provide the following comments with reference to NZS 5826:2010;

## Main Pool

- During the season full water testing is being completed twice a day, at the first and last test of the day. This is within the requirements of NZS 5826:2010, as the site has automatic chemical residual controllers in place for FAC and pH control. In between these tests, there are a further two plant room checks completed, with Pool Wizard and bore information being recorded on the water test sheet.  
Note: This testing method is not always seen as best practice from a commercial facility perspective, however, we are unable to comment further without a full review of the bather loads experienced by the facility.
- The water test results recorded by the site and Pool Wizard between 22 February to 3 April are consistently within the requirements of NZS 5826:2010. For example the FAC value tested by the site ranged between 2.83 - 5.12 mg/L, and NZS 5826:2010 states the most desirable value is between 2.5 – 5.0 mg/L, and allowable between 1.5 – 7.0 mg/L.
- The Calcium Hardness, Cyanuric Acid and Alkalinity values are also clearly recorded on the sheet and completed as required. There is a record of dosing that has been completed in response to these test results.
- As mentioned previously, we are surprised at the number of 20 litre containers of Sodium Hypochlorite being used onsite. For example, for the week starting 22 February, six containers of Sodium Hypochlorite were used.

| MAIN POOL                  |                    |      |      |     | ColorQ From Pool     |               |                    |                  | Cont             |           | Pool Wizard |                 |                   | Bore     |                  |  |  | Flow Meter |  | Flow Meter |  | Initials |  | Action / Comment |  |
|----------------------------|--------------------|------|------|-----|----------------------|---------------|--------------------|------------------|------------------|-----------|-------------|-----------------|-------------------|----------|------------------|--|--|------------|--|------------|--|----------|--|------------------|--|
| Time                       | Pool Temp (office) | FCL  | TAC  | pH  | CO2 press            | Alorine level | FAC Read / FAC Set | pH Read / pH Set | uS Read / uS Set | Bore temp | Disch temp  | Flow meter read | Flow meter moving | Initials | Action / Comment |  |  |            |  |            |  |          |  |                  |  |
| Monday (date): 28/03/18    |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 6.15                       |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      | 26.4               |      |      |     |                      | 3/4           | 3.2/3.5            | 7.6/7.6          | 1886             |           |             | 270133          | X                 | VS       |                  |  |  |            |  |            |  |          |  |                  |  |
| 2.30                       | 26.8               |      |      |     |                      | ✓             | 3.5/3.5            | 7.6/7.6          | 1889             |           |             | 270133          | X                 | SR       |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.30                       | 26.7               | 3.58 |      | 7.4 | 5000                 | NEW           | 3.7/3.5            | 7.6/7.6          | 1890             |           |             | 270133          | X                 | SR       |                  |  |  |            |  |            |  |          |  |                  |  |
| Tuesday (date): 29/03/18   |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 6.15                       | 26.2               | 2.92 | 3.58 | 7.4 | 5000                 | ✓             | 3.9/3.5            | 7.6/7.6          | 1902             | 40        | 27          | 270314          | ✓                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      |                    |      |      |     |                      | ✓             | 3.5/3.5            | 7.6/7.6          | 1907             |           |             | 270364          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 2.30                       | 27.4               |      |      |     |                      | ✓             | 3.1/3.0            | 7.5/7.6          | 1912             |           |             | 270364          | X                 | GN       |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.30                       | 27.6               | 2.84 |      | 7.4 | 5000                 | ✓             | 3.2/3.0            | 7.5/7.6          | 1928             |           |             | 270564          | X                 | GN       |                  |  |  |            |  |            |  |          |  |                  |  |
| Wednesday (date): 30/03/18 |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 6.15                       | 26.0               | 2.73 | 3.07 | 7.4 | 5000                 | ✓             | 3.9/3.0            | 7.6/7.6          | 1909             | 40        | 28          | 270525          | ✓                 | RE       | PH 7.4           |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      | 26.2               |      |      |     |                      | ✓             | 3.7/3.0            | 7.5/7.6          | 1920             |           |             | 270576          | X                 | GN       |                  |  |  |            |  |            |  |          |  |                  |  |
| 2.30                       | 27.2               |      |      |     |                      | ✓             | 3.0/3.0            | 7.5/7.6          | 1924             |           |             | 270576          | X                 | GN       |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.30                       | 27.4               | 3.25 |      | 7.5 | 5000                 | ✓             | 3.1/3.0            | 7.5/7.6          | 1928             |           |             | 270576          | X                 | SR       |                  |  |  |            |  |            |  |          |  |                  |  |
| Thursday (date): 31/03/18  |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 6.15                       | 26.2               | 3.06 | 3.44 | 7.5 | 5000                 | ✓             | 3.2/3.0            | 7.5/7.6          | 1913             |           |             | 270640          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      | 26.4               |      |      |     |                      | ✓             | 3.2/3.0            | 7.6/7.6          | 1936             |           |             | 270690          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 2.30                       | 26.9               |      |      |     |                      | ✓             | 2.8/3.0            | 7.6/7.6          | 1930             |           |             | 270699          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.30                       | 26.6               | 3.18 |      | 7.5 | 4500                 | ✓             | 2.9/3.0            | 7.5/7.6          | 1930             |           |             | 270699          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| Friday (date): 01/04/18    |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 6.15                       | 26.0               | 2.89 | 3.29 | 7.5 | 4500                 | ✓             | 3.1/3.0            | 7.5/7.6          | 1919             | 40        | 28          | 270296          | ✓                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      | 26.1               |      |      |     |                      | ✓             | 2.2/3.0            | 7.5/7.6          | 1943             |           |             | 270362          | ✓                 | RE       | PH 7.4           |  |  |            |  |            |  |          |  |                  |  |
| 2.30                       | 26.3               |      |      |     |                      | ✓             | 3.4/3.0            | 7.6/7.6          | 1951             |           |             | 270835          | X                 | RE       | PH 7.5           |  |  |            |  |            |  |          |  |                  |  |
| 5.30                       | 25.9               | 4.02 |      | 7.5 | 3500                 | ✓             | 4.6/3.0            | 7.5/7.6          | 1929             |           |             | 270835          | X                 | RE       | PH 7.5           |  |  |            |  |            |  |          |  |                  |  |
| Saturday (date): 02/04/18  |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 9.15                       | 26.1               | 2.32 | 2.72 | 7.5 | 3500                 | ✓             | 2.8/3.0            | 7.6/7.6          | 1905             | 40        | 28          | 271045          | ✓                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 10.45                      | 26.8               |      |      |     |                      | ✓             | 2.7/3.0            | 7.5/7.6          | 1920             |           |             | 271054          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.00                       | 26.9               | 3.20 |      | 7.5 | 3000                 | ✓             | 3.4/3.0            | 7.6/7.6          | 1921             |           |             | 271054          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| Sunday (date): 03/04/18    |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 11.15                      | 26.4               | 4.29 | 4.60 | 7.4 | 3000                 | ✓             | 3.1/3.0            | 7.5/7.6          | 1909             |           |             | 271109          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| 4.00                       | 26.6               | 3.77 |      | 7.5 | 3000                 | ✓             | 3.4/3.0            | 7.5/7.6          | 1909             |           |             | 271109          | X                 | RE       |                  |  |  |            |  |            |  |          |  |                  |  |
| Friday (date): 04/04/18    |                    |      |      |     |                      |               |                    |                  |                  |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| Time                       | Cyanuric acid ppm  |      |      |     | Total alkalinity ppm |               |                    |                  | Hardness ppm     |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |
| 5.30pm                     | 32                 |      |      |     | 138                  |               |                    |                  | 84               |           |             |                 |                   |          |                  |  |  |            |  |            |  |          |  |                  |  |



## Winter Programme

The pool is now being maintained on a Winter Programme. However we were concerned to see dry chemical residue on the floor of the pool, particularly given the pace the pool paint has already deteriorated in such a short space of time.

INITIAL (POOL WATER ANALYSIS)  
50kg BICARB 40L HYPO  
50kg CAL CHL. 10L HCL.  
10kg CYAN.

| Date    | Time    | Temp                        | Fac  | Ph  | Initial | Comments                                                |
|---------|---------|-----------------------------|------|-----|---------|---------------------------------------------------------|
| 12.4.16 | 10 AM   |                             | 0.84 | 7.5 | ✓       |                                                         |
| 13.4    | 8.30 AM |                             |      |     |         | 20L HYPO: 5L HCL: 1kg CYAN ACID                         |
| 13.4    | 4.15    | 22.0                        | 4.39 | 7.3 | ✓       |                                                         |
| 16.4    |         | 15.3                        | 2.07 | 7.6 | ✓       |                                                         |
| 16.4    | 10.10   |                             |      |     |         | START MAINTAINING MAIN POOL.                            |
| 16.5.   | 8.45 AM |                             |      |     |         | START FILLING MAIN POOL.                                |
| 16.5.   | 4.0 PM  |                             |      |     |         | 50kg BICARB 25kg CAL CHL.                               |
| 17.5.   | 9.30 AM | 1 <sup>st</sup> RUN OF PUMP |      |     |         | 50L HYPO (40L IS 76 WKS OLD)<br>15L HCL, 10kg CYAN ACID |
| 18.5.   | 11.15   | 14.5                        | 5.26 | 7.3 | ✓       | ALK=114                                                 |
| 22.5.   | 8.30 AM |                             | 3.9  | 7.5 | ✓       | WATERBROOKS 39<br>CYAN 20 25kg CAL CHL.                 |
| ✓       | 5.15 PM |                             | 2.97 | 7.5 | ✓       |                                                         |
| 25/5.   | 8.45 AM |                             | 2.50 | 7.7 | ✓       | 20L HYPO<br>5L HCL                                      |

## Small Pool

We did not see any water test results for this pool whilst on site.

The Small Pool has a Pool Major system, which is a different model to the system installed on the Main Pool. However, this system is also capable of automated FAC and pH testing, meaning the site can also complete twice a day water testing as per the Main Pool.



# **Review of Disinfection System (including Self Generation Chlorine)**

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The current automated disinfection and pH control systems are sufficient, however we do recommend that the disinfection source is either changed or the Sodium Hypochlorite supply is purchased in a more economical volume.

There are three different types of disinfection which have been reviewed, and are appropriate for the operational requirements of this facility:

- Commercial Strength Sodium Hypochlorite (13-15% Strength)
- Self-Generated Sodium Hypochlorite (1-3% Strength).
- Calcium Hypochlorite (60-65% Strength)

## **Commercial Strength Sodium Hypochlorite (13-15% Strength)**

Commercially available Sodium Hypochlorite is a by-product of the pulp and paper industry and is available in 5, 20 and 200 litre containers, or in bulk deliveries.

Sodium Hypochlorite is currently purchased in 20 litre containers, which is not an economical volume to purchase.

Compliance requirements are relatively light and reflect the risk profile of the chemical. The trigger volume of an individual tank for bulk storage is 5,000 litres. At this level only site certification of the tank is required.

Based on information we were provided, the operator estimates that the current consumption over the season is 4,500 litres. Based on this, at a minimum, a storage tank of 1,500 litres would be required. Sodium Hypochlorite has a  $\frac{1}{2}$  life of 3 months, therefore deliveries at intervals of 6-8 weeks to refill the storage tank will be required. This is based on the storage volume and usage expected.

Understanding the facility is seasonal, careful management will be required to ensure there is a minimal chlorine level at the conclusion of the season.

The cost for Sodium Hypochlorite delivered to site in bulk would range between \$0.90 - \$1.10 per litre + GST depending on the supplier.

The site would require a bunded and ventilated tank to be installed, however all other specific requirements are already in place at the facility, with easy tanker access and fill point, safety shower and hose facilities.

Sodium Hypochlorite is available in the region from at least three suppliers, in bulk, or a range of suppliers if purchased in smaller volumes. There are a number of facilities that operate with bulk Sodium Hypochlorite deliveries throughout the country.

The use of Sodium Hypochlorite requires pH depression, which is currently controlled through CO<sub>2</sub> Gas in the Main Pool and Hydrochloric Acid in the Small Pool.





## Self-Generated Sodium Hypochlorite (1-3% Strength)

We were provided with a proposal received from Liquid Chlorine New Zealand, to change the existing system over to an onsite chlorine generation system.

On site generation of Sodium Hypochlorite is achieved through the use of electrolysis that converts salt into a weak Sodium Hypochlorite solution. Salt is purchased in 25kg bags and manually dosed into the vessel for conversion. This is an ongoing continuous process that produces Sodium Hypochlorite that is stored in bulk for dosing to the pool.

Historically plant was purchased as a capital cost item at construction, or was purchased under a lease to own agreement. Most recent installations however are operated under an agreement whereby the plant is owned by the salt supplier, as per the proposal, provided.

The proposal allows the plant owner to invoice the operator based on the litres of chlorine produced, with the plant owner covering all required servicing and maintenance of the generators, cell replacement and salt supply.

The set up cost to supply and install the required services and supply line to the Small Pool Plant Room is \$11,246.88 + GST. Excluding potential cost of Small Pool dosing pump (\$1,388.00 + GST).

The cost of chlorine quoted is \$0.05 per litre of 0.8% Sodium Hypochlorite. At an equivalent concentration of 13% this works out to be \$0.81 per litre (commercial solution).

The system is inherently safer than commercial Sodium Hypochlorite due to its low concentration strength, there are however a number of specific requirements:

- Isolation of the salt store due to its corrosive nature
- Salt is required to be purchased on a per pallet basis. The facility, would require space for at least one pallet at a time – a pallet holds 1.2 tonnes of salt.
- Salt handling requires relatively low level PPE

Typically facilities are still required to maintain a small supply of commercial strength Sodium Hypochlorite in order to boost chlorine levels from time to time. This occurs when the demand for chlorine residual (by swimmers using the pool) outstrips the chlorine levels capable of being dosed in a short period of time.

Understanding the type of usage at the facility this could be expected to occur on a relatively frequent basis as the number of swimmers could fluctuate quite quickly, particularly in a outdoor facility on a summer's day. This addition of commercial strength chlorine is generally undertaken manually, and whilst it may be via a dosing pump, still requires operator intervention and an understanding of the implications.

The balancing chemical required for Self-Generated chlorine is Hydrochloric Acid or CO<sub>2</sub> Gas. Hydrochloric Acid (currently used on Small Pool) requires manually mixing with water to dilute, and has a very high risk profile and specific health and safety needs, compared with CO<sub>2</sub> Gas (currently used on Main Pool) and is easy to handle and has a relative low risk profile, albeit at a greater cost.

Finally, the weakness of the generated chlorine means that a reasonable volume is required to be dosed, directly from bulk storage tanks. We expect this would be a similar volume to commercial strength Sodium Hypochlorite, however with a greater turnover, and the previously mentioned need to support it with a commercial strength supply.



## Calcium Hypochlorite (60-65% Strength)

Calcium Hypochlorite is delivered as fine granules, generally in a 40kg drum. Traditionally this chemical was used at school pools and small community pools. Prior to the development of purpose designed plant, the use of Calcium Hypochlorite required slurry tanks, transfer of the liquid and disposal of the residual slurry. This disposal and intensive handling was the primary reason that Calcium Hypochlorite was not used beyond the type of facility outlined above.

In the past 5 years over 200 commercial pools throughout Australia have started using Granular Calcium Hypochlorite (dry chlorine), including pools from 1000 to 6 000 000 litres. There are currently two pools in the Auckland region in the process of installing this type of chlorination, including the Albany Stadium Pool Facility.

Due to a reduction in TDS the use of dry chlorine will result in reduced backwashing caused by high TDS levels.



**Chlorination system for three pools**

Calcium Hypochlorite has a trigger volume of 400kg, which means beyond that volume stored on site, specific containment and handling requirements need to be met.

We have been advised that cost savings of around 30% can be achieved over Sodium Hypochlorite.

Additionally the balance chemical best suited is Sulphurous Acid, which has a medium risk profile and specific health and safety needs. It is purchased in a pre-diluted state, thereby reducing the risk profile. CO<sub>2</sub> Gas and/or Sodium Bisulphate are also able to be used.

Calcium Hypochlorite has a pH of 9-11, 3-5 lower than Sodium Hypochlorite. The use of Calcium Hypochlorite chlorine will see a saving in pH control due to the addition of a lower pH product from the outset.

Both Calcium Hypochlorite and Sulphurous Acid are available from a wide range of local/domestic suppliers, and dosing can be controlled for FAC, TAC, pH, TDS and any combination of detection required.

The direct benefits of this type of system include:

- On-going supplier choice
- Low to moderate compliance needs
- Smallest impact on landscape and ancillary building needs
- Cost effectiveness (capex and opex)





## Summary

Further to the information provided above, the following table will assist in the selection process of the preferred Water Treatment System:

|                              | Calcium Hypochlorite | Commercial Strength Sodium Hypochlorite | Self-Generated Sodium Hypochlorite |
|------------------------------|----------------------|-----------------------------------------|------------------------------------|
| Water Consumption            | Moderate             | Moderate                                | Moderate                           |
| Space Requirements           | Good                 | High                                    | High                               |
| Maintenance Requirements     | Moderate             | Moderate                                | Moderate                           |
| Staff Time                   | Good                 | Good                                    | Good                               |
| Health & Safety              | Good                 | Moderate                                | Good                               |
| Cost                         | Moderate             | High                                    | Good                               |
| Dosing System Control Choice | Moderate             | Good                                    | Moderate                           |
| Contractor                   | Moderate             | Moderate                                | Moderate                           |
| Delivery Availability        | Good                 | Good                                    | Good                               |
| Balance Chemical Cost        | Good                 | Moderate                                | Moderate                           |

|      |                                    |                        |                           |
|------|------------------------------------|------------------------|---------------------------|
| Key: | Good / Low Risk / Choice Available | Moderate / Medium Risk | High Risk / Little Choice |
|------|------------------------------------|------------------------|---------------------------|

We believe the Self-Generated Sodium Hypochlorite option is the least preferred of the options.

Self-Generated Chlorine would restrict Council to a lease and supply arrangement with one supplier and an ongoing commitment to the system and salt supply. There are some concerns with the corrosive nature of the salt which would mean a specific storage structure would be required. More importantly, the facility will still need to maintain a supply of Commercial Strength Sodium Hypochlorite, which is perhaps the biggest operational (and cost) challenge.

Therefore, the preferred options are Commercial Strength Sodium Hypochlorite, or Calcium Hypochlorite.

Changing to a bulk supply of Commercial Strength Sodium Hypochlorite is a straight forward cost effective option for the facility, as the only requirement would be the installation of a bulk storage tank. This would be installed in the Main Plant Room, and supply for the Small Pool could be decanted from this tank, or the supplier could fill 200 litre containers within the Small Pool Plant Room at the time they complete a bulk delivery.

The cost of a self banded bulk storage tank with a 1,500 litre capacity would be approximately \$10,000 + GST.

We would estimate a cost saving of approximately \$3,000 per season through this method, after the initial cost of the tank.



Considering the options, we do however recommend Calcium Hypochlorite is considered as the main chlorine source, assuming Council is happy being the second Local Authority to install plant of this kind in a facility of this size and type.

Benefits of either options include:

- On-going supplier choice
- Low to moderate compliance needs
- Smallest impact on landscape and ancillary building needs
- Cost effectiveness (capex and opex).

We are confident either option will provide a compliant, easily managed and cost effective water management system.

However, our most preferred option would be Calcium Hypochlorite due its reduced Plant Room and storage needs, lower compliance threshold, lack of tanker deliveries, reduced pH correction need, supplier choice and resultant cost effectiveness.



## Recommendations & Indicative Costs

The following is a summary of recommendations from our site visit. Some of the recommendations reference 'upgrade works' – the exact scope of these works is included in the following section.

### Poolside and Equipment

#### Pool Covers

Given the weight of the Main Pool covers they would generally require two staff members to put the covers on/ off the pool. Therefore we would recommend that these are changed over to an under seat reel system (as per photo below). This would simplify the process of putting the covers on and off, as they would be fixed to the ground, meaning staff wouldn't need to move the reels around.

These would need to be located at the shallow end of the pool, as the dive blocks are located at the deep end.



Due to the length of the pool covers, a winder would be required, however the facility already has one onsite, which would be able to be reused.

In regards to the Small Pool, we feel the current setup is dangerous with the reels at a low head height over the pool tank. Although we have not been advised of any immediate issues with this, given the obvious potential for injury, we would recommend that a under seat reel system is also installed on this pool.

We recommend that an under seat reel system is installed in the current location of the river stones, however this could require a redevelopment of this concourse area.

#### Indicative Costs

| Item                                                                                            | Indicative Cost Estimate |
|-------------------------------------------------------------------------------------------------|--------------------------|
| Main Pool – Supply and Install new thermal covers and under seat reel system. Excluding winder. | \$ 45,000                |
| Small Pool – Supply and Install new thermal covers and under seat reel system.                  | \$ 20,000                |

Note: Depending on timeframes for this recommended upgrade works, there is potential that the existing thermal pool covers could be re-used on this proposed reel system.



## Concourse Shade/ Seating

We recommend that further shade options are installed along the side of the Main Pool on the embankment. This area would benefit from a fixed shade sail option, to provide shade for spectators and pool users. Due to the depth of this pool, supervision requirements would be similar to the Small Pool.

Additionally, to encourage people to abide by the 'Pool Alone Policy', it is important that the facility provides sufficient seating around the concourse area.

### Indicative Costs

| Item                                              | Indicative Cost Estimate |
|---------------------------------------------------|--------------------------|
| Supply and install new fixed shade sail structure | \$40,000                 |
| Supply and install new concourse seats            | \$2,000                  |

## Pool Surface

The Main Pool surface will need to be re painted within the next two years and we suggest that this is incorporated into the scope of the proposed upgrade works.

Whilst this is being completed, we also recommend that the Small Pool is painted as this surface is failing. This will enable all future works to be in line with each other, which will also contribute to economies across contractor costs.

It is important that the correct paint finish is chosen as there are a number of different types of paint finishes available – chlorinated rubber compound, epoxy, or standard pool paint. This type of finish is inexpensive to install, although painted pools usually require a repaint every 5 to 7 years. Epoxy is approximately double the cost of a chlorinated rubber compound, but will provide a superior finish. We recommend Epoxy over other paint alternatives such as chloro rubber or cheaper "pool paint".

Recent projects where we have delivered an epoxy paint finish have been priced around \$40 per/m<sup>2</sup> for the paint (excluding preparation costs), with soft joint repairs costing up to \$75 per/m, depending on the size and condition. Generally, we would expect a 3 to 5 year warranty on the paint finish, with an expected lifespan of at least 7 years.

Preparation costs are based on full two pass diamond grind of the surface, which enables the surface to be taken back to bare concrete. As a comparison, other forms of preparation only prepare the top coat for the paint to "key in".

Paint will be the most cost effect surface for these seasonal pools.



### Indicative Costs

| Item                                                                                      | Indicative Cost Estimate |
|-------------------------------------------------------------------------------------------|--------------------------|
| Main Pool – Prepare surface and apply epoxy pool paint. (excluding jointing requirements) | \$25,000                 |
| Small Pool – Prepare surface and apply epoxy pool paint (excluding jointing requirements) | \$7,000                  |
| Soft joints (\$75 per linear meter)                                                       | TBC                      |

## Diving Blocks

We recommend that if the diving blocks are continued to be used, the depth of the pool tank is adjusted to ensure these can be used compliantly with the requirements of NZS 5826:2010.

The minimum depth at the end of the pool tank needs to be 1.35m for 6m from the wall where the diving blocks are installed. The proposed upgrade works includes installing a mobility ramp and overflow channel, however to install these the pool depth will be increased by 200mm, which would mean the dive blocks can be used at a compliant depth.

### Indicative Cost

Cost included within the proposed upgrade works.



## Compliance

### Pool Depth Signage

Pool depth signage needs to be installed prior to the commencement of the upcoming season. This is a compliance requirement which needs to be addressed with urgency.

Based on our experience, the most effective application for depth signs for an outdoor facility would be to paint the depth signs onto the concrete concourse.

Although we have provided an indicative cost for this, these could easily be painted onto the concourse by a Council maintenance staff member.

#### Indicative Cost

| Item                                                                         | Indicative Cost Estimate |
|------------------------------------------------------------------------------|--------------------------|
| Paint depth signage onto the concourse adjacent to the Main and Small Pools. | \$500.00                 |

### Plant Room Chemical Signage

Signage needs to be relocated to the exterior side of the Plant Room doors in order to fully inform what chemicals are stored within the Plant Room prior to entry.

The signage will need to be altered if the disinfection system is changed, as per our recommendation, from Sodium Hypochlorite to Calcium Hypochlorite.

As mentioned, above, this could also be easily completed by a maintenance staff member.

#### Indicative Cost

| Item                                                                                | Indicative Cost Estimate |
|-------------------------------------------------------------------------------------|--------------------------|
| Relocate chemical signage onto the external side of the Plant Room access doors x2. | \$250.00                 |





# Pool Plant, Circulation, Filtration, Disinfection and Heating

## Water Circulation

The wide overflow channels down the side of the Main Pool are functional, however the flow of the pool will be improved if an overflow channel was installed down each side of the pool. This channel needs to have overflow grates installed, with one central dropper installed from each channel back to the balance tank.

Understanding a ramp has been proposed within the scope of future upgrade works, it would be the opportune time to incorporate the over flow channel works at this time.

Although there are no obvious issues with either the lift or duty pumps, these will need to be upgraded as part of the filter upgrade works for the increased flow rate. This will also be the opportune time to rationalise pipework.

The two skimmers on the side of the Small Pool will not be sufficient for the flow rate of water required for the increased filtration area. Therefore, we recommend that two further skimmers are installed to enable the flow to be increased for the upgraded filtration system required.

### Indicative Cost

| Item                                            | Indicative Cost Estimate |
|-------------------------------------------------|--------------------------|
| Small Pool – Install 2 new skimmers on poolside | \$5,000                  |

## Filtration

The Main Pool filter is undersized and needs to be upgraded, as it is currently providing approximately 25% of the required filtration area.

Other filtration options have also been considered, however the current Plant Room, is not sufficiently sized to house pressure sand filters nor does the height allow Pressure DE filtration to be considered,

Therefore, we recommend the existing filter tank (which holds 26 elements) is increased in size to accommodate the additional 52 elements required as there is sufficient space to do so.

To increase the size of the filter tank, we would recommend that the tank is extended either side of the existing tank. The floor would need to be excavated to the required depth and building work completed to construct the tank.

These calculations have been checked against proposed upgrade works, and should the pool tank be deepened, the system will be compliant.

After each washdown Vacuum DE filters require DE media to be replaced, which is an industrial dust which must be handled and stored following appropriate health and safety methods (including gloves and facemask), however in its wetted condition does not pose the same degree of risk. Media storage space is required of 2m<sup>2</sup>.



The Small Pool filtration system also requires upgrading, with it currently providing 50% of the required flow. The plant room is sufficiently sized for two further pressure sand filters to be installed along with associated circulation pumps. Alternatively one Pressure DE PCT 80 filter could be installed.

#### Indicative Costs

| Item                                                                           | Indicative Cost Estimate |
|--------------------------------------------------------------------------------|--------------------------|
| Main Pool – Extend the existing filter tank, supply 52 elements and manifolds. | \$60,000                 |
| Small Pool – Supply and installation of two new filter tank.                   | \$20,000                 |

## Disinfection and pH Control

The current automated disinfection and pH control systems are sufficient, however we recommend that the disinfection source is changed or a bulk storage tank is installed for Sodium Hypochlorite.

We recommend the disinfection source is changed to a Calcium Hypochlorite system, as it is readily available on the market from a variety of suppliers in the required 20kg buckets. Additionally, the required Plant Room space for the Calcium Hypochlorite unit and required chemical supplies is approximately 2m<sup>2</sup> which is minimal in comparison to other systems or bulk storage tanks.

The Calcium Hypochlorite dosing units are able to operate via the existing Pool Wizard and Pool Major systems, therefore we recommend these are used if it can be confirmed that there are no issues with either of the units.

The other option is to install a bunded and ventilated tank which has capacity to store 1,500 litres of Commercial Strength Sodium Hypochlorite.

#### Indicative Costs

| Item                                                              | Indicative Cost Estimate |
|-------------------------------------------------------------------|--------------------------|
| Main Pool – Supply and installation of Calcium Hypochlorite Unit  | \$17,000                 |
| Small Pool – Supply and installation of Calcium Hypochlorite Unit | \$14,000                 |
| Supply and installation of new bunded and ventilated tank         | \$10,000                 |



# The Pool Tank

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Watershed has been engaged to complete a option analysis for including a mobility access ramp into the Main Pool. As part of this review, we also provide lane rope configuration options.

The required flow rate is included within the filtration recommendations above.

## Mobility Access Ramp

### Current Pool Access

Access into the Main Pool is currently via a mobile step unit which is wheeled out and placed onto the side of the pool structure. The unit has wide checker plate steps and provides a functional purpose for access.

Due to the fixings on the corner of the pool closest to the plant room, we assume this is where the unit is installed during the season. The steps run parallel to the head wall, where the dive blocks are located. NZS 4441:2008, states that "Stairs, ladders, or step holes shall be positioned that pool users are discouraged from swimming beneath diving boards".

Additionally, the current access unit has a gap behind it, which is high risk as people can swim around and behind it which presents a increase risk of entrapment. NZS 4441:2008 states that the "steps or ladders that project into the pool shall be so designed that pool users cannot be trapped by them".

The access steps have a hand rail installed on both sides of the unit.

There was no evidence of any further means of access around the pool, however we would expect, that at a minimum there were access ladders installed at the shallow end of the pool. Given the pool is 33.5m long, there is a requirement for a means of access at this end of the pool as NZS 4441:2008 requires "at least one means of exit within 25 m of all points of the perimeter of the pool where the water depth is greater than 500 mm."

Currently, there is no access to the pool for mobility impaired people, with no ramp or mobility hoist option in place.

### Proposed Pool Access

The current mobile step unit is functional, however it does not comply with the requirements of NZS 4441:2008 or provide a point of access to mobility impaired pool users. Therefore, we recommend that Council look to install a ramp to ensure the pool can be accessed by a wider range of users.

The design of the pool, with the wide overflow channels provides the opportunity to install a ramp down the side of the pool tank. The recommended width for a ramp which is sufficiently sized for wheelchair access is 1.2 m wide, with a gradient of 1:12.

The current width of the overflow channels is 1.345 m (excluding the width of the pool wall), which is sufficient for installing a ramp without reducing the width of the pool.



This is important to enable the pool to remain six lanes wide, of a sufficient width which complies with the requirements of NZS 4441:2008. The minimum lane width for training pools should be 2.15m.

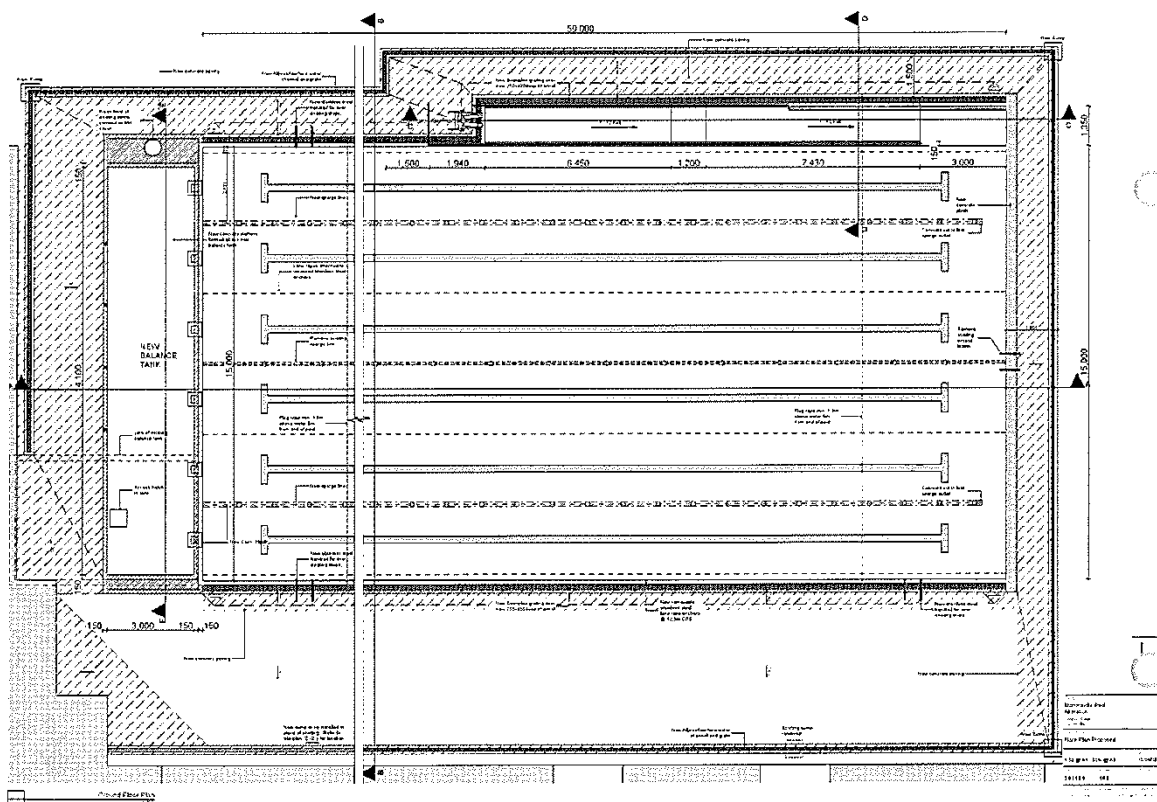
The desired gradient of the ramp is 1:12, although this could be increased to 1:15 in accordance with NZS 4441:2008.

Installing a ramp will have implications on the current return channels which are currently centralised along the overflow channels, as well as the inlets located down the wall of the pool. However, given the current filtration system is undersized and needs to be upgraded, it would be the opportune time to redirect these pipes as part of the works to install an access ramp.

Handrails on either side of the ramp would need to be installed at a 0.9m height.

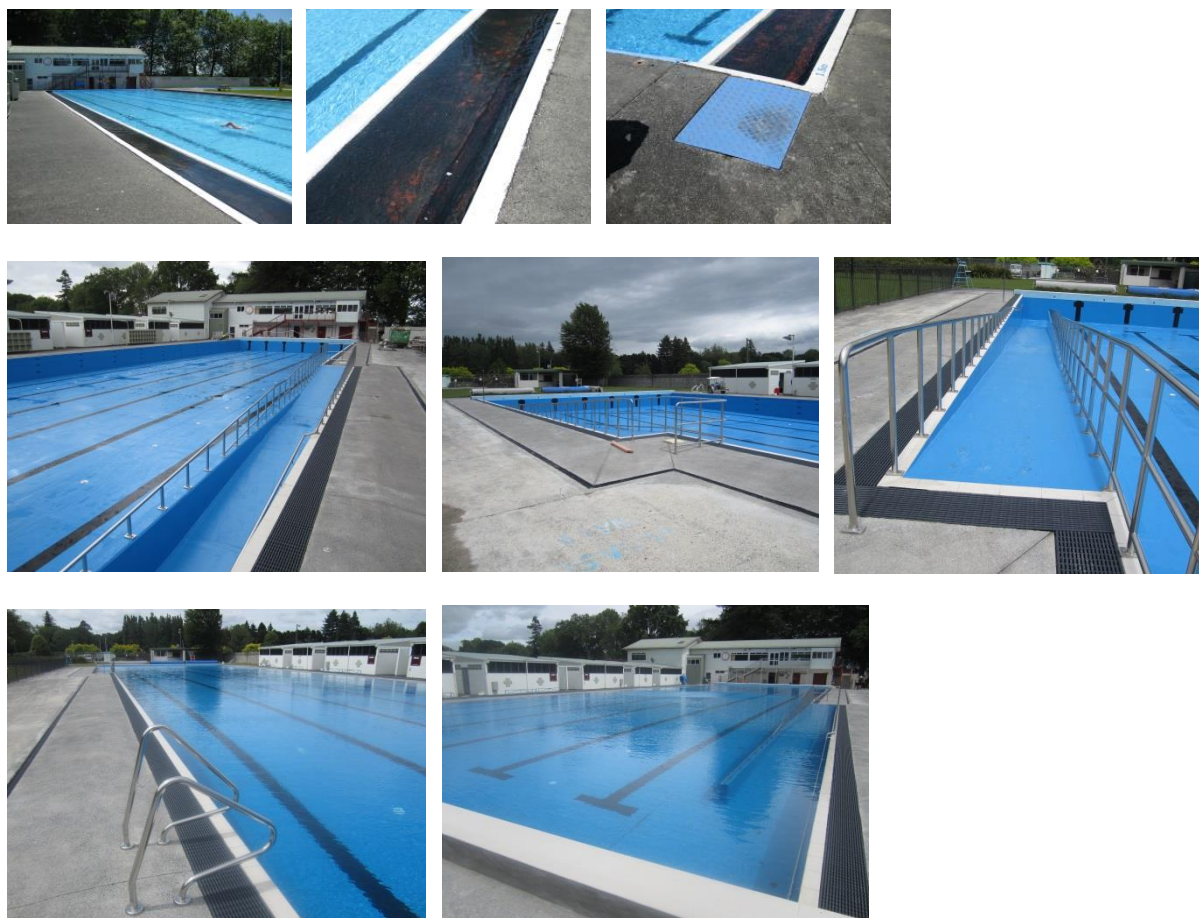
We have been involved in delivering several projects where there has been ramp access installed into an existing pool. Prior to the completion of upgrade works in 2012, the Morrinsville Pool was a similar design to the Dave Hume Pool, with wide over flow channels. The scope of this upgrade work included installing a ramp, in the location of the wide overflow channels for access. This was also installed as part of filtration upgrade works.

The following diagram is a drawing from a previous project which we were involved in. This will enable a further understanding of our recommended design for the pool.





Below are some photo examples of the Morrinsville Pool prior to the upgrade works commencing, and the outcome on completion of the project.



## Lane Rope Configuration

Within the scope of the upgrade works, we also recommend that the opportunity is taken, whilst the pool is empty, to install further stainless steel lane rope anchors.

Installing additional anchor points in the pool will provide further opportunities in how the pool is used. Traditionally, lane ropes are installed to divide the pool lengthwise, however, this does not necessarily need to be the norm.

The facility caters for a wide variety of user groups and schools within a short space of time, therefore it is important that space is efficiently used to maximise occupancy, and usage type.

The exact number and layout of lane rope anchors will need to be discussed in detail with the operators who are aware of age groups, type of usage, current challenges with how space is used and desired needs; however as a guideline, further lane rope anchors have the potential to provide the following:

- Allocated spaces to enable multiple groups to use the pool at one time either length or width ways.
- Confine learn to swim or school groups to within a specific area. This could be half or quarter of a lane length.



- Divide the pool to enable aqua aerobics classes to be run at the same time a community group is using the other end of the pool.
- Casual swimming space can be adapted and changed in relation to group bookings; for example two lanes could be made available for to casual swimmers, with the remaining four lanes separated width ways to enable two different school groups to use the remaining space.

### Indicative Costs

| Item                                                                                                                         | Indicative Cost Estimate |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Main Pool - Raise the side of the pool tank to enable an overflow channel, ramp and lane rope anchor points to be installed. | \$600,000                |
| Lane ropes with polypropylene discs and floats                                                                               | \$30 per/m               |

Notes: The proposed changes to the filtration and disinfection systems are sufficiently sized to accommodate the additional volume of water that will be introduced by raising the sides of the pool tank.

All cost estimates exclude fees and consents if required.





## Conclusion

There is opportunity to further develop this facility to improve its functionality from both an operational and community perspective.

The current filtration systems are no longer compliant and require upgrade work to enable them to comply with NZS 4441:2008. Additionally we see a need to reduce operational costs associated with either the method of water treatment currently used, or volumes which are purchased.

We recommend that upgrade work is incorporated into the scope of any other desired works at the facility, such as installing a mobility ramp.

To assist in scoping the required project we have separated the works in what we see as 'must do' and 'nice to do' works below:

| Must do work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nice to do work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Repaint the Main and Small Pools.</li> <li>Install depth markings on the side of the Main and Small Pools.</li> <li>Install chemical signage on the exterior of the Plant Room doors.</li> <li>Install two further skimmers on the wall of the Small Pool to increase required water flow.</li> <li>Enlarge the Main Pool filtration tank to incorporate required filter elements for compliance.</li> <li>Install two further filters on the Small Pool system to increase the filtration area for compliance.</li> <li>Either upgrade the disinfection system or install a bulk storage tank for Sodium Hypochlorite.</li> </ul> | <ul style="list-style-type: none"> <li>Install new under seat reel system on the Main and Small Pools.</li> <li>Install new shade option on poolside.</li> <li>Raise the side of the pool structure to enable the dive blocks to be used compliantly and a new mobility access ramp to be installed.<br/>Note: The mobility ramp can only be installed if the sides of the pool tank are raised.</li> <li>Install further lane rope configuration options within the pool structure.</li> </ul> |

We thank you for your instructions and we look forward to meeting with you to discuss this report and the next steps.

### Report authored by:

Amy Scott  
**Aquatics Manager**

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**Managing Director**

Assessment Date: 7 June 2016

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# **Dave Hume Pool Preliminary Feasibility Study**

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## **Final Report**

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## Current Situation

The Dave Hume complex was opened in 1973 as an outdoor 33 metre 6 lane pool with an additional children's pool facility. In recent years two outdoor spa pools have also been added to the complex.

The pool is open during the summer months from October through to April each year and is heated geothermally.

The complex is in good condition with the water quality of the pools being extremely high. It is situated adjacent to Katikati College.

The complex is owned by WBOP District Council and funded by a service contract. It is governed and managed by the Dave Hume Pool Trust, which is made up of representatives from the clubs, schools and the community. A manager is appointed to oversee the day to day pool operations.

The Dave Hume pool is predominately utilised for and focused around structured swimming. The local primary schools and college utilising it for their aquatic curriculum while swim clubs, private swim coaches and learn to swim operators are also core users. In terms of the proportion of the pool time which is available for use, the wider community have limited unstructured access during weekdays.

There are many issues currently associated with the operation of the complex. These issues are widely acknowledged by the Trust and the pools core stakeholders. Some of these issues are:

- The pools are only open during the summer months.
- Swimmers having to travel to Tauranga during winter months.
- Limited access and space for casual and recreational community pool use.
- Competing demands from the various private coaches and learn to swim operators.

As a result a preliminary feasibility study was requested to determine the long term potential of the complex and its potential to meet current needs, and to understand the associated cost implications.

## Purpose of the Report

This report has been prepared as a **preliminary feasibility document to aid discussion between potential partners** in the proposed Dave Hume Pool complex redevelopment. The document has been prepared in accordance with the Western Bay of Plenty District Council and Dave Hume Trust project brief and report formatting requirements. The document is envisaged to be the first step in a much longer process. Prior to a detailed business plan being developed it is essential that the potential partners discuss and finalise the type of facility they desire, and the likely levels of available capital funding.

## 1.0 Population Overview

The following section provides a brief overview of the demographic data for Katikati and the surrounding areas, as well as future population projections. Demographic and projection data are drawn from Statistics New Zealand's 2006 Census and the projections are from the Western Bay of Plenty Sub-region SmartGrowth strategy projections unless stated otherwise.

### Key Summary Considerations

The demographic analysis of Katikati and surrounding areas has indicated that the following:

- There was a potential catchment population of **15,381** at the 2006 Census which includes the areas of Katikati, Waihi Beach, Aongatete, Athenree, Island View – Pios Beach, Tahawai and Waihi.
- The catchment population above excludes the area of Omokoroa, which has some of the community utilising the current Dave Hume Pool. The Omokoroa community is expected to undergo significant growth in the future with the recent plan changes allowing new residential developments.
- This potential catchment area (as outlined above) is projected by Statistics New Zealand to increase to **18,360** by 2031.
- The SmartGrowth population projections for Katikati and Waihi Beach alone is that by 2051 the population of both areas will be **22,800**.
- The Katikati area is currently relatively 'older' than the rest of the Bay of Plenty Region. The median age is 48, compared with 37 for the whole region.
- Also 33.2 percent of people in Katikati are aged 65 years and over, compared with 14.8 percent for the region. And only 18.3 percent of people are aged under 15 years, compared with 23.0 percent for the region as a whole.

### 1.1 Katikati and Catchment Population

The 2006 Census identified that 3,582 people lived in Katikati at that time. This was an increase of 925 people, or 35 percent, in the 10 years since the 1996 Census (Table 1).

However, while this growth rate is higher than the immediate surrounding areas it is relatively low compared to that of adjacent areas spread along State Highway 2 from Tauranga City. The major growth areas in the Bay of Plenty region have been to the South in the satellite areas of Tauranga around Bethlehem.

Table 1: Population Change 1996 – 2006

| Area Unit (Statistics NZ)<br>(arranged North to South) | 1996  | 2001  | 2006  | Population<br>growth since 1996 | %<br>growth |
|--------------------------------------------------------|-------|-------|-------|---------------------------------|-------------|
| Waihi                                                  | 4,743 | 4,524 | 4,503 | -240                            |             |
| Waihi Beach                                            | 1914  | 1908  | 1776  | -138                            | -7%         |
| Athenree                                               | 504   | 516   | 612   | 108                             | 21%         |
| Island View – Pios Beach                               | 567   | 609   | 558   | -9                              | -2%         |
| Tahawai                                                | 1425  | 1566  | 1743  | 318                             | 7%          |

|                  |               |               |               |     |     |
|------------------|---------------|---------------|---------------|-----|-----|
| <b>Katikati*</b> | 2661          | 2916          | 3582          | 921 | 35% |
| <b>Aongatete</b> | 1977          | 2286          | 2607          | 630 | 32% |
| <b>Total</b>     | <b>13,791</b> | <b>14,325</b> | <b>15,381</b> |     |     |

Source: 2006 Census Population

The catchment area population above excludes the area of Omokoroa, which has some of the community utilising the current Dave Hume Pool. The Omokoroa community is expected to undergo significant growth in the future with the recent plan changes allowing new residential developments. It will be important to understand the Omokoroa community's preference as to whether they prefer to travel to Tauranga or Katikati to access indoor swimming opportunities.

The current population of Omokoroa is approximately 2,510 and is projected to increase to 3,540 by 2031 as identified by Census Population. SmartGrowth projections for Omokoroa identify the population will reach 10,400 by 2031.

Table 2: Population Projections

| Area Unit<br>(Statistics NZ)  | 2006   | 2011   | 2016  | 2021  | 2026  | 2031  | Pop <sup>+</sup><br>growth | %<br>growth |
|-------------------------------|--------|--------|-------|-------|-------|-------|----------------------------|-------------|
| <b>Waihi</b>                  | 4,503  | 4,570  | 4480  | 4350  | 4180  | 3970  |                            |             |
| <b>Waihi Beach</b>            | 1820   | 1860   | 1940  | 2030  | 2110  | 2170  | 350                        | 19%         |
| <b>Athenree</b>               | 630    | 690    | 750   | 810   | 860   | 910   | 280                        | 44%         |
| <b>Island View–Pios Beach</b> | 570    | 570    | 580   | 580   | 580   | 580   | 10                         | 2%          |
| <b>Tahawai</b>                | 1780   | 1840   | 1950  | 2050  | 2130  | 2190  | 410                        | 23%         |
| <b>Katikati</b>               | 3680   | 4160   | 4390  | 4570  | 4720  | 4840  | 1160                       | 32%         |
| <b>Aongatete</b>              | 2680   | 2930   | 3150  | 3360  | 3540  | 3700  | 1020                       | 38%         |
| <b>Total</b>                  | 15,663 | 16,620 | 17240 | 17750 | 18120 | 18360 |                            |             |

Source: Area Unit Population Projections by Territorial Authorities, Age and Sex, 2006(base)-2031 update

## 1.2 Smart Growth Population Statistics

However, the population growth assumptions developed through the SmartGrowth strategic planning process, identify an even more significant increase in the population for both Katikati and Waihi Beach than compared to the New Zealand Statistics data.

By 2051 the Smart Growth projected populations for Waihi Beach are estimated to be 7,590 and for Katikati to be 15,210.

Under the SmartGrowth projections Katikati and Waihi Beach would have a combined population of 22,800 by 2051. Consideration should be given to see how the actual growth of both areas continues to track against the SmartGrowth projected population figures in the future.



### 1.3 Population Characteristics and Trends

#### 1.3.1 Age distribution

The key points regarding the age distribution of Katikati are:

- The Katikati area is currently relatively 'older' than the rest of the Bay of Plenty Region. The median age is 48, compared with 37 for the whole region
- Similarly 33.2 percent of people in Katikati are aged 65 years and over, compared with only 14.8 percent for the region. And only 18.3 percent of people are aged less than 15 years, compared with 23.0 percent for the region as a whole.
- According to Statistics NZ projections this relatively older age distribution is not projected to change proportionately as the Katikati population increases (Tables 3 and 4).

Table 3: Projected Age Distribution (Numbers)

| Area     | Age (years)  | 2006        | 2011        | 2016        | 2021        | 2026        | 2031        |
|----------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Katikati | 0-14         | 660         | 700         | 720         | 730         | 730         | 740         |
|          | 15-39        | 770         | 840         | 870         | 910         | 960         | 960         |
|          | 40-64        | 1030        | 1150        | 1210        | 1220        | 1190        | 1180        |
|          | 65+          | 1210        | 1470        | 1590        | 1700        | 1830        | 1960        |
|          | <b>Total</b> | <b>3670</b> | <b>4160</b> | <b>4390</b> | <b>4560</b> | <b>4710</b> | <b>4840</b> |

Source: Area Unit Population Projections by Territorial Authorities, Age and Sex, 2006(base)-2031 update

Table 4: Projected Age Distribution (Percentages)

| Area     | Age (years)  | 2006        | 2011        | 2016        | 2021        | 2026        | 2031        |
|----------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Katikati | 0-14         | 18%         | 17%         | 16%         | 16%         | 15%         | 15%         |
|          | 15-39        | 21%         | 20%         | 20%         | 20%         | 20%         | 20%         |
|          | 40-64        | 28%         | 28%         | 28%         | 27%         | 25%         | 24%         |
|          | 65+          | 33%         | 35%         | 36%         | 37%         | 39%         | 40%         |
|          | <b>Total</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> |

Source: Area Unit Population Projections by Territorial Authorities, Age and Sex, 2006(base)-2031 update

#### 1.3.2 Gender balance

The gender balance of 47 percent male versus 53 percent female is the same as that for the whole Bay of Plenty Region (Table 5). That is also not projected to change significantly by 2031.

Table 5: Gender - 2006

| Population - 2006 Census |              |                |
|--------------------------|--------------|----------------|
|                          | Katikati     | Bay of Plenty  |
| Male                     | 1,674        | 124,812        |
| Female                   | 1,908        | 132,567        |
| <b>Total</b>             | <b>3,579</b> | <b>257,379</b> |

Source: 2006 Census Population

### 1.3.3 Ethnic Groups

Katikati has a much less diverse ethnic composition than the rest of the Bay of Plenty Region with over 74.8 percent being of European descent, compared with 67.1 percent for the whole Region.

Most ethnic groups are less represented in Katikati, with Maori in particular at a much lower proportion (11.2% compared to 27.5% for the Region). However, the area has a higher proportion of residents who were born overseas, comprising 24.3 percent of the population compared with 14.9 percent for the whole Region.

This reflects the recent history of the area, which has been experiencing population growth and construction of new housing. For people born overseas who are now living in Katikati, the most common birthplace was the UK and Ireland. This corresponds to the immigrant birthplace pattern for the wider Bay of Plenty Region.

Table 6: Ethnic Groups by Percentage of the Population.

| Ethnic Groups - 2006 Census                  |          |               |
|----------------------------------------------|----------|---------------|
|                                              | Katikati | Bay of Plenty |
| <b>European</b>                              | 74.8     | 67.1          |
| <b>Maori</b>                                 | 11.2     | 27.5          |
| <b>Pacific peoples</b>                       | 04.1     | 2.6           |
| <b>Asian</b>                                 | 5.8      | 3.2           |
| <b>Middle Eastern/Latin American/African</b> | 0.2      | 0.3           |
| <b>Other ethnicity</b>                       | 12.5     | 12.3          |

Source: 2006 Census Population

## 2.0 Network of Facilities

There is a small selection of existing pool facilities in the areas surrounding Katikati which provide pool opportunities for their communities.

Gaining an understanding of the network of existing and planned pool facilities throughout the northern part of Western Bay of Plenty is vital so that the proposed Dave Hume Pool facility fits within the hierarchy, and does not unnecessarily duplicate future facilities and functions.

### Key Summary Considerations

A review of the current and planned aquatic developments have indicated the following:

- The Greerton Pool in Tauranga is the closest 12 month indoor pool for Katikati and surrounding area residents (which is approximately 35 minutes away).
- Waihi College has a 25 metre heated outdoor pool which is open to the community during summer months.
- A new outdoor 25 metre pool is being planned at Omokoroa Number 1 School.
- There are other outdoor 'hot pool' experiences within the Katikati and surrounding areas.

### 2.1 Katikati Pool Facilities

Table 7: Katikati Pool Facilities

| FACILITY TYPE                        | FACILITY                                                                                                                                                                                   | COMMUNITY USE                                                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dave Hume Pool Complex</b>        | <ul style="list-style-type: none"> <li>• Outdoor</li> <li>• Heated</li> <li>• 33 metre</li> <li>• 6 lanes</li> <li>• Learners heated outdoor</li> <li>• 2 Spa pools</li> </ul>             | <ul style="list-style-type: none"> <li>• Summer months</li> <li>• Various time slots during the week</li> <li>• 11am – 6pm weekends</li> </ul> |
| <b>Sapphire Springs Holiday Park</b> | <ul style="list-style-type: none"> <li>• Outdoor</li> <li>• Large hot pool</li> <li>• Small soaking pool</li> <li>• Children's shallow pool</li> <li>• 2 enclosed private pools</li> </ul> | <ul style="list-style-type: none"> <li>• Community and holiday park users</li> </ul>                                                           |

## 2.2 Existing Pool Facilities in Surrounding Areas

Table 8: Existing Pool Facilities in Surrounding Areas

| NAME                                         | FACILITY                                                                                                     | DISTANCE TO KATIKATI                                         | COMMUNITY USE                                                                                                                                                                              |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waihi College Community Swimming Pool</b> | <ul style="list-style-type: none"> <li>Outdoor</li> <li>25 metre</li> <li>Heated</li> </ul>                  | <ul style="list-style-type: none"> <li>20 minutes</li> </ul> | <ul style="list-style-type: none"> <li>Summer months</li> <li>6am – 8:30am weekdays</li> <li>12:15pm – 1:15pm weekdays</li> <li>3pm – 5pm weekdays</li> <li>11am – 5pm weekends</li> </ul> |
| <b>Waihi Beach Primary School</b>            | <ul style="list-style-type: none"> <li>Outdoor</li> <li>Learn to swim</li> <li>Heated</li> </ul>             | <ul style="list-style-type: none"> <li>20 minutes</li> </ul> | <ul style="list-style-type: none"> <li>Summer months</li> <li>After school learn to swim operates from pool</li> </ul>                                                                     |
| <b>Waihi Beach Top 10 Holiday Park</b>       | <ul style="list-style-type: none"> <li>Outdoor</li> <li>Heated</li> <li>25 metre</li> <li>3 lanes</li> </ul> | <ul style="list-style-type: none"> <li>20 minutes</li> </ul> | <ul style="list-style-type: none"> <li>Some community use</li> <li>Holiday park users</li> </ul>                                                                                           |

## 2.3 Planned Pool Facilities in Surrounding Areas

Table 9: Planned Pool Facilities in Surrounding Areas

| FACILITY NAME                        | DRIVE TIME TO KATIKATI | PROPOSED DEVELOPMENT                                                                             |
|--------------------------------------|------------------------|--------------------------------------------------------------------------------------------------|
| <b>Omokoroa Number 1 School Pool</b> | 25 minutes             | <ul style="list-style-type: none"> <li>25 metre pool</li> <li>Outdoor</li> <li>Heated</li> </ul> |

## 2.4 Other Pool Used by Katikati and Surrounding Areas Residents

Table 10: Other Pools Utilised in the Surrounding Area

| FACILITY NAME                   | DRIVE TIME TO KATIKATI | FACILITIES                                                                                           |
|---------------------------------|------------------------|------------------------------------------------------------------------------------------------------|
| <b>Greerton Pool – Tauranga</b> | 35 minutes             | <ul style="list-style-type: none"> <li>Indoor Pool Complex.</li> <li>Open all year round.</li> </ul> |

### 3.0 Strategic Alignment

There is a strong requirement for future community infrastructure developments, such as the proposed Dave Hume Pool redevelopment, to align with the strategic direction of key stakeholders such as the Western Bay of Plenty District Council.

This is due to the projected significant population growth in the Western Bay of Plenty, and the need to align the planning and development of community infrastructure in a coordinated way to optimise available capital and operational expenditure.

There have been a number of 'Growth Management Strategies' developed to manage the future population growth. The key considerations from the growth strategies section are identified below.

#### Key Summary Considerations

- The SmartGrowth strategy for the Western Bay of Plenty Sub-Region and the Western Bay of Plenty District Long Term Council Community Plan 2009-2019, have identified Katikati as one of their priority urban growth areas.
- The SmartGrowth strategy and the Western Bay of Plenty District Long Term Council Community Plan 2009-2019 both emphasise that quality of life is a key part of their growth strategies, including access to open spaces and facilities for sport and recreation participation.
- The Katikati Community Development Plan, under its 'Leisure for Life' section, identifies the long term potential could be to cater for a new pool and/or covering of a pool at the Dave Hume Pool Complex.
- The Katikati Community Development Plan also identifies the need to 'ensure sufficient recreational facilities are available to meet community needs'.

### 3.1 Smart Growth

SmartGrowth was launched in 2004 and involves stakeholders such as Tauranga City Council, Western Bay of Plenty District Council, and Environment Bay of Plenty, Tangata Whenua, Central Government and the private sector.

*'SmartGrowth has been identified as playing a key role in preparing the Western Bay for the future, such as planning major transportation projects, business parks, new urban centres, recreational facilities and the protection of the natural environment.'*

The SmartGrowth strategy has identified urban growth areas that should be focused on in order to accommodate the significant growth that the Western bay of Plenty is projected to receive. The urban growth areas as identified by SmartGrowth are:

- Omokoroa
- Waihi Beach
- Te Puke
- Katikati

SmartSpace (Open Space, Sports, Arts and Leisure) identifies that *‘the availability of high quality open space and arts and leisure opportunities are key indicators of the quality of life that a community enjoys’*

The SmartSpace Vision is:

*‘That Open Space, sports, arts and leisure provision and opportunities are a defining feature of the lifestyles of the Western Bay of Plenty sub region’.*

The key points under this section relevant to the Dave Hume Pool potential development are:

- The area defines itself by its impressive leisure and recreation opportunities.
- Meets the needs of an increasing diverse and aging population.
- Open space and recreation is an important element of ‘quality of life’ and integral to the ‘live, work and play’ concept.
- Through the provision of open space and facilities, provide a range of sporting and active living opportunities, and that the built and open space environment encourages and motivates people to be active.
- The need for consideration from a sub-regional perspective of the significant open space and facility proposals, with more regional perspective and involvement as appropriate.

The specific project actions related to SmartSpace are:

- Implement “Active Communities” initiatives to 2012. These include the following:
- Aquatic Strategy, which identified a network approach to Aquatic facilities within the Tauranga City. This work needs to be widened to also take into account the western BOP sub region.

### **3.2 Katikati Community Plan**

The Katikati Community Plan was developed in 2000 as a community plan for the next 20 years.

A key section within the Katikati Community Plan is the ‘Leisure for Life’ section, which is focuses on ensuring people enjoy leisure, keep fit and are creative.

The section identifies four key areas of focus, with two of these areas being relevant to the Dave Hume Pool complex proposal.

#### **1. Provide Quality Recreation Facilities**

- Ensure sufficient recreational facilities are available to meet community needs

#### **2. Create Pleasant Places for Leisure**

- Make the best use of facilities and resources of schools and community.
- Co-ordinate events and the shared use of facilities.
- Investigate the feasibility of developing and sharing key facilities (such as swimming pool and indoor events.)

The potential Dave Hume Swimming Pool upgrade is discussed specifically within the 'Leisure for Life' section.

The proposed upgrade to the pool complex has been broken down into three key stages with both Stages 1 and 2 having already been completed.

1. Stage 1 – Make What we have got better

This stage focuses on maintenance and some minor upgrade work.

2. Stage 2 – New Features

This included the development of spa/soak and play features.

3. Stage 3 – Longer Term

This stage focuses on the future potential of the pool complex, which it identifies could be developing a new pool and/or the covering of a pool.

The longer term stage also identifies that the proposed future developments will depend on funds and patronage.



## 4.0 Stakeholder Consultation Summary

A consultation process with a selection of current key stakeholders of the Dave Hume Pool Complex was undertaken.

The selection of stakeholders included current structured swim organisations such as local swim clubs, coaches, learn to swim teachers, schools and the surf club. Katikati Councillors and Community Board members were also consulted as were the Dave Hume Trust Chair and manager.

At this stage the general community have not been consulted as part of this process. However, it is recommended that wider community consultation should be undertaken if this project is to proceed to the next stage so as to understand the communities' wider level of support.

The consultation process combined an initial series of face-to-face interviews as well as phone interviews. These interviews addressed:

- Current use of Dave Hume Pool.
- Current issues related to Dave Hume Pool.
- Potential opportunities related to Dave Hume Pool.

The following section summarises the content generated from these interviews, and presents the key summarised findings.

### Key Summary Considerations

There were many key points that were commonly raised by the stakeholder consultation.

The key issues that were raised by the stakeholders were as follows:

- The pool is well utilised for formal structured swimming during summer months.
- Current pool is very good for learn to swim as it is shallow, but this has limitations when trying to develop swimmers as they get older.
- A key issue is that there is limited access and space for casual and recreational community use of the pool.
- The biggest issue received by the Trust is that there is not enough community casual/recreation space during the week.
- Users of the Dave Hume Pool are utilising the Greeton pool in Tauranga during the winter months, or they just stop swimming during the winter.
- The pool is only serving a minority of the community.
- Unable to grow structured and casual swimming at the pool.
- The majority of structured swimming user groups support the Dave Hume Pool Complex being developed into a 12 month operation.
- There are a number of local young people who go into swim clubs at Tauranga (because of the facilities offered), which impacts on the local swim club's membership.
- An indoor 25 metre pool was identified by the majority of user groups as an option to consider for delivering a 12 month pool operation.
- It was also suggested that consideration should be given to keeping the existing 33 metre outdoor pool.
- A 12 month operating pool would spread bookings out and allow for more community use
- Consideration of a gym and meeting rooms as part of the redevelopment.

- Removal of Spa pools – not a good fit – have other options for hot pool experience.
- Some stakeholders questioned the actual demand to make an indoor pool viable.
- Better co-ordination of current programmes and activities at the pool is required.
- Some stakeholders identified the saturation of learn to swim providers.
- Increased access to the pool by some existing user groups is limited.
- There is a need to cater for the older population in Katikati in terms of programmes and aquatic opportunities.
- More opportunities for youth are needed.

## 5.0 Needs Analysis Summary

The previous sections have identified a range of key factors that assist in determining if the Dave Hume Pool complex has a demonstrated 'need' to be developed. Determining if the level of need, both now and into the future, is sufficient to warrant the provision of a particular type and scale of facility is essential.

1. A review of the current and planned aquatic facility network has identified that Katikati and surrounding areas have no local access to a 12 month pool operation (i.e. within a 30 minutes drive time).
2. Currently the local communities are travelling to Tauranga to undertake their indoor recreation needs.
3. The SmartGrowth strategy for the Western Bay of Plenty Sub-Region, and the Western Bay of Plenty District Long Term Council Community Plan 2009-2019, have identified Katikati as one of their priority urban growth areas.
4. At the 2006 Census there was a potential catchment population of **15,381** in the area which included Katikati, Waihi Beach, Aongatete, Athenree, Island View – Pios Beach, Tahawai and Waihi.
5. This same potential catchment area is projected to increase to **18,360** by 2031 according to Statistics New Zealand.
6. There is a strong demand from structured sport for a 12 month pool operation.
7. A key issue is that there is limited access and space for casual and recreational community use of the pool.
8. More co-ordination of the current pool would lead to more efficient use of pool space and greater lane availability.
9. 12 month pool operation would provide the ability to more evenly spread the usage throughout the year and at peak times (such as school use).

Localised need undoubtedly exists for twelve month structured pool use. Assumptions can also be made about casual use (although direct community consultation was not part of the current brief). The aging population means programmes will need to be targeted to attract the likely necessary casual users. The decision to redevelop aquatic facilities will in large part be dependent on sustainability issues. Retaining an outdoor pool and building a new indoor pool will likely generate the highest operational costs. If this option is chosen the operational costs, in our opinion, will be a significant challenge.

## 6.0 Bulk and Location Options

### 6.1 Bulk and Location Options

The following options have been developed which will meet the identified community need for an aquatic space, as well as providing effective practise components, that will be the most operationally viable long term. The facility options that have been considered are:

#### 1. Option 1- New Indoor 25 metre pool plus learners pool

- This option investigates the potential to develop a new indoor pool complex adjacent to the existing outdoor pool.
- The key issue with this option is it would require the relocation of the Scout building as the new indoor pool could require the Scout building land.
- The key decision will be based on whether to keep the existing 33 metre outdoor pools operational if a new indoor pool is to be developed.
- If the existing outdoor pool was removed then the new indoor pool could be developed on the existing pool site.
- The spa pools would also be removed under this option.
- Capital and operational costings will be based on the above facility configuration.

#### 2. Option 2 -Cover existing 33 metre pool and refurbish the entry, changing facilities, and the plant room

- This option will also include adding a bulk head in the existing 33 metre pool to provide a 25metre pool plus learners' pool that would be covered.
- This option could include or exclude the outdoor learners' pool remaining.
- The spa pools would also be removed under this option.
- Capital and operational costings will be based on the above facility configuration.

### 6.2 Staging the Developments

#### Short Term

There is the potential in the short term to undertake some minor developments within the existing pool complex to optimise its operation.

- Add a bulk head in at the 25 metre mark
- Provide 25 metre pool for training
- Provides additional pool space for 'learn to swim' while freeing up space for lane swimming

This could be completed in the short term while allowing time for the future planning decisions of the pool to be made.

## Long Term

The long term decisions will need to be made on whether to develop a new indoor pool or to cover the existing outdoor pool.

## 6.3 Key Considerations

### 6.3.1 Fitness Gym

As part of the development of the feasibility study, consideration was given to potential facility components that might increase sport and recreational opportunities for the local Katikati community and assist with making the facility a more viable operation. The key reasons why a community fitness gym area was identified as having potential to be developed as part of the proposed aquatic facility redevelopment were:

- The Katikati community has only one small current fitness centre within the area.
- Fitness gym areas are considered effective practice and provide good synergies with the development of aquatic facilities.
- Fitness centre areas can provide income revenue streams that may contribute to the operational viability of an aquatic facility.

The decision on whether a community fitness gym component will be included in the final design will not be made until the capital funding plan has been developed.

### 6.3.2 Depth of Pool

A key consideration for deciding on whether to develop a new indoor pool or cover the existing pool will be how important the depth of the pool is to serve as much of the community needs as possible.

The final chosen depth of the pool will have some impact on the potential user groups. As an example a 2 metre consistent depth pool will cater strongly for the formal sports sector such as water polo and competitive swimming. However, this could impact negatively on the recreational and learn to swim sectors as it would make the pool too deep for some of them to utilise.

Construction of a new pool will provide the best opportunity to develop a combination of depths using the main pool and learners' pool. Covering the existing pool will not provide an opportunity to increase the depth of the main or learner pools.

Further discussion will be required between the stakeholders to determine the appropriate depth of the pools if a new indoor pool is developed.

There would be a small difference in the costs associated with constructing a pool depth of 1.2 metre sloping to 2 metres compared to a 2 metre constant depth pool. However in the scheme of the overall capital cost of the project they would not be significant.

Some of the considerations regarding the depth of pools are outlined below.

**1.2 Metre Sloping to 2 Metre Deep Main Pool**

| Pros                                                                                            | Cons                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flexibility of use - caters to a wider spectrum of recreation and structured users.             | Does not provide the ability for activities such as water polo, canoe polo and other deep water activities to be undertaken that require a constant 2 metre depth. |
| The sloping depth pool is very popular as it can cater for a wider range of abilities of users. |                                                                                                                                                                    |

**Constant 2 Metre Depth of Main Pool**

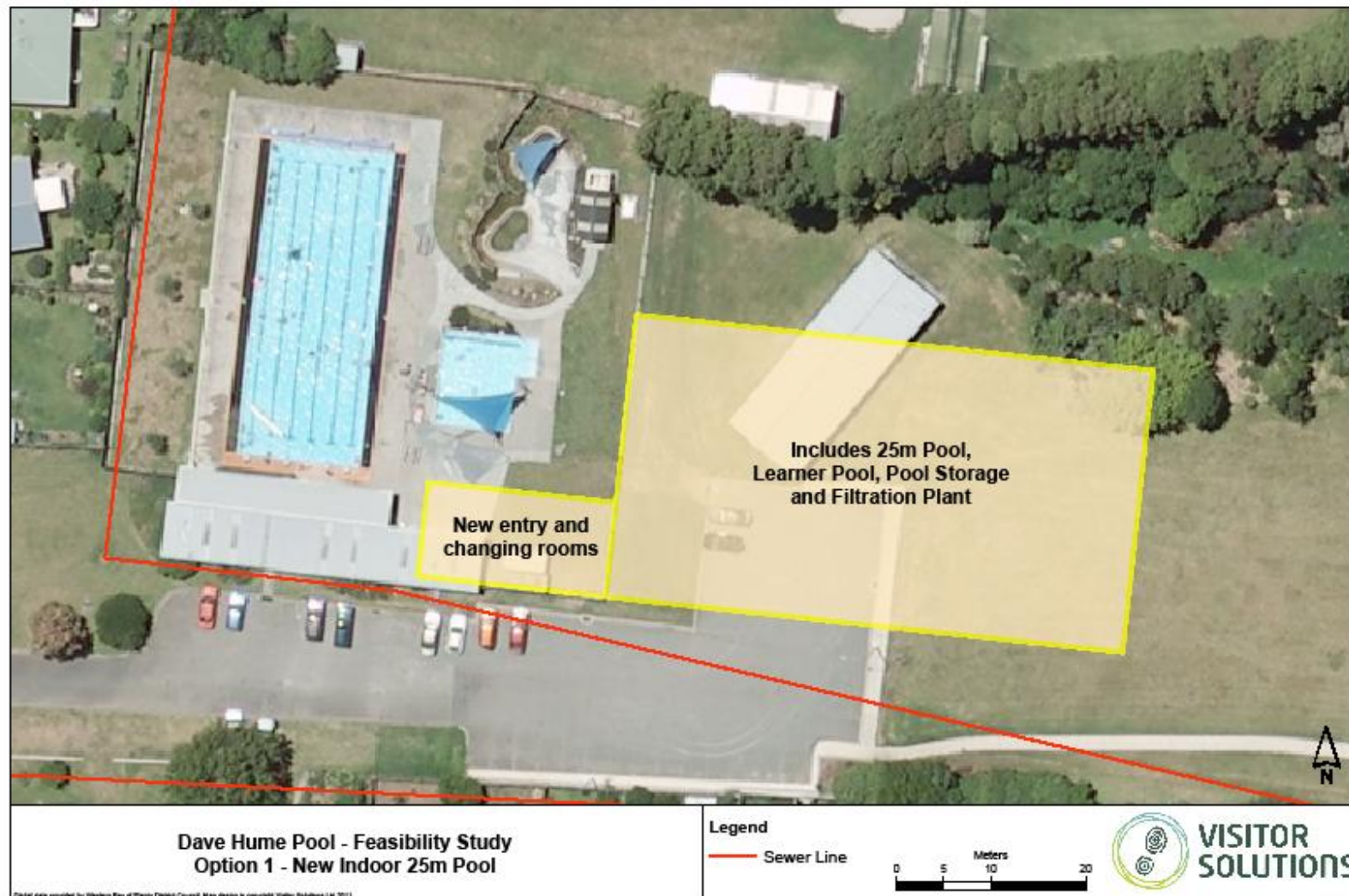
| Pros                                                                                                                                                              | Cons                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Would provide opportunities for activities such as water polo, canoe polo and other deep water activities to be undertaken that require a constant 2 metre depth. | The main pool would lack flexibility of use.                                                                                                                 |
|                                                                                                                                                                   | The main pool would not provide opportunities for recreational, causal or the 'learn to swim' sectors of the community (as 2 metre depth would be too deep). |
|                                                                                                                                                                   | Main pool would be used predominately for structured sport, such as water polo and swimming.                                                                 |
|                                                                                                                                                                   | Reduced recreational space for community use.                                                                                                                |

## 7.0 Schedule of Spaces

### 7.1 Option 1 - New Indoor 25 metre pool plus learners' pool

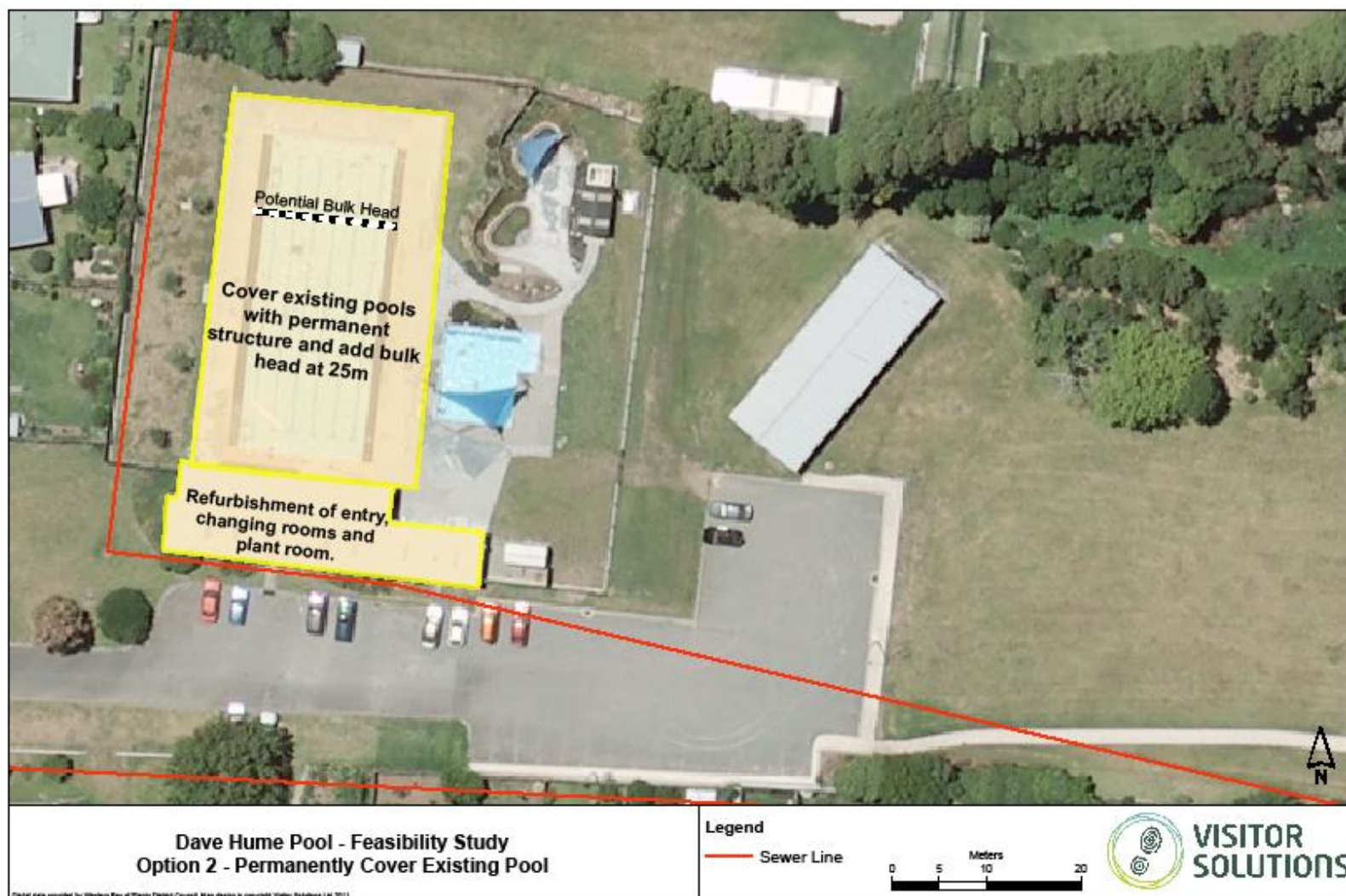
| Space                                                                                                                                                                                                                                                              | Use of Space                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indoor Swimming Pool Area</b> <ul style="list-style-type: none"> <li>25m x 20m pool.<br/>(Floor depth to be decided up to 2m)</li> <li>5m x 12.5m x 0.9m (average) learners' pool.</li> <li>Seating, open locker/store area and casual seating area.</li> </ul> | <ul style="list-style-type: none"> <li>Structured sport.</li> <li>Recreation use.</li> <li>Learn to swim.</li> <li>Spectator seating and storage.</li> </ul>                                                                  |
| <b>Pool Store Area</b> <ul style="list-style-type: none"> <li>Pool Store.</li> <li>Filtration plant room.</li> <li>Water heating plant room.</li> </ul>                                                                                                            | <ul style="list-style-type: none"> <li>Required pool plant space.</li> </ul>                                                                                                                                                  |
| <b>Wet Change Rooms</b> <ul style="list-style-type: none"> <li>Community Changing Rooms.</li> </ul>                                                                                                                                                                |                                                                                                                                                                                                                               |
| <b>Entry for Pool and Outdoor Areas</b> <ul style="list-style-type: none"> <li>Reception.</li> <li>Administration.</li> <li>Offices.</li> <li>Public Toilets.</li> </ul>                                                                                           | <ul style="list-style-type: none"> <li>One main reception from where public can access indoor pools and outdoor areas including learners' pool if operating.</li> <li>Controlled access point for entire facility.</li> </ul> |





## 7.2 Option 2 - Cover existing 33 metre pool, add bulk head and refurbish entry, changing facilities and plant room

| Space                                                                                                                                                                                                                                                                                                                               | Use of Space                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indoor Swimming Pool Area</b> <ul style="list-style-type: none"> <li>Add a bulk head at 25 metre mark of existing 33 metre pool to provide: <ul style="list-style-type: none"> <li>Indoor 25m pool with</li> <li>Indoor learners' pool.</li> </ul> </li> <li>Seating, open locker/store area and casual seating area.</li> </ul> | <ul style="list-style-type: none"> <li>Structured sport.</li> <li>Recreation use.</li> <li>Learn to swim.</li> <li>Spectator seating and storage.</li> </ul>                                                                  |
| <b>Pool Store Area</b> <ul style="list-style-type: none"> <li>Pool Store.</li> <li>Filtration plant room.</li> <li>Water heating plant room.</li> </ul>                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Required pool plant space.</li> </ul>                                                                                                                                                  |
| <b>Wet Change Rooms</b> <ul style="list-style-type: none"> <li>Community Changing Rooms.</li> </ul>                                                                                                                                                                                                                                 |                                                                                                                                                                                                                               |
| <b>Public Entry for Pool and Outdoor Areas</b> <ul style="list-style-type: none"> <li>Reception.</li> <li>Administration.</li> <li>Offices.</li> <li>Public Toilets.</li> </ul>                                                                                                                                                     | <ul style="list-style-type: none"> <li>One main reception from where public can access indoor pools and outdoor areas including learners' pool if operating.</li> <li>Controlled access point for entire facility.</li> </ul> |



## 8.0 Construction Options

There are various construction options when building either a new indoor pool, or the covering of the existing pool. An example of this is the use of various different materials for the roof, structure and walls. The various construction options all have an impact on the overall capital costs of the development as well as impacting on the ongoing operational costs.

The section below outlines various construction options that could be considered for the development for the Katikati pool.

The construction options that have been reviewed are:

- High Option – Normal Public Facility - King Span
- Medium Option - Steel Structure
- Low Option - Fabric Structure

The key specifications and considerations for each of the options have been highlighted and should be explored in more detail as the project evolves.

### 8.1 High Option -Normal Public Built Facility – King Span

| Item                                | Considerations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pool                                | <ul style="list-style-type: none"> <li>• Myrtha Pool</li> <li>• Stainless steel wall panels, factory finished with a permanent welded layer of PVC bolted back to a steel section frame. Liquid PVC bonds a rigid PVC profile seal at the panel joints.</li> <li>• A traditional concrete floor is waterproofed by a layer of pvc protected by a surface lacquering. The overflow gutter is formed out of the same construction as the wall panels.</li> <li>• A more traditional concrete pool could also be considered.</li> </ul> |
| Pool Water Treatment and Filtration | <ul style="list-style-type: none"> <li>• Chlorine and Sand. The most common treatment and filtration system in New Zealand remains to be chlorine and sand. Other treatment systems include combinations of Ozone/Chlorine, UV/Free Chlorine and Salt/Chlorine (the latter usually only in domestic applications).</li> <li>• Another public pool filtration system is DE (Diatomaceous Earth) which is a natural product that traps dirt and debris as small as one tenth of the width of a human hair.</li> </ul>                  |
| Air Handling                        | <ul style="list-style-type: none"> <li>• Suspended Supply and Return Ducts.</li> <li>• Suspended ducts have traditionally been metal, but fabric ducts have also been used on the basis they are lighter, cause less condensation issues and do not rust in corrosive chlorine environment.</li> <li>• Fabric ducts are susceptible to damage at seamed joints. However, a more detailed historical review of the alternatives would be required to recommend one over the other.</li> </ul>                                         |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <ul style="list-style-type: none"> <li>Below floor ducts, which are higher in capital cost, but arguably lower in ongoing energy and maintenance costs could also be considered. We are however not aware of any below floor ducts that have been used with a Myrtha Pool.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| Roof                    | <ul style="list-style-type: none"> <li>Insulated Panel - A polystyrene panel sandwiched between profiled steel roofing and a colour steel interior lining.</li> <li>Recent projects in Auckland have installed panels ranging from 40mm to 200mm in thickness. The optimum thickness appears to have been generated by the larger span capabilities of thicker panels, reducing the supporting structure required beneath, rather than the additional insulation provided.</li> </ul>                                                                                                                                                                                                   |
| Structure               | <ul style="list-style-type: none"> <li>Laminated or LVL Timber - Traditionally vertically laminated beams have been considered an ideal material for swimming pool structure because the material does not react in the same way to the corrosive pool environment that structural steel does.</li> <li>More recently LVL (Laminated Veneer Lumber) which is a product manufactured in a similar way to plywood has been used more on projects because it has been found to be more structurally reliable and easily made to large dimensions.</li> <li>The product can be specially manufactured with a preservative treatment appropriate for a swimming pool environment.</li> </ul> |
| Walls                   | <ul style="list-style-type: none"> <li>Insulated Panel - Similar to the roofing panel product. The advantages of an insulated panel system is that the risks of internal corrosive moisture penetrating the lining of a traditional framed construction system and compromising the structural framing and fixings, are removed.</li> </ul>                                                                                                                                                                                                                                                                                                                                             |
| Acoustic Treatment      | <ul style="list-style-type: none"> <li>Perforated Aluminium.</li> <li>Acoustic treatment on walls and ceilings will mitigate the effect of hard surfaces in a pool environment which can reflect and amplify noise to uncomfortable levels.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Windows and Glazing     | <ul style="list-style-type: none"> <li>Single or Double Glazed Aluminium Joinery with or without Thermal Breaks.</li> <li>Double glazing will reduce heating costs and condensation.</li> <li>Thermal breaks in the aluminium joinery extrusions can reduce these further.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| Floor Finishes          | <ul style="list-style-type: none"> <li>Tiles. Tiles have traditionally been considered a higher standard of finish than most other products in a swimming pool environment.</li> <li>They must be appropriately selected and cleaned to maintain slip resistance requirements.</li> <li>Advances in concrete finishes present what many now believe is an equal alternative.</li> </ul>                                                                                                                                                                                                                                                                                                 |
| Shower and Change Rooms | <ul style="list-style-type: none"> <li>Timber Frame with Compact Laminate Panel Lining.</li> <li>Compact laminate sheet panels provide a robust lining and relatively easy access to future upgrades of services when required.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                              |



## 8.2 Medium Option – Steel Structure

| Item                                | Specification                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pool                                | <ul style="list-style-type: none"> <li>• Myrtha</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    |
| Pool Water Treatment and Filtration | <ul style="list-style-type: none"> <li>• Chlorine and Sand or Diatomaceous Earth</li> </ul>                                                                                                                                                                                                                                                                                                                                                   |
| Air Handling                        | <ul style="list-style-type: none"> <li>• Suspended Supply Duct and Wall Grill Return.</li> <li>• Although less effective than a fully ducted supply and return system the relative disadvantages from an energy use and operating cost perspective are hard to quantify without relative as built comparisons, or theoretical energy modelling.</li> </ul>                                                                                    |
| Roof                                | <ul style="list-style-type: none"> <li>• Steel Cladding on Insulated Timber or Steel Framing with Fibre Cement Lining.</li> <li>• Compared to a solid insulated roofing panel system there is potential risk of internal corrosive moisture penetrating the lining and vapour barriers of this traditional framed construction system and compromising the structural integrity of the framing and fixings.</li> </ul>                        |
| Structure                           | <ul style="list-style-type: none"> <li>• Steel.</li> <li>• Although lower in capital cost a steel structure requires more careful maintenance of protective coatings to ensure the structural integrity is not compromised by corrosion.</li> </ul>                                                                                                                                                                                           |
| Walls                               | <ul style="list-style-type: none"> <li>• Steel Cladding on Insulated Timber or Steel Framing with Fibre Cement Lining.</li> <li>• Compared to a solid insulated cladding panel system there is potential risk of internal corrosive moisture penetrating the lining and vapour barriers of this traditional framed construction system and compromising the structural integrity of the framing and fixings.</li> </ul>                       |
| Acoustic Treatment                  | <ul style="list-style-type: none"> <li>• None.</li> <li>• Without acoustic treatment on walls and ceilings to mitigate the effect of hard surfaces in a pool environment, noise will be reflected and amplified to uncomfortable levels.</li> </ul>                                                                                                                                                                                           |
| Windows and Glazing                 | <ul style="list-style-type: none"> <li>• Single Glazed Aluminium Joinery.</li> </ul>                                                                                                                                                                                                                                                                                                                                                          |
| Floor Finishes                      | <ul style="list-style-type: none"> <li>• Concrete.</li> <li>• Although traditionally not considered as visually attractive as tiles, concrete floors can still provide a safe slip resistance provided the surface is finished appropriately, floors are sloped to ensure there is no ponding of water and they are cleaned appropriately.</li> <li>• Advances in concrete finishes present this as an equal alternative to tiles.</li> </ul> |
| Shower and Change Rooms             | <ul style="list-style-type: none"> <li>• Timber Frame with Hardiglaze or similar Panel Lining.</li> <li>• Hardiglaze and other similar panel linings are not as robust as compact laminate sheet linings</li> </ul>                                                                                                                                                                                                                           |

### 8.3 Low Option - Fabric Structure

| Item                                | Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pool                                | <ul style="list-style-type: none"> <li>• Myrtha.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Pool Water Treatment and Filtration | <ul style="list-style-type: none"> <li>• Chlorine and Sand or Diatomaceous Earth</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Air Handling                        | <ul style="list-style-type: none"> <li>• Suspended PVC Supply Duct Only with Exterior “Leakage” Return.</li> <li>• Warm air is supplied at high level and leaks out through gaps around the walls.</li> <li>• This type of air handling system is very inefficient from an energy use perspective and expensive to operate.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Roof                                | <ul style="list-style-type: none"> <li>• Single Layer PVC. Although PVC provides good natural daylight it offers no insulation properties.</li> <li>• This will increase operating cost and energy requirements and also create heavy “wet” condensation issues for 7 to 8 months of the year.</li> <li>• If this option were pursued we would strongly recommend this material be constrained to the pool hall only.</li> <li>• Change rooms, store rooms and offices etc. should be roofed with a more standard insulated system.</li> <li>• The Otumoetai Pool tent fabric appears to be deteriorating as expected relative to its 10 year warranty and has required relatively expensive and disruptive repairs after 6 and 8 years respectively.</li> </ul> |
| Structure                           | <ul style="list-style-type: none"> <li>• Aluminium. Even without any regular maintenance aluminium structure appears to withstand a relatively corrosive environment after 8 years.</li> <li>• The lower strength of aluminium relative to steel and LVL prohibits its use with heavier more permanent roofing and cladding.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Walls                               | <ul style="list-style-type: none"> <li>• Single Layer PVC. Similar to the roof the PVC offers good natural daylight with sliding panels further enhancing a desirable connection with the outdoor environment during summer, but again offers no insulation properties.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Acoustic Treatment                  | <ul style="list-style-type: none"> <li>• None.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Windows and Glazing                 | <ul style="list-style-type: none"> <li>• None.</li> <li>• Fabric continues down to ground with say 20% of walls incorporating fabric panels that slide open along wires.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Floor Finishes                      | <ul style="list-style-type: none"> <li>• Concrete.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Shower and Change Rooms             | <ul style="list-style-type: none"> <li>• Timber Frame with Hardiglaze or similar Panel Lining.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 9.0 High Level Cost Estimates of the Bulk and Location Plan

The Katikati potential aquatic development Bulk and Location Plan options have undergone a high level estimate of costs. The estimated costs are indicative only and are based on indicative sizes and locations of buildings and spaces. It is expected that during the detailed design stage a comprehensive analysis will be undertaken to identify more exact costs.

The cost estimates include options for either a new indoor pool or covering the existing outdoor pool development.

### Key Note:

It is expected that during the detailed design stage a comprehensive analysis will be undertaken to identify a more exact cost of the development; this will determine the final cost of the facility. Examples of items that will impact on the final cost of the facility, for which there is no current detailed information or decisions on yet, are:

- Level of material specification
- Ceiling insulation
- Wall insulation

## 9.1 Order of Cost Estimate for 'Bulk and Location Options

The high level estimated cost for the development of the Katikati Pool Development options are outlined below and are based on current day pricing and escalation costs should be allowed for separately.

Note that the sums below include professional fees of 15% and a contingency component of 10%.

The breakdown and cost for each component of the concept plan can be reviewed in Appendix at the back of the report.

### 9.1.1 Option 1 – New Indoor 25 metre and learner's pool (with King Span)

➤ Total **\$ 7,400,000**

The sum includes the following components:

- Demolition and site clearance
- 25 x 20m Main Pool & plant Sum
- 12.5 x 7.5m Learners' pool & plant
- Pool hall
- Entry
- Supervisor office
- Swim club office



- Change Room 1
- Change Room 2
- Store/Plant rooms
- Air Plant Room
- Allowance for hard & soft landscaping
- Professional Fees 15%
- Contingency 10%

### 9.1.2 Option 2 – Cover Existing Pool with King Span (high option)

➤ Total **\$ 3,700,000**

The sum includes the following components:

- Demolition
- New Pool hall (Kingspan structure)
- New water plant room
- Provisional allowance for water plant upgrade
- Refurbish existing Entry/ Office
- Refurbish existing Change Room 1
- Refurbish existing Change Room 2
- Refurbish existing verandah
- New extended verandah
- Bulk head to pool
- Allowance for hard & soft landscaping
- Professional Fees 15%
- Contingency 10%

### 9.1.3 Option 3 – Cover Existing Pool with Steel Structure (medium option)

➤ Total **\$ 3,500,000**

The sum includes the following components:

- Demolition
- New Pool hall (Steel structure)
- New air plant room
- New water plant room
- Provisional allowance for water plant upgrade
- Refurbish existing Entry/ Office
- Refurbish existing Change Room 1
- Refurbish existing Change Room 2
- Gross Floor Area
- Refurbish existing verandah
- New extended verandah
- Bulk head to pool \$ 100,000
- Allowance for hard & soft landscaping
- Professional Fees 15%
- Contingency 10%

#### 9.1.4 Option 4 – Cover Existing Pool with Fabric Structure (low option)

➤ Total **\$ 3,200,000**

The sum includes the following components:

- Demolition
- New Pool hall (fabric structure)
- New air plant room
- New water plant room
- Provisional allowance for water plant upgrade
- Refurbish existing Entry/ Office
- Refurbish existing Change Room 1
- Refurbish existing Change Room 2
- Gross Floor Area
- Refurbish existing verandah
- New extended verandah
- Bulk head to pool
- Allowance for hard & soft landscaping
- Professional Fees 15%
- Contingency 10%

#### 9.1.4 Estimate of Capital Costings Asset Life Cycle Considerations

The estimate of capital costs associated with the various options for either developing a new indoor pool or covering the existing pool have been identified in the above section.

It should be noted that the various options would have associated significant upgrade costs to the pool structure at various stages of their life and should be considered in the ongoing cost of the asset.

The options of the 'King Span' and 'Steel Structure' are likely to require an upgrade of the pool structure anywhere between 20 and 30 years for an aquatic facility. This would vary from facility to facility.

However the 'Fabric Structure' option would require the significant upgrade to the pool structure approximately every 10 years. The major cost would be the replacement of the fabric membrane structure every ten years.

## 9.2 Additional fitness/gym space

An additional space for a potential new fitness room (gym) has been excluded from the initial bulk and location plan.

It has been identified by certain stakeholders as a facility component that might have some potential to be added to the pool development, either in the first instance, or staged as part of a later development component.

A gym component would provide another revenue stream that could assist with the operating budget of the pool development. The final fund raising component of the project will dictate whether the gym component is included in the final capital budget.

**It has been identified at a high level that a gym space and associated storage of 224 square metres would add approximately \$350,000 to the capital budget.**

## 9.3 Estimated Cost Inclusions

The estimate of costs includes two key components within the total cost. These are:

- Professional Fees of 15%
- Contingency of 10%

## 9.4 Estimated Costs Exclusions

The following items have been excluded from these estimates:

- Loose furniture, fittings & equipment
- Development Contributions
- Land, Finance & Legal costs
- Escalation costs from October 2010
- GST

## **10. Preliminary Operational Costs**

### **10.1 Development of Operational Costs**

The development of the preliminary operational costs has been based on benchmarking exercises that were undertaken in regard to operational costs and usage data of facilities of similar size.

In developing the preliminary income and costs streams there were some key assumptions that were made in terms of management approach and potential user numbers.

Further detailed business planning and consultation with potential user groups will be required during the next phase of the facility development to develop a final business plan suitable for the Katikati pool redevelopment. This is essential pre any project options being progressed.

### **10.2 Preliminary Operational Budget**

As part of the potential management and facility component considerations from earlier sections, the preliminary operational budget was established under two separate scenarios.

1. Scenario 1 – New Indoor Pool Developed
2. Scenario 2 – Cover Existing Pool

### **10.3 Preliminary Operational Budget Deficit/Surplus**

The preliminary operational budgets for two scenarios have highlighted a potential operational deficit of approximately \$30,000 - 60,000 per annum.

This potential deficit has an ability to be reduced depending on a number of factors including:

- Increased programme development and delivery.
- Increase current operational subsidy provided by Council.
- Manage the level of depreciation in a different way.

## 10.4 Key Assumptions

- The cost streams for the operational plan have been developed based on benchmarking costs for similar sized facilities.
- Different management model is undertaken as outlined in 11.1.
- Learn to swim and other activities are run by the pool complex and not private operators.
- Increased community access and use occurs.
- A contribution towards the depreciation costs of the building has been included with the preliminary operational budget.
- The Cover Existing Pool operational budget is based on the higher quality king span structure with will allow a better environment for customers.
- It will be harder to obtain the user numbers if the covered pool option is developed in the form of the lower quality option.
- Bulk head included in covered pool option.

## 10.5 Gym Considerations

- **Gym component could provide an additional approximately \$20,000 to \$30,000 per annum to the income if managed effectively.**
- The potential community fitness gym being operated as a non staffed operation.

## 10.6 Bore to Heat the Water Temperature

The current main pool is heated to 26 degrees by a bore with the resource consent expiring in 2013. The main pool is heated using a heat exchange system that was donated from an old dairy 10-15 years ago. A long term solution that ensures the bore is retained to heat the pool with a modern system needs to be resolved.

The learner's pool is heated to 29 degrees by a boiler using diesel. This is not ideal for the long term and the learner's pool should also be heated with the bore in the future.

By utilising the bore there will be savings on electricity to heat the water which will bring the ongoing operational costs down.

## 10.6 Preliminary Operational Budget – New Indoor Pool Option

| Inclusions within Section    | Year 1           |
|------------------------------|------------------|
| Clubs                        | \$15,000         |
| Coaching                     | \$15,470         |
| Lessons                      | \$91,000         |
| Schools                      | \$12,000         |
| Casual                       | \$81,250         |
| WBOPDC Funding               | \$56,000         |
| Other grants / interest      | \$620            |
| Sales                        | \$15,000         |
| <b>TOTAL INCOME</b>          | <b>\$286,340</b> |
| Staffing                     | \$156,547        |
| Staff training / uniforms    | \$5,000          |
| <b>STAFF COSTS</b>           | <b>\$161,547</b> |
| Electricity                  | \$40,000         |
| Diesel                       | \$15,000         |
| Minor Maintenance            | \$10,000         |
| Communications               | \$4,000          |
| Cleaning                     | \$5,000          |
| Bank / finance charges       | \$2,000          |
| Misc costs                   | \$2,500          |
| <b>SERVICES</b>              | <b>\$78,500</b>  |
| Insurance (building)         | \$15,000         |
| Insurance (content)          | \$5,000          |
| Rates / water / rubbish      | \$0              |
| Accounting / Legal           | \$5,000          |
| <b>STATUTORY</b>             | <b>\$25,000</b>  |
| Office supplies              | \$1,000          |
| Pool Supplies                | \$30,000         |
| Shop purchases               | \$7,500          |
| <b>SUPPLIES</b>              | <b>\$38,500</b>  |
| Advertising / Marketing      | \$3,000          |
| Professional Fees            | \$0              |
| <b>MARKETING</b>             | <b>\$3,000</b>   |
| Depreciation (Building)      | \$35,000         |
| <b>Depreciation</b>          | <b>\$35,000</b>  |
| <b>TOTAL EXPENSES</b>        | <b>\$341,547</b> |
| <b>Net Operating Surplus</b> | <b>-\$55,207</b> |

## 10.7 Preliminary Operational Budget – Cover Existing Pool Option (Kingspan)

| Section                      | Year 1           |
|------------------------------|------------------|
| Clubs                        | \$10,000         |
| Coaching                     | \$7,735          |
| Lessons                      | \$78,000         |
| Schools                      | \$10,000         |
| Casual                       | \$48,750         |
| WBOPDC Funding               | \$56,000         |
| Other grants / interest      | \$620            |
| Sales                        | \$10,000         |
| <b>TOTAL INCOME</b>          | <b>\$221,105</b> |
| Staffing                     | \$122,820        |
| Staff training / uniforms    | \$3,000          |
| <b>STAFF COSTS</b>           | <b>\$125,820</b> |
| Electricity                  | \$30,000         |
| Diesel                       | \$7,000          |
| Minor Maintenance            | \$5,000          |
| Communications               | \$1,500          |
| Cleaning                     | \$2,500          |
| Bank / finance charges       | \$1,000          |
| Misc costs                   | \$2,500          |
| <b>SERVICES</b>              | <b>\$49,500</b>  |
| Insurance (building)         | \$2,500          |
| Insurance (content)          | \$0              |
| Rates / water / rubbish      | \$0              |
| Accounting / Legal           | \$3,120          |
| <b>STATUTORY</b>             | <b>\$5,620</b>   |
| Office supplies              | \$500            |
| Pool Supplies                | \$30,000         |
| Shop purchases               | \$5,000          |
| <b>SUPPLIES</b>              | <b>\$35,500</b>  |
| Advertising / Marketing      | \$2,000          |
| Professional Fees            | \$0              |
| <b>MARKETING</b>             | <b>\$2,000</b>   |
| Depreciation (Building)      | \$35,000         |
| <b>Depreciation</b>          | <b>\$35,000</b>  |
| <b>TOTAL EXPENSES</b>        | <b>\$253,440</b> |
| <b>Net Operating Surplus</b> | <b>-\$32,335</b> |



## **11. Governance and Management**

It is recognised that to maximise the benefits and utilisation of any indoor recreation facility that a good governance and management structure needs to be in place.

This report has proposed both current and potential long term governance and management considerations in order to optimise the Dave Hume aquatic facility.

### **11.1 Future Management Focus**

The management of the Dave Hume Aquatic facility has been reviewed and areas identified that could optimise both the existing focus and the future management focus. Addressing these issues would assist to provide more robust operational management of the Dave Hume Pool.

These issues include:

#### **Clarifying roles, responsibilities**

- Develop a structure to demonstrate the linkages and progression between user groups; and develop a MOU between all user groups to promote co-ordination and co-operation.

#### **Income Maximisation**

- Review all activities available at the pool to identify all potential income streams. The priority should be given to developing and managing activity by the Trust to ensure income streams generate / maximise the return to the Trust.
- Only where this is not possible should external providers be considered.

#### **Rationalisation / Optimisation of Programming**

- Review the current programming to rationalise activities / club activities to avoid duplication.
- Undertake a review of other swimming providers to consider management options to ensure an appropriate balance between clubs, school, learn to swim and community access.
- Consider appropriate level of provision for club users (e.g. ratio of number of lanes to number of users).

#### **Increasing access for public swimming**

- Review current programming to ensure increased community access during peak times (after school and early evening).
- Ensure appropriate water space is provided to meet the community needs and reallocate / consolidate other users as appropriate to ensure sufficient access.

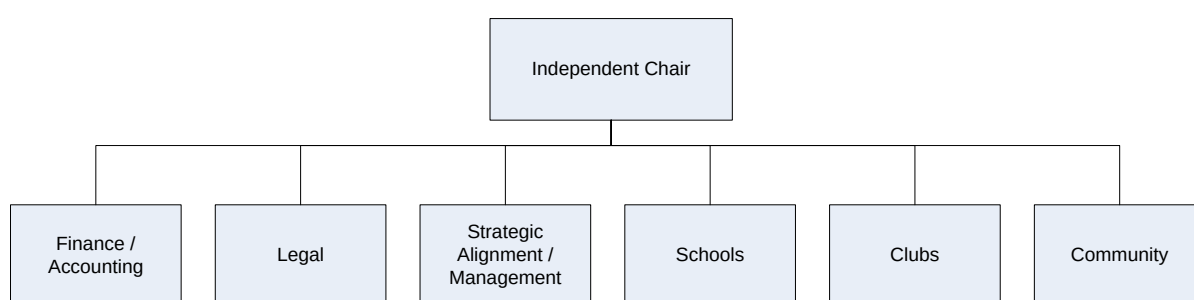
## 11.2 Future Governance Structure (longer term focus)

It is important to plan for the longer term governance which will need to be established as future developments take place at the pool and the plans are developed for a new facility.

Once a new facility is developed it is essential that the governance structure is appropriate to maximise the operation of the new facility, safeguard access for all users and ensure the long term sustainability.

To achieve this it is recommended that a skills based Trust is developed (Figure 1).

**Figure 1 Skills Based Trust**



The key aspects of each of the Trustees roles are important to the success of the Trust. As well as clarifying roles and responsibilities it is important that an expert in each of the skills is appointed onto the board. The operation of a new indoor facility will change the focus to more of a commercial based operation, and thus new skills will be required.

An overview of the future Trustees is outlined below.

**Independent Chair:** An independent person to chair the Trust to ensure a central focus is maximising utilisation, income and ensuring the long term sustainability of the Trust.

**Finance / Accounting:** Trustee with experience in finance / accounting to oversee the financial operation of the Trust.

**Legal:** A Trustee with a legal background to oversee compliance issues and legal responsibilities.

**Strategic Alignment / Management:** A Trustee with experience in developing wider strategic linkages with other organisations or management of sporting facilities with a number of different user groups competing for limited time.

**Schools:** A Trustee with experience of the school usage and access requirements to ensure the needs of schools are considered within decision making processes.

**Clubs:** A Trustee with experience of the clubs' usage and access requirements to ensure the needs of clubs are considered within decision making processes.

**Community:** A Trustee with experience of the community usage and access requirements to ensure the needs of the wider community are considered within decision making processes. (This may be a representative of the Community Board or Council)

It is envisaged that work towards developing a new skills based Trust is undertaken in parallel to the development of new / improved facilities. However should it not be possible for the existing Trust to resolve the issues identified earlier it is recommended that a skills based Trust structure is introduced at an earlier point in time.

## 12. Conclusions

Localised need undoubtedly exists for twelve month structured pool use. Assumptions can also be made about casual use (although direct community consultation was not part of the current brief).

The findings of the study have indicated a growing population for the Katikati area with the potential catchment area to increase to **18,360** by 2031, as indicated by Stats New Zealand. The SmartGrowth population projections for Katikati and Waihi Beach alone are that by 2051 the population of both areas will be **22,800**.

The Greeton Pool in Tauranga is the closest 12 month indoor pool for Katikati and surrounding area residents; this is approximately a 35 minutes drive away.

The decision to redevelop the aquatic facilities will in large part be dependent on sustainability issues. Retaining an outdoor pool and building a new indoor pool will likely generate the highest operational costs. If this option is chosen the operational costs, in our opinion, will be a significant challenge.

Also the decision on whether to develop a new indoor pool complex or to cover the existing outdoor pool with one of the three construction options identified within this report will have a significant impact on the final capital costing of the project.

A realistic funding plan will need to be undertaken to determine the appropriate final facility design and facility components.

## 13. Recommendations

It is recommended that:

1. Formal engagement with the potential key funding partners /organisations is undertaken to understand the level of support for the project. This should be done prior to any further planning or design work being undertaken.
2. A formal presentation is undertaken by the Dave Hume Trust to Western Bay of Plenty District Council.
3. The project's proponents should decide as soon as possible whether developing a new pool, or covering the existing pool is the preferred option. This should be done prior to any further planning or design work being undertaken.
4. A detailed financial business plan should be developed based on the outcome of the implementation of recommendation 1 – 3 above.
5. Develop final concept design based on the outcomes of the above three recommendations.
6. Add a bulk head in at the 25 metre mark of existing pool for short term solution which will also provide additional pool space for 'learn to swim'.

## **Appendix 1 – Estimate of Capital Costs**



**Order of Cost Estimates**

**For**

**Dave Hume Pool**

**7 April 2011**



## **Dave Hume Pool**

### **Order of Cost Estimate - April 2011**

#### **Clarifications & Exclusions**

##### **General**

These estimates have been based on the assumptions stated in the estimate

##### **Clarifications**

Estimates are based on the following :

PENZ section sketches dated April 2011

PENZ schedule of areas dated 4th April 2011

Assumes adequate services infrastructure at boundary of site

Circulation areas allowed for within schedule of spaces areas

Estimates assume a traditional procurement process

Estimates are based on current day pricing and escalation costs should be allowed for separately

Provisional Allowances have been made where noted for items where scopes have been assumed.

##### **Exclusions**

The following are excluded from these estimates:

Site specific geotechnical and topographical costs

Loose furniture, fittings & equipment

Development Contributions

Land, Finance & Legal costs

Escalation costs from April 2011

GST

##### **Options Summary**

|                                                      |    |           |
|------------------------------------------------------|----|-----------|
| Option 1; New Pool Facility; Kingspan structure      | \$ | 7,400,000 |
| Option 2; Close in Existing Pool; Kingspan structure | \$ | 3,700,000 |
| Option 3; Close in Existing Pool; Tin structure      | \$ | 3,500,000 |
| Option 4; Close in Existing Pool; Fabric structure   | \$ | 3,200,000 |

**Dave Hume Pool****Order of Cost Estimate - April 2011****Option 1; New Pool Facility**

|                               |  |  |    |        |
|-------------------------------|--|--|----|--------|
| Demolition and site clearance |  |  | \$ | 30,000 |
|-------------------------------|--|--|----|--------|

|                            |     |  |    |           |
|----------------------------|-----|--|----|-----------|
| 25 x 20m Main Pool & plant | Sum |  | \$ | 1,250,000 |
|----------------------------|-----|--|----|-----------|

|                                  |     |  |    |         |
|----------------------------------|-----|--|----|---------|
| 12.5 x 7.5m Learner pool & plant | Sum |  | \$ | 250,000 |
|----------------------------------|-----|--|----|---------|

|           |          |       |    |           |
|-----------|----------|-------|----|-----------|
| Pool hall | 1,500 m2 | 2,000 | \$ | 3,000,000 |
|-----------|----------|-------|----|-----------|

|       |       |       |    |         |
|-------|-------|-------|----|---------|
| Entry | 72 m2 | 2,200 | \$ | 158,400 |
|-------|-------|-------|----|---------|

|                   |       |       |    |        |
|-------------------|-------|-------|----|--------|
| Supervisor office | 22 m2 | 2,200 | \$ | 48,400 |
|-------------------|-------|-------|----|--------|

|                  |       |       |    |        |
|------------------|-------|-------|----|--------|
| Swim club office | 22 m2 | 2,200 | \$ | 48,400 |
|------------------|-------|-------|----|--------|

|               |       |       |    |         |
|---------------|-------|-------|----|---------|
| Change Room 1 | 60 m2 | 3,700 | \$ | 222,000 |
|---------------|-------|-------|----|---------|

|               |       |       |    |         |
|---------------|-------|-------|----|---------|
| Change Room 2 | 60 m2 | 3,700 | \$ | 222,000 |
|---------------|-------|-------|----|---------|

|                   |        |       |    |         |
|-------------------|--------|-------|----|---------|
| Store/Plant rooms | 245 m2 | 1,600 | \$ | 392,000 |
|-------------------|--------|-------|----|---------|

|                  |          |
|------------------|----------|
| Gross Floor Area | 1,981 m2 |
|------------------|----------|

|                                       |     |  |    |         |
|---------------------------------------|-----|--|----|---------|
| Allowance for hard & soft landscaping | Sum |  | \$ | 200,000 |
|---------------------------------------|-----|--|----|---------|

|           |  |  |    |           |
|-----------|--|--|----|-----------|
| Sub Total |  |  | \$ | 5,821,200 |
|-----------|--|--|----|-----------|

|                   |     |  |    |         |
|-------------------|-----|--|----|---------|
| Professional Fees | 15% |  | \$ | 873,180 |
|-------------------|-----|--|----|---------|

|             |     |  |    |         |
|-------------|-----|--|----|---------|
| Contingency | 10% |  | \$ | 669,438 |
|-------------|-----|--|----|---------|

|  |  |  |    |           |
|--|--|--|----|-----------|
|  |  |  | \$ | 7,363,818 |
|--|--|--|----|-----------|

|                                    |            |  |    |                  |
|------------------------------------|------------|--|----|------------------|
| <b>Total Estimate for Option 1</b> | <b>Say</b> |  | \$ | <b>7,400,000</b> |
|------------------------------------|------------|--|----|------------------|



**Dave Hume Pool****Order of Cost Estimate - April 2011****Option 2; Existing Pool Facility**

|                                               |            |          |           |                  |
|-----------------------------------------------|------------|----------|-----------|------------------|
| Demolition                                    |            |          | \$        | 15,000           |
| New Pool hall (Kingspan structure)            | 960 m2     | 2,000    | \$        | 1,920,000        |
| New air plant room                            | 40 m2      | 1,600    | \$        | 64,000           |
| New water plant room                          | 60 m2      | 1,600    | \$        | 96,000           |
| Provisional allowance for water plant upgrade | Sum        |          | \$        | 250,000          |
| Refurbish existing Entry/ Office              | 21 m2      | 2,000    | \$        | 42,000           |
| Refurbish existing Change Room 1              | 60 m2      | 2,500    | \$        | 150,000          |
| Refurbish existing Change Room 2              | 60 m2      | 2,500    | \$        | 150,000          |
| Gross Floor Area                              |            | 1,201 m2 |           |                  |
| Refurbish existing verandah                   | 100 m2     | 300      | \$        | 30,000           |
| New extended verandah                         | 40 m2      | 600      | \$        | 24,000           |
| Bulk head to pool                             |            |          | \$        | 100,000          |
| Allowance for hard & soft landscaping         | Sum        |          | \$        | 100,000          |
| Sub Total                                     |            |          | \$        | 2,941,000        |
| Professional Fees                             | 15%        |          | \$        | 441,150          |
| Contingency                                   | 10%        |          | \$        | 338,215          |
|                                               |            |          | \$        | 3,720,365        |
| <b>Total Estimate for Option 1</b>            | <b>Say</b> |          | <b>\$</b> | <b>3,700,000</b> |

**Dave Hume Pool****Order of Cost Estimate - April 2011****Option 3; Existing Pool Facility**

|                                               |            |       |           |                         |
|-----------------------------------------------|------------|-------|-----------|-------------------------|
| Demolition                                    |            |       | \$        | 15,000                  |
| New Pool hall (Tin structure)                 | 960 m2     | 1,800 | \$        | 1,728,000               |
| New air plant room                            | 40 m2      | 1,600 | \$        | 64,000                  |
| New water plant room                          | 60 m2      | 1,600 | \$        | 96,000                  |
| Provisional allowance for water plant upgrade | Sum        |       | \$        | 250,000                 |
| Refurbish existing Entry/ Office              | 21 m2      | 2,000 | \$        | 42,000                  |
| Refurbish existing Change Room 1              | 60 m2      | 2,500 | \$        | 150,000                 |
| Refurbish existing Change Room 2              | 60 m2      | 2,500 | \$        | 150,000                 |
| Gross Floor Area <u>1,201 m2</u>              |            |       |           |                         |
| Refurbish existing verandah                   | 100 m2     | 300   | \$        | 30,000                  |
| New extended verandah                         | 40 m2      | 600   | \$        | 24,000                  |
| Bulk head to pool                             |            |       | \$        | 100,000                 |
| Allowance for hard & soft landscaping         | Sum        |       | \$        | <u>100,000</u>          |
| Sub Total                                     |            |       | \$        | 2,749,000               |
| Professional Fees                             | 15%        |       | \$        | 412,350                 |
| Contingency                                   | 10%        |       | \$        | <u>316,135</u>          |
|                                               |            |       | \$        | <u><u>3,477,485</u></u> |
| <b>Total Estimate for Option 1</b>            | <b>Say</b> |       | <b>\$</b> | <b>3,500,000</b>        |

**Dave Hume Pool****Order of Cost Estimate - April 2011****Option 4; Existing Pool Facility**

|                                               |            |       |           |                         |
|-----------------------------------------------|------------|-------|-----------|-------------------------|
| Demolition                                    |            |       | \$        | 15,000                  |
| New Pool hall (fabric structure)              | 960 m2     | 1,600 | \$        | 1,536,000               |
| New air plant room                            | 40 m2      | 1,600 | \$        | 64,000                  |
| New water plant room                          | 60 m2      | 1,600 | \$        | 96,000                  |
| Provisional allowance for water plant upgrade | Sum        |       | \$        | 250,000                 |
| Refurbish existing Entry/ Office              | 21 m2      | 2,000 | \$        | 42,000                  |
| Refurbish existing Change Room 1              | 60 m2      | 2,500 | \$        | 150,000                 |
| Refurbish existing Change Room 2              | 60 m2      | 2,500 | \$        | 150,000                 |
| Gross Floor Area <u>1,201 m2</u>              |            |       |           |                         |
| Refurbish existing verandah                   | 100 m2     | 300   | \$        | 30,000                  |
| New extended verandah                         | 40 m2      | 600   | \$        | 24,000                  |
| Bulk head to pool                             |            |       | \$        | 100,000                 |
| Allowance for hard & soft landscaping         | Sum        |       | \$        | <u>100,000</u>          |
| Sub Total                                     |            |       | \$        | 2,557,000               |
| Professional Fees                             | 15%        |       | \$        | 383,550                 |
| Contingency                                   | 10%        |       | \$        | <u>294,055</u>          |
|                                               |            |       | \$        | <u><u>3,234,605</u></u> |
| <b>Total Estimate for Option 1</b>            | <b>Say</b> |       | <b>\$</b> | <b>3,200,000</b>        |



# Feasibility Report

Swimming Pool Facility Development

**Dave Hume Trust and Western Bay of Plenty District Council**

October 2019



*Think. Do. Comply.*



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## Introduction

The Dave Hume Trust (DHT), and the Western Bay of Plenty District Council (Council) have engaged Watershed to provide a Feasibility Study that responds to several clear directives around the future development of the Dave Hume swimming facility in Katikati.

This report is intended to inform stakeholders about the future development options, operational costs, governance and management structures and provide some visual collateral that will assist with future decision making.

Our scope of work specifically excludes reviewing or analysing other swimming facilities in the area (between Omokoroa and Waihi) and outlined the vision that DHT has for the offering any future new indoor facility may provide.

We have used this information and presented the options as per the brief, however we have also added a third option that we feel would be worthwhile considering, particularly in light of both capital and operational costs.

It is important to recognise that future cost projections are in 2019 dollars, i.e. they are not inflation adjusted. Therefore, care should be taken when planning for future expenditure such as in LTTP or when seeking fundraising opportunities.



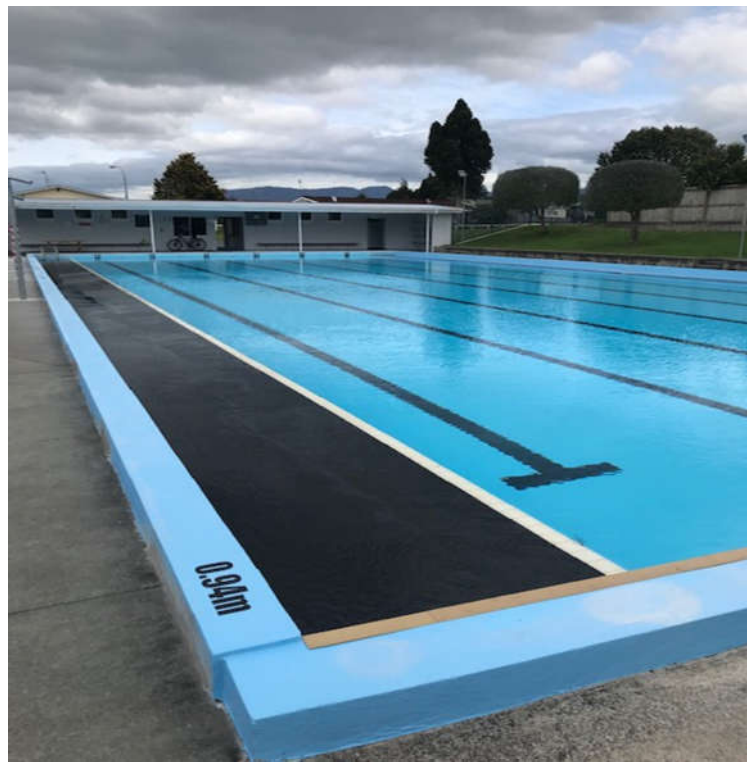




## The Current Level of Service & Provision

Council is currently reviewing its Recreation and Leisure Strategy, and as part of that process is defining what its level of service is to be. For the purposes of comparison we have been instructed to assume that Councils Level of Service for public swimming pools includes:

- Council owned land of a similar area as the existing facility
- Outdoor main pool 25 m long, 6 lanes wide, 1.3-1.8m deep (sufficient for local competition swimming) and a disability access ramp
- Outdoor toddlers/learners pool 0.8m deep
- Pool water heating system to maintain average temp of 26 degrees and 30 degrees in the learners pool
- Ablution/ changing facilities including hot water showers
- Office (including basic staff kitchen), staff toilet, foyer, plant room building
- Outdoor seating and shade
- Pool operational equipment such as pool covers & retractor reels/motors, robotic vacuum cleaner
- Fencing
- Summertime operation only (approximately 7 months), as the facility is outdoors







## The Existing Facility

Opened in 1973 the Dave Hume Pool caters for the wider Katikati swimming community that includes:

- Casual swimmers;
- Masters Swimming;
- Waihi Beach Surf Club;
- Learn to Swim;
- Local schools.

The facility offers:

- A 33m heated outdoor pool, and a small toddlers pool, measuring 10.0m x 8.0m;
- Men's and women's change and bathroom facilities;
- A small administration and shop area;
- Plant and equipment storage areas;
- A toddlers pool that has a stand-alone plant room;
- Swimming pool water that is heated from a bore and supplies source water at 38°C, via a heat exchanger for each pool, and is typically returned to ground at 26°C.

There have previously been spa pools on site, however for a number of reasons these have been decommissioned.

The facility enjoys a reserve aspect, located down a right of way. This affords it ample parking, a pleasant, park like view and relative isolation from residential neighbours.



Produced using ArcMap by the Western Bay of Plenty District Council GIS Team.  
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Location of services is indicative only. Council accepts no liability for any error.  
Archaeological data supplied by NZ Archaeological Assoc/Dept. of Conservation.

Date: 22/07/2019  
Operator: Geocortex  
A3 Scale 1: 500  
0 25 Meters



Dave Hume Pool Facility  
Vessey Stewart Reserve  
KATIKATI







View across pool



Previous spa pool location



View towards the reserve area

The current plant, whilst well maintained, is undersized in terms of the required filter area and filtration rate. Replacement of the pool filters needs to consider any wider upgrades and the lifespan of plant and pools before investment is considered.

If we assume:

- The pool tanks have a design life (with no upgrade works) of 50 years. In 2023, the facility (overall) will be 50 years old;
- New filters can be expected to last 25 years;
- Is it reasonable to assume the main pool will remain unchanged, in terms of demand, usage and volume for a further 25 years?
- Will expectations on what the small pool provides change in that same 25 years?

Unfortunately, the answers to these questions inevitably lead to further questions and review of what a Level of Service looks like, and whether the existing facility can easily and with a planned approach meet Council and community needs.

In order to understand what works need to be considered at the existing facility it is important to be clear on whether the facility currently meets Councils minimum Level of Service.



| Service Level Measure                                                                                                             | Service Level being achieved | Comments                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outdoor main pool 25 m long, 6 lanes wide, 1.3–1.8m deep (sufficient for local competition swimming) and a disability access ramp | No                           | The pool is not deep enough for compliant use of starting blocks, no accessible ramp, and filtration is undersized.                                                                                  |
| Outdoor toddlers/learners pool 0.8m deep                                                                                          | Yes and No                   | The pool is small, and only suitable for small group lessons, although the depth is appropriate. It can also struggle at peak times to accommodate the number of swimmers. Filtration is undersized. |
| Pool water heating system to maintain average temp of 26 degrees and 30 degrees in the learners pool                              | Yes                          | Bore water supplies enough heating via the heat exchanger at the current volumes and consent requirements.                                                                                           |
| Ablution/ changing facilities including hot water showers                                                                         | Yes                          | Hot showers available                                                                                                                                                                                |
| Office (including basic staff kitchen), staff toilet, foyer, plant room building                                                  | Yes                          | Although basic, all needs are being met.                                                                                                                                                             |
| Outdoor seating and shade                                                                                                         | Yes                          | Shade and seating is provided and is easily upgraded/replaced.                                                                                                                                       |
| Pool operational equipment such as pool covers & retractor reels/motors, robotic vacuum cleaner                                   | Yes                          | New covers and reels added in 2017                                                                                                                                                                   |
| Fencing                                                                                                                           | Yes                          | Upgraded in 2017                                                                                                                                                                                     |
| Summertime operation only (approximately 7 months), as the facility is outdoors                                                   | Yes                          | Seasonal depending on weather and community demand.                                                                                                                                                  |

Generally, the pool meets Councils minimum Service Levels.

The Watershed Assessment Report of 2016 identified a number of opportunities in how best to meet what is now considered a minimum Level of Service. These included increasing the filter area of both pools, adding a ramp to the main pool and several options around chemical treatment and dosing. These should be considered the minimum required to improve the compliance, Level of Service and community outcomes of the existing facility, with no other improvements.

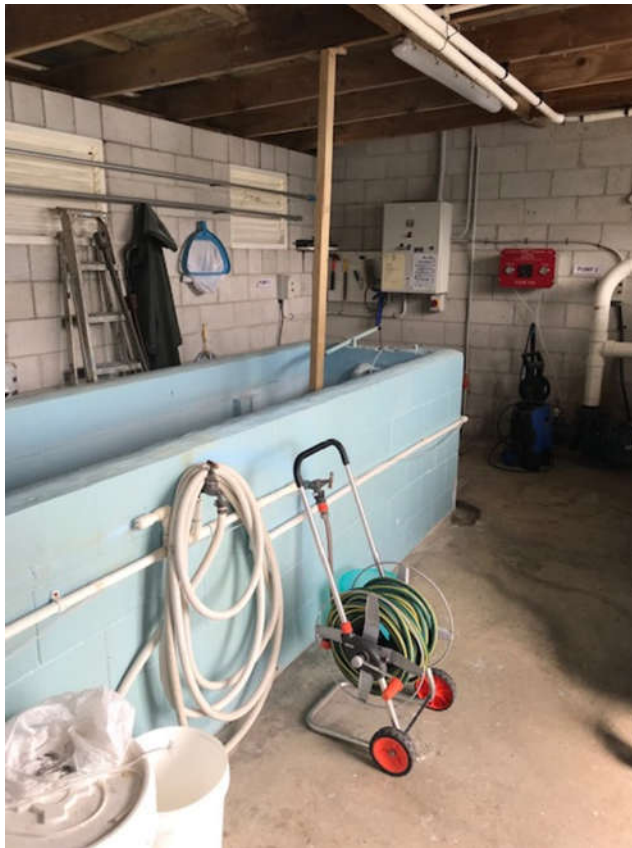
The table below provides updated cost estimates for the works outlined in 2016, and still relevant.

| Item                  | 2016 estimate | Description                                                                         | Current cost estimate |
|-----------------------|---------------|-------------------------------------------------------------------------------------|-----------------------|
| Main pool ramp        | \$600,000.00  | Alter overflow channel(s) and add ramp                                              | \$700,000.00          |
| Main pool filtration  | \$60,000.00   | Increase filter area as it is currently approx. 35% of the required compliant level | \$100,000.00          |
| Small pool filtration | \$20,000.00   | Increase filter area as it is currently approx. 44% of the required compliant level | \$50,000.00           |
| Small pool skimmers   | \$5,000.00    | Increase skimmer area to the pool, in conjunction with filter upgrade               | \$incl above          |





Chemical treatment has been addressed in several ways since the 2106 review, and we believe is adequate. Any future upgrade could address treatment needs, however at this time the systems, chemical type and processes reflect the option solutions that were as presented in 2016, and have since proven to be suitable. Expenditure on chemical dosing plant or systems, should be from annual operational funds unless complete replacement is undertaken.



Main pool filter



Toddlers pool plantroom



Toddlers pool filter and plant



Operational Modelling: **Capex Requirements Existing Facility**  
Client: **Western Bay of Plenty District Council**  
Pool: **Dave Hume Swimming Pool**  
Date: **18-Sep-19**

|                               |              | 2019     | 2020      | 2021      | 2022       | 2023      | 2024     | 2025     | 2026      | 2027      | 2028     | 2029     | 2030     | 2031      | 2032      | 2033     | 2034      | 2035     | 2036     | 2037       | 2038      |
|-------------------------------|--------------|----------|-----------|-----------|------------|-----------|----------|----------|-----------|-----------|----------|----------|----------|-----------|-----------|----------|-----------|----------|----------|------------|-----------|
|                               |              | Yr1      | Yr2       | Yr3       | Yr4        | Yr5       | Yr6      | Yr7      | Yr8       | Yr9       | Yr10     | Yr11     | Yr12     | Yr13      | Yr14      | Yr15     | Yr16      | Yr17     | Yr18     | Yr19       | Yr20      |
| <b>Pool</b>                   |              |          |           |           |            |           |          |          |           |           |          |          |          |           |           |          |           |          |          |            |           |
| Pool Covers                   | Main Pool    | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ 16,000 | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ 16,000  | \$ -      |
| Pool Cover Reel/Storage       | Main Pool    | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ 16,000 | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Lane Ropes                    | Main Pool    | \$ -     | \$ -      | \$ -      | \$ 6,250   | \$ -      | \$ -     | \$ -     | \$ -      | \$ 6,250  | \$ -     | \$ -     | \$ -     | \$ -      | \$ 6,250  | \$ -     | \$ -      | \$ -     | \$ -     | \$ 6,250   | \$ -      |
| Ladders/Handrail              | Main Pool    | \$ 500   | \$ -      | \$ -      | \$ -       | \$ -      | \$ 500   | \$ -     | \$ -      | \$ -      | \$ -     | \$ 500   | \$ -     | \$ -      | \$ -      | \$ -     | \$ 500    | \$ -     | \$ -     | \$ -       | \$ -      |
| Ramp                          | Main Pool    | \$ -     | \$ -      | \$ -      | \$ 700,000 | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Tiles                         | Main Pool    | \$ -     | \$ 18,000 | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Pool Covers                   | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ 3,000 | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ 3,000  |
| Pool Cover Reel/Storage       | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ 3,000  | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Ladders/Handrail              | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ 1,500 | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Cover Winder                  |              | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ 8,000  | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ 8,000   | \$ -      |
| Pool Vacuum                   |              | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ 5,000  | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ 5,000   | \$ -      |
| <b>Plant</b>                  |              | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Automatic Doser               | Main Pool    | \$ -     | \$ -      | \$ -      | \$ 7,000   | \$ -      | \$ -     | \$ -     | \$ -      | \$ 7,000  | \$ -     | \$ -     | \$ -     | \$ -      | \$ 7,000  | \$ -     | \$ -      | \$ -     | \$ -     | \$ 7,000   | \$ -      |
| Filter (increase filter area) | Main Pool    | \$ -     | \$ -      | \$ -      | \$ 100,000 | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ 25,000  | \$ -      |
| Filter Pumps                  | Main Pool    | \$ -     | \$ -      | \$ -      | \$ -       | \$ 15,000 | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ 15,000 |
| Heat Exchanger                | Main Pool    | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ 5,500  | \$ -     | \$ -     | \$ -       | \$ -      |
| Bore Pump                     | Main Pool    | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ 8,500  | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Heat Exchanger                | Leaners Pool | \$ -     | \$ -      | \$ 6,000  | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Filter Pumps                  | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ 5,000   | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Filter (increase filter area) | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ 50,000  | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Automatic Doser               | Leaners Pool | \$ -     | \$ -      | \$ -      | \$ 7,000   | \$ -      | \$ -     | \$ -     | \$ -      | \$ 7,000  | \$ -     | \$ -     | \$ -     | \$ -      | \$ 7,000  | \$ -     | \$ -      | \$ -     | \$ -     | \$ 7,000   | \$ -      |
| Plant General                 |              | \$ 2,500 | \$ 2,500  | \$ 2,500  | \$ 2,500   | \$ 2,500  | \$ 2,500 | \$ 2,500 | \$ 2,500  | \$ 2,500  | \$ 2,500 | \$ 2,500 | \$ 2,500 | \$ 2,500  | \$ 2,500  | \$ 2,500 | \$ 2,500  | \$ 2,500 | \$ 2,500 | \$ 2,500   | \$ 2,500  |
| <b>Other</b>                  |              | \$ -     | \$ -      | \$ -      | \$ -       | \$ -      | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -     | \$ -     | \$ -      | \$ -      | \$ -     | \$ -      | \$ -     | \$ -     | \$ -       | \$ -      |
| Change Rooms/Office           |              | \$ -     | \$ 1,500  | \$ -      | \$ 1,500   | \$ -      | \$ 1,500 | \$ -     | \$ 1,500  | \$ 10,000 | \$ 1,500 | \$ -     | \$ 1,500 | \$ -      | \$ 1,500  | \$ -     | \$ 1,500  | \$ -     | \$ 1,500 | \$ 10,000  | \$ 1,500  |
| General Grounds               |              | \$ -     | \$ -      | \$ 5,000  | \$ -       | \$ -      | \$ -     | \$ -     | \$ 5,000  | \$ 33,000 | \$ -     | \$ -     | \$ -     | \$ 5,000  | \$ -      | \$ -     | \$ -      | \$ -     | \$ 5,000 | \$ 21,000  | \$ -      |
| Toatl                         |              | \$ 3,000 | \$ 22,000 | \$ 13,500 | \$ 879,250 | \$ 17,500 | \$ 4,500 | \$ 2,500 | \$ 20,500 | \$ 94,750 | \$ 7,000 | \$ 3,000 | \$ 4,000 | \$ 23,500 | \$ 24,250 | \$ 4,000 | \$ 10,000 | \$ 2,500 | \$ 9,000 | \$ 107,750 | \$ 22,000 |

Assumptions  
Plant and pool items will last the recommend/expected economic life  
Pool plant items are maintained as per best practice  
Initial replacement years based on information supplied by ther Facility Manager - they are not based on Watershed site observations.



The table below reflects the current replacement costs for a facility offering the minimum Level Of Service:

| Item                                                                                                                                     | Cost (\$)          |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Outdoor main pool 25 m long, 6 lanes wide, 1.3-1.8m deep (sufficient for local competition swimming) and a disability access ramp        | 1,800,000          |
| Outdoor toddlers/learners pool 0.8m deep                                                                                                 | 750,000            |
| Ablution/ changing facilities including hot water showers<br>300m2 @\$3000                                                               | 900,000            |
| Office (including basic staff kitchen), staff toilet, foyer, plant room building. Incl above                                             | -                  |
| Outdoor seating and shade, concourse, landscape and similar                                                                              | 800,000            |
| Pool operational equipment such as pool covers & retractor reels/motors, robotic vacuum cleaner, lane ropes, blocks, ladders and similar | 150,000            |
| Fencing, gates and access                                                                                                                | 90,000             |
| Misc at 1%                                                                                                                               | 44,900             |
| Fees at 20%                                                                                                                              | 906,980            |
| <b>Total</b>                                                                                                                             | <b>\$5,441,880</b> |



The information below anticipates operational costs out 20 years out and is based on current condition and expenditure and assumes no significant changes to the facility, other than those described previously.

|                                   |                           |                                        |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
|-----------------------------------|---------------------------|----------------------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|
| Operational Modelling:            |                           | Basic Level of Service                 |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Client:                           |                           | Western Bay of Plenty District Council |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Pool:                             |                           | Dave Hume Swimming Pool                |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Date:                             |                           | 18-Sep-19                              |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
|                                   |                           | 2019                                   | 2020        | 2021        | 2022         | 2023        | 2024        | 2025        | 2026        | 2027         | 2028        | 2029        | 2030        | 2031        | 2032         | 2033        | 2034        | 2035        | 2036        | 2037         | 2038        |
|                                   |                           | Yr1                                    | Yr2         | Yr3         | Yr4          | Yr5         | Yr6         | Yr7         | Yr8         | Yr9          | Yr10        | Yr11        | Yr12        | Yr13        | Yr14         | Yr15        | Yr16        | Yr17        | Yr18        | Yr19         | Yr20        |
| Staff Costs                       |                           |                                        |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Wages -                           | Outdoor Main              | \$ 89,366                              | \$ 95,424   | \$ 100,978  | \$ 100,978   | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978   | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978   | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978  | \$ 100,978   | \$ 100,978  |
|                                   | Outdoor Toddlers/Learners | \$ 11,729                              | \$ 12,524   | \$ 13,253   | \$ 13,253    | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253    | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253    | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253   | \$ 13,253    | \$ 13,253   |
| Professional development          |                           | \$ 1,011                               | \$ 1,079    | \$ 1,142    | \$ 1,142     | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142     | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142     | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142    | \$ 1,142     | \$ 1,142    |
| Admin                             |                           | \$ 2,793                               | \$ 2,982    | \$ 3,156    | \$ 3,156     | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156     | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156     | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156    | \$ 3,156     | \$ 3,156    |
| Operating Costs                   |                           |                                        |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Chemicals                         |                           | \$ 5,970                               | \$ 5,970    | \$ 5,970    | \$ 5,970     | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970     | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970     | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970    | \$ 5,970     | \$ 5,970    |
| Energy                            |                           | \$ 12,793                              | \$ 12,793   | \$ 12,793   | \$ 12,793    | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793    | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793    | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793   | \$ 12,793    | \$ 12,793   |
| Water                             |                           | \$ -                                   | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        |
| Grounds                           |                           | \$ 1,700                               | \$ 1,700    | \$ 1,700    | \$ 1,700     | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700     | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700     | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700    | \$ 1,700     | \$ 1,700    |
| Planned maintenance               |                           | \$ 4,264                               | \$ 5,686    | \$ 4,264    | \$ 5,686     | \$ 4,264    | \$ 5,686    | \$ 4,264    | \$ 5,686    | \$ 4,264     | \$ 5,686    | \$ 4,264    | \$ 5,686    | \$ 4,264    | \$ 5,686     | \$ 4,264    | \$ 5,686    | \$ 4,264    | \$ 5,686    | \$ 4,264     | \$ 5,686    |
| Reactive maintenance              |                           | \$ 5,330                               | \$ 4,549    | \$ 4,478    | \$ 7,107     | \$ 3,411    | \$ 5,970    | \$ 5,330    | \$ 4,549    | \$ 4,478     | \$ 7,107    | \$ 3,411    | \$ 5,970    | \$ 5,330    | \$ 4,549     | \$ 4,478    | \$ 7,107    | \$ 3,411    | \$ 5,970    | \$ 5,330     | \$ 4,549    |
| Cleaning                          |                           | \$ 3,910                               | \$ 4,175    | \$ 4,418    | \$ 4,418     | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418     | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418     | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418    | \$ 4,418     | \$ 4,418    |
| Sundry                            |                           | \$ 5,095                               | \$ 5,231    | \$ 5,043    | \$ 85,651    | \$ 4,883    | \$ 15,480   | \$ 5,171    | \$ 5,267    | \$ 85,043    | \$ 5,651    | \$ 4,883    | \$ 5,480    | \$ 15,171   | \$ 85,267    | \$ 5,043    | \$ 5,651    | \$ 4,883    | \$ 5,480    | \$ 85,171    | \$ 15,267   |
| Rates                             |                           | \$ -                                   | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        |
| Insurance                         |                           | \$ 1,950                               | \$ 1,950    | \$ 1,950    | \$ 1,950     | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950     | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950     | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950    | \$ 1,950     | \$ 1,950    |
| Compliance                        |                           |                                        |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Water testing                     |                           | \$ 1,750                               | \$ 1,750    | \$ 1,750    | \$ 1,750     | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750     | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750     | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750    | \$ 1,750     | \$ 1,750    |
| Compliance                        |                           | \$ 1,500                               | \$ 1,500    | \$ 1,500    | \$ 1,500     | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500     | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500     | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500    | \$ 1,500     | \$ 1,500    |
| Security                          |                           | \$ -                                   | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        |
| Health & Safety                   |                           | \$ -                                   | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        | \$ -        | \$ -        | \$ -        | \$ -         | \$ -        |
| Total                             |                           | \$ 149,161                             | \$ 157,313  | \$ 162,395  | \$ 247,054   | \$ 161,169  | \$ 175,746  | \$ 163,376  | \$ 164,112  | \$ 242,395   | \$ 167,054  | \$ 161,169  | \$ 165,746  | \$ 173,376  | \$ 244,112   | \$ 162,395  | \$ 167,054  | \$ 161,169  | \$ 165,746  | \$ 243,376   | \$ 174,112  |
| Annual Opex                       |                           | \$ 149,161                             | \$ 157,313  | \$ 162,395  | \$ 247,054   | \$ 161,169  | \$ 175,746  | \$ 163,376  | \$ 164,112  | \$ 242,395   | \$ 167,054  | \$ 161,169  | \$ 165,746  | \$ 173,376  | \$ 244,112   | \$ 162,395  | \$ 167,054  | \$ 161,169  | \$ 165,746  | \$ 243,376   | \$ 174,112  |
| Council Service Delivery Contract |                           | \$ 100,000                             | \$ 100,000  | \$ 100,000  | \$ 100,000   | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000   | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000   | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000  | \$ 100,000   | \$ 100,000  |
| Deficit/Surplus                   |                           | \$ (49,161)                            | \$ (57,313) | \$ (62,395) | \$ (147,054) | \$ (61,169) | \$ (75,746) | \$ (63,376) | \$ (64,112) | \$ (142,395) | \$ (67,054) | \$ (61,169) | \$ (65,746) | \$ (73,376) | \$ (144,112) | \$ (62,395) | \$ (67,054) | \$ (61,169) | \$ (65,746) | \$ (143,376) | \$ (74,112) |
| Annual Swims Required             | Child \$3.20 inc gst      | 15,719                                 | 18,326      | 19,951      | 47,020       | 19,559      | 24,219      | 20,264      | 20,499      | 45,530       | 21,440      | 19,559      | 21,022      | 23,462      | 46,079       | 19,951      | 21,440      | 19,559      | 21,022      | 45,844       | 23,697      |
|                                   | Adult \$4.80 inc gst      |                                        |             |             |              |             |             |             |             |              |             |             |             |             |              |             |             |             |             |              |             |
| Daily Swims Required              |                           | 79                                     | 92          | 100         | 236          | 98          | 122         | 102         | 103         | 229          | 108         | 98          | 106         | 118         | 232          | 100         | 108         | 98          | 106         | 230          | 119         |

Assumptions  
The facility is open for an average of 199 days per season  
After the 1 April 2021 we have not allowed for any increase in the minimum wage  
The above assumes a minimum roster of 1 FTE which increases to 2 FTE during peak periods  
Based on the 3 year review of the LTP we have assumed capital expenditure will result in a reduction in reactive maintenance  
We have not allowed for any inflation in general costs  
Pool painting occurs on a 5 year cycle  
Interior repaint is allowed for every seven years commencing 2024 and is included under sundry items  
We have not allowed for any pool plant replacement as this should be covered under capex  
There is an additional biennial allowance for planned maintenance which is not on an annual cycle





## The Pools

Notwithstanding the need to provide improved accessibility, the main pool appears in excellent condition.

The repaint in 2017 necessitated the pool surface being ground back to bare concrete, thereby exposing the concrete surface, and any issues that may have been hidden or disguised by paint. The images below show the main pool after grinding. From our experience, and feedback from the painter, the pool substrate was in excellent condition, there are no leaks and only small areas of joints needed replacing, which is expected at repaint time.



In order to achieve Council's minimum Level of Service the design and consenting (if any) to install a new ramp and raise the sides of the pool could occur over a summer season. The works can then commence as soon as the swimming season ends, before the winter weather can affect ground works in a significant way.

At this time the following would be required and deliverable:

- Add filter area or replace the existing filter(type influenced by the decision around any future indoor pool provision, and the way in which waste water is managed);
- Alter overflow channels to achieve new pool depth;
- New pipework to and from the pool to accommodate new compliant flow rates and filter area;
- Pool repaint and concourse repairs.





Should the decision be made that there will not be a new indoor facility, or it is many years away, the toddlers pool filter and circulation upgrade could and should occur at the same time as the main pool upgrade. The Toddlers pool does not remain in any of the options below, therefore the capital investment in that pool should be considered on the basis of "how long will it be there"?

Having observed the main pool preparation and repaint in 2017, and numerous visits since, we strongly believe that re-lining the pool in a Myrtha or Natare solution would not be sensible nor required expenditure. There is no evidence of leaks, the pool substrate is in excellent condition, and new supply and return pipework will remove any unknown risks around existing pipework.

The existing plant room and storage areas are adequate for the current offering, although filter selection may be impacted by the available space in the plant room for the main pool. The Toddlers pool plant room has the capacity to fit new filters, and if an indoor facility is not progressed the building and infrastructure for that pool is adequate.

On the basis that the main pool was repainted two years ago, it would be sensible to plan the main pool upgrade works to be delivered in the winter of 2022, ahead of the need for the scheduled repaint. This would achieve the full value of the 2017 repaint and provide time for planning and funding.

The Bore is currently located alongside the main pool storage area. Options one and two below, both allow for the bore to remain in its current location in some way.



Existing Bore



Main Pool Heat Exchanger



Toddlers Pool Heat Exchanger



## Future Thinking

The following options reflect the project brief, and as noted previously, we have included a third option.

We have considered the "logical" layout of the site, optimum reuse of existing facilities including the driveway, services, bore where relevant, and of course for the options where the existing main pool remains, its layout and orientation.

Key points to note:

- Costs are based on the types of pool and in all instances allow for tiled finishes;
- Filtration and treatment plant costs have been included in the rates, and allow for the typical costs of all options available currently;
- In the absence of spa size requirements, we have allowed for 10 seats, which means a seating area of five lineal metres;
- HVAC plant has been allowed for on the roof of the plant room, and costs reflect the structure and access required for the plant;
- We have allowed for large doors to the outdoor area in options two and three;
- Ideally HVAC is turned off (or ramped down) over the summer months and doors opened to allow ambient temperatures to influence the pool hall and reduce operational costs;
- Pools have been positioned considering separation of user groups (Spa separation from Learn to Swim areas for example and the distance from the outdoor area to the Learn to Swim pool);
- We have also considered supervision needs and efficiencies, and the ability for guards to roam, whilst being visible and able to actively observe multiple areas simultaneously;
- We have allowed for family change rooms;
- The café area is co-located in the entry area, and is applicable to all options;
- Costs assume similar construction across all options with the use of Kingspan, portal frames, and a medium to high level of architectural design in public facing areas;
- The existing change rooms remain for summer use in options two and three;
- The existing main pool plant room remains in use for options two and three;
- We have not allowed for Green Star design or features- including Solar heating or energy;
- Potential lifeguarding positions;
- Sight lines through the facility;
- Management area proximity and access to poolside;
- Pedestrian traffic movements;
- Proximity of differing water types (toddlers away from deep water and pool entry areas);
- Storage and access to and from the concourse;
- Plantroom access internal and external deliveries;



# Option One | New Indoor Pool Facility



## AREA SCHEDULE / m<sup>2</sup>

|                 |             |
|-----------------|-------------|
| Pool Hall       | 1660        |
| Pool Change     | 335         |
| Entry           | 145         |
| Admin           | 100         |
| Gym             | 85          |
| Therapy         | 35          |
| Gym Change      | 35          |
| Stores          | 170         |
| Pool Plant      | 300         |
| AH Plant (Roof) | 250         |
| Misc.           | 110         |
| <b>Total</b>    | <b>3225</b> |



**SK01** WESTERN BAY OF PLENTY DISTRICT COUNCIL - DAVE HUME POOL  
VESSEY STEWART RESERVE, KATIKAKI  
OPTION 1  
Plot Date: 20/04/2019 3:30:06 PM Cad File No: P:\SRP295\desig\3-concept\version 1

Scale  
date  
rev  
job no. 12515719







Option One consists of a new indoor pool constructed on the existing site that includes the following provisions:

- 10 lane 25m pool with a ramp access;
- 8x15m hydrotherapy pool 1.1-1.8m with a ramp access;
- Spa pool (we have assumed 10 occupants at one time);
- 10x 15m toddlers/Learn to Swim pool;
- Change rooms- including family change areas;
- 10-person gym – therefore 10 machine/training spaces;
- A leased café area, office/shop, room for staff, coaches and managers meeting room;
- Leased therapy space (eg physio);
- Pool equipment storage;
- Plant area.

#### High Level Cost Estimate: Option One

| Item                                                      | Rate (\$) | Area (m²) | Cost (\$)         | Comments                                                                                                              |
|-----------------------------------------------------------|-----------|-----------|-------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Buildings</b>                                          |           |           |                   |                                                                                                                       |
| Pool Hall Area                                            | 4,750     | 1660      | 7,885,000         | Includes all pools, plant, electrical, fittings and finishes to upper mid range finish (eg tiled pools and concourse) |
| Essential supporting area                                 | 3,500     | 540       | 1,890,500         | Includes change rooms / storage                                                                                       |
| Gym/ Therapy                                              | 3,000     | 120       | 360,000           |                                                                                                                       |
| Foyer / Circulation Area                                  | 3,000     | 145       | 435,000           | Includes café area                                                                                                    |
| Internal Plant Area/AH plant                              | 2,500     | 550       | 1,375,000         | Air handling on roof- allows for safe access and structure                                                            |
| Core Management                                           | 3,500     | 210       | 703,500           | Includes storage/office/misc spaces                                                                                   |
| <b>Siteworks and Infrastructure</b>                       |           |           |                   |                                                                                                                       |
| Demolition                                                |           |           | 250,000           | \$150,000 pool, \$100,000 building and ancillary                                                                      |
| Services Supply (electrical, fire, communications, water) | sum       |           | 350,000           | Includes new bore                                                                                                     |
| Hardstanding                                              | sum       |           | 200,000           | Includes reuse of existing carparking                                                                                 |
| Landscaping                                               | sum       |           | 250,000           | Includes areas within the facility and across the site- concourse, seating, shade, planting, grass etc                |
| <b>Sub Total</b>                                          |           |           | <b>13,699,000</b> |                                                                                                                       |
| Resource and Building Consent                             | 2%        |           | 273,980           |                                                                                                                       |
| Professional Fees                                         | 15%       |           | 2,054,850         |                                                                                                                       |
| Contingency                                               | 10%       |           | 1,369,900         | 10% of construction estimate only                                                                                     |
| <b>Total</b>                                              |           |           | <b>17,397,730</b> |                                                                                                                       |
| Escalation                                                | 5%        |           | 869,886           | Applied across all costs and in place only until design is completed and relates to high level early stage            |
| Current Total Budget Allowance                            |           |           | 18,300,000        | \$18,267,616 rounded                                                                                                  |



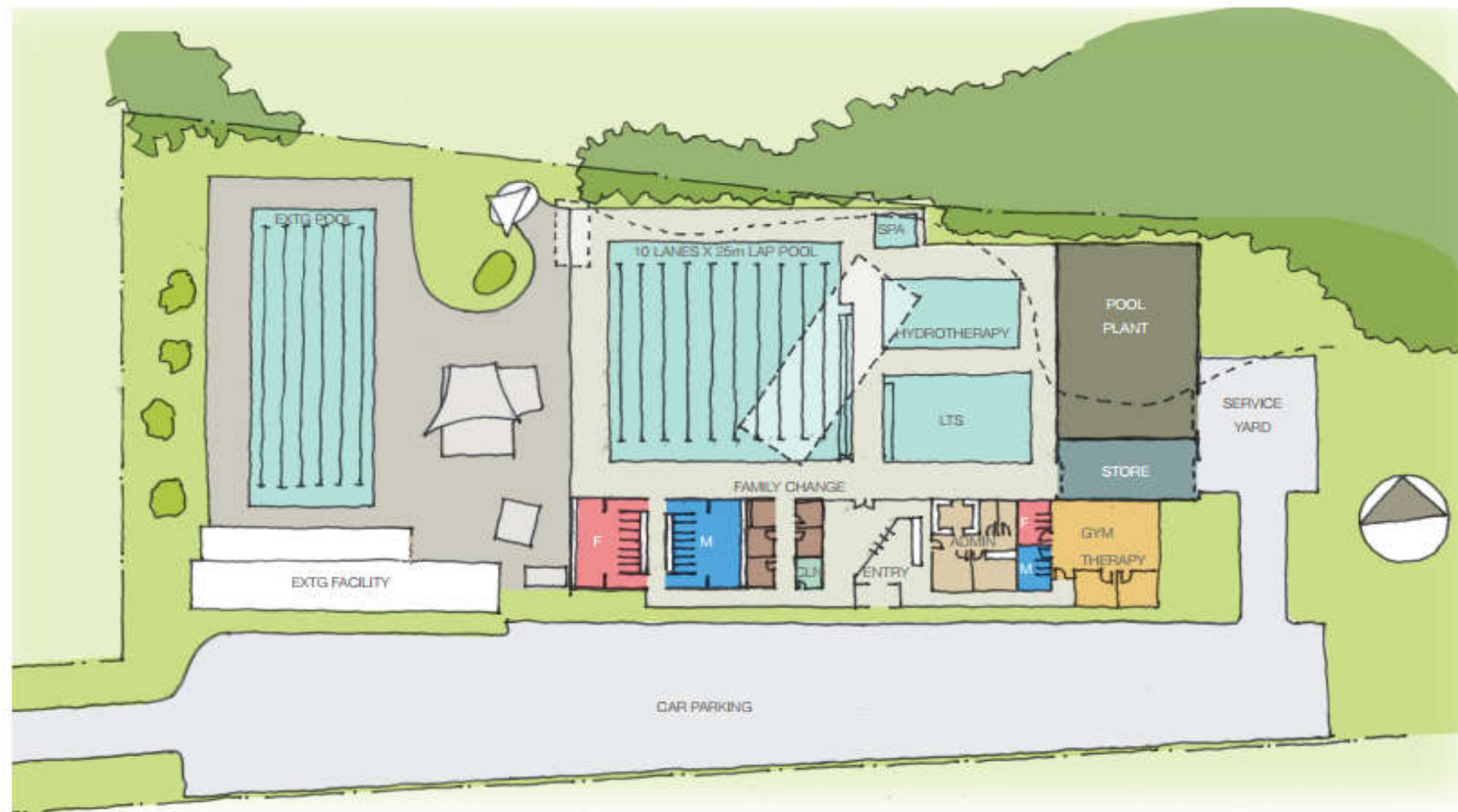
Operational Modelling: **Option 1**  
Client: **Western Bay of Plenty District Council**  
Pool: **Dave Hume Swimming Pool**  
Date: **18-Sep-19**

|                                   |              | 2019              | 2020              | 2021              | 2022              | 2023              | 2024                | 2025              | 2026                | 2027              | 2028              | 2029              | 2030              | 2031                | 2032              | 2033                | 2034              | 2035              | 2036              | 2037              | 2038                |
|-----------------------------------|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|---------------------|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|---------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
|                                   |              | Yr1               | Yr2               | Yr3               | Yr4               | Yr5               | Yr6                 | Yr7               | Yr8                 | Yr9               | Yr10              | Yr11              | Yr12              | Yr13                | Yr14              | Yr15                | Yr16              | Yr17              | Yr18              | Yr19              | Yr20                |
| <b>Staff Costs</b>                |              |                   |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |
| Wages -                           | Pool General | \$ 325,130        | \$ 347,172        | \$ 367,378        | \$ 367,378        | \$ 367,378        | \$ 367,378          | \$ 367,378        | \$ 367,378          | \$ 367,378        | \$ 367,378        | \$ 367,378        | \$ 367,378        | \$ 367,378          | \$ 367,378        | \$ 367,378          | \$ 367,378        | \$ 367,378        | \$ 367,378        | \$ 367,378        | \$ 367,378          |
|                                   | LTS          | \$ -              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                |
|                                   | Gym/Other    | \$ 150,728        | \$ 160,947        | \$ 170,314        | \$ 170,314        | \$ 170,314        | \$ 170,314          | \$ 170,314        | \$ 170,314          | \$ 170,314        | \$ 170,314        | \$ 170,314        | \$ 170,314        | \$ 170,314          | \$ 170,314        | \$ 170,314          | \$ 170,314        | \$ 170,314        | \$ 170,314        | \$ 170,314        | \$ 170,314          |
| Facility Manager                  |              | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000           | \$ 75,000         | \$ 75,000           | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000           | \$ 75,000         | \$ 75,000           | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000         | \$ 75,000           |
| Professional development          |              | \$ 5,509          | \$ 5,831          | \$ 6,127          | \$ 6,127          | \$ 6,127          | \$ 6,127            | \$ 6,127          | \$ 6,127            | \$ 6,127          | \$ 6,127          | \$ 6,127          | \$ 6,127          | \$ 6,127            | \$ 6,127          | \$ 6,127            | \$ 6,127          | \$ 6,127          | \$ 6,127          | \$ 6,127          | \$ 6,127            |
| Admin                             |              | \$ 35,561         | \$ 37,972         | \$ 40,182         | \$ 40,182         | \$ 40,182         | \$ 40,182           | \$ 40,182         | \$ 40,182           | \$ 40,182         | \$ 40,182         | \$ 40,182         | \$ 40,182         | \$ 40,182           | \$ 40,182         | \$ 40,182           | \$ 40,182         | \$ 40,182         | \$ 40,182         | \$ 40,182         | \$ 40,182           |
| <b>Operating Costs</b>            |              |                   |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |
| Chemicals                         |              | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714           | \$ 51,714         | \$ 51,714           | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714           | \$ 51,714         | \$ 51,714           | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714         | \$ 51,714           |
| Energy                            | 25m Pool     | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793           | \$ 12,793         | \$ 12,793           | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793           | \$ 12,793         | \$ 12,793           | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793         | \$ 12,793           |
|                                   | Other        | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729          | \$ 122,729        | \$ 122,729          | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729          | \$ 122,729        | \$ 122,729          | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729        | \$ 122,729          |
| Water                             | 25m Pool     | \$ -              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                |
|                                   | Other        | \$ -              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                |
| Grounds                           |              | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550            | \$ 2,550          | \$ 2,550            | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550            | \$ 2,550          | \$ 2,550            | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550          | \$ 2,550            |
| Planned maintenance               |              | \$ 16,807         | \$ 12,929         | \$ 16,807         | \$ 12,929         | \$ 16,807         | \$ 12,929           | \$ 16,807         | \$ 12,929           | \$ 16,807         | \$ 12,929         | \$ 16,807         | \$ 12,929         | \$ 16,807           | \$ 12,929         | \$ 16,807           | \$ 12,929         | \$ 16,807         | \$ 12,929         | \$ 16,807         | \$ 12,929           |
| Reactive maintenance              |              | \$ 21,009         | \$ 10,343         | \$ 21,009         | \$ 10,343         | \$ 21,009         | \$ 10,343           | \$ 21,009         | \$ 10,343           | \$ 21,009         | \$ 10,343         | \$ 21,009         | \$ 10,343         | \$ 21,009           | \$ 10,343         | \$ 21,009           | \$ 10,343         | \$ 21,009         | \$ 10,343         | \$ 21,009         | \$ 10,343           |
| Cleaning                          |              | \$ 14,224         | \$ 15,189         | \$ 16,073         | \$ 16,073         | \$ 16,073         | \$ 16,073           | \$ 16,073         | \$ 16,073           | \$ 16,073         | \$ 16,073         | \$ 16,073         | \$ 16,073         | \$ 16,073           | \$ 16,073         | \$ 16,073           | \$ 16,073         | \$ 16,073         | \$ 16,073         | \$ 16,073         | \$ 16,073           |
| Sundry                            |              | \$ 36,274         | \$ 34,237         | \$ 36,551         | \$ 34,369         | \$ 36,551         | \$ 104,369          | \$ 36,551         | \$ 94,369           | \$ 36,551         | \$ 34,369         | \$ 36,551         | \$ 34,369         | \$ 106,551          | \$ 34,369         | \$ 96,551           | \$ 34,369         | \$ 36,551         | \$ 34,369         | \$ 36,551         | \$ 104,369          |
| Rates                             |              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                |
| Insurance                         |              | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750            | \$ 3,750          | \$ 3,750            | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750            | \$ 3,750          | \$ 3,750            | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750          | \$ 3,750            |
| <b>Compliance</b>                 |              |                   |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |                   |                     |                   |                   |                   |                   |                     |
| Water testing                     |              | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500            | \$ 3,500          | \$ 3,500            | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500            | \$ 3,500          | \$ 3,500            | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500          | \$ 3,500            |
| Compliance                        |              | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500            | \$ 2,500          | \$ 2,500            | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500            | \$ 2,500          | \$ 2,500            | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500          | \$ 2,500            |
| Security                          |              | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757            | \$ 7,757          | \$ 7,757            | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757            | \$ 7,757          | \$ 7,757            | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757          | \$ 7,757            |
| Health & Safety                   |              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                | \$ -              | \$ -                | \$ -              | \$ -              | \$ -              | \$ -              | \$ -                |
| <b>Total</b>                      |              | <b>\$ 887,535</b> | <b>\$ 906,913</b> | <b>\$ 956,734</b> | <b>\$ 940,008</b> | <b>\$ 956,734</b> | <b>\$ 1,010,008</b> | <b>\$ 956,734</b> | <b>\$ 1,000,008</b> | <b>\$ 956,734</b> | <b>\$ 940,008</b> | <b>\$ 956,734</b> | <b>\$ 940,008</b> | <b>\$ 1,026,734</b> | <b>\$ 940,008</b> | <b>\$ 1,016,734</b> | <b>\$ 940,008</b> | <b>\$ 956,734</b> | <b>\$ 940,008</b> | <b>\$ 956,734</b> | <b>\$ 1,010,008</b> |
| Annual Opex                       |              | \$ 887,535        | \$ 906,913        | \$ 956,734        | \$ 940,008        | \$ 956,734        | \$ 1,010,008        | \$ 956,734        | \$ 1,000,008        | \$ 956,734        | \$ 940,008        | \$ 956,734        | \$ 940,008        | \$ 1,026,734        | \$ 940,008        | \$ 1,016,734        | \$ 940,008        | \$ 956,734        | \$ 940,008        | \$ 956,734        | \$ 1,010,008        |
| Council Service Delivery Contract |              | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000          | \$ 100,000        | \$ 100,000          | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000          | \$ 100,000        | \$ 100,000          | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000        | \$ 100,000          |
| Deficit/Surplus                   |              | \$ (787,535)      | \$ (806,913)      | \$ (856,734)      | \$ (840,008)      | \$ (856,734)      | \$ (910,008)        | \$ (856,734)      | \$ (900,008)        | \$ (856,734)      | \$ (840,008)      | \$ (856,734)      | \$ (840,008)      | \$ (926,734)        | \$ (840,008)      | \$ (916,734)        | \$ (840,008)      | \$ (856,734)      | \$ (840,008)      | \$ (856,734)      | \$ (910,008)        |
| Annual Swims Required             |              | 251,810           | 258,006           | 273,936           | 268,588           | 273,936           | 290,970             | 273,936           | 287,772             | 273,936           | 268,588           | 273,936           | 268,588           | 296,318             | 268,588           | 293,121             | 268,588           | 273,936           | 268,588           | 273,936           | 290,970             |
| Daily Swims Required              |              | 696               | 713               | 757               | 742               | 757               | 804                 | 757               | 795                 | 757               | 742               | 757               | 742               | 819                 | 742               | 810                 | 742               | 757               | 742               | 757               | 804                 |

**Assumptions**  
*The facility is open for 362 days per annum*  
*After the 1 April 2021 we have not allowed for any increase in the minimum wage*  
*The above assumes a minimum roster of 2 FTE which increases to 4 FTE during peak periods*  
*We have not allowed for any inflation in general costs*  
*Interior repaint is allowed for every seven years commencing 2026 and is included under sundry items*  
*There is an annual allowance for planned and reactive maintenance. This does not fall in an even pattern so in years where full funding is not expensed funds should be accrued for future years*  
*We have not allowed for any pool plant replacement as this should be covered under capex*  
*A leased Café has been excluded from these figures*



## Option Two | Retain Existing & Add New Facilities



### AREA SCHEDULE / m<sup>2</sup>

|                 |      |
|-----------------|------|
| Pool Hall       | 1660 |
| Pool Change     | 335  |
| Entry           | 145  |
| Admin           | 100  |
| Gym             | 85   |
| Therapy         | 35   |
| Gym Change      | 35   |
| Stores          | 105  |
| Pool Plant      | 300  |
| AH Plant (Roof) | 250  |
| Misc.           | 65   |

Total 3115



**SK02** WESTERN BAY OF PLENTY DISTRICT COUNCIL - DAVE HUME POOL  
VESSEY STEWART RESERVE, KATIKAKI  
OPTION 2

Plot Date: 20/09/2019 3:30:12 PM

Cad File No: P: SRP2951design10-conceptversion 1

Scale: 1:500 Date: 20/09/2019 Rev: 1 Job No: 12515719

**Watershed**  
Properties, Projects & Aquatics

**GHDWOODHEAD**  
creativespaces





Option two includes a new indoor pool constructed beside the existing outdoor facility that includes the following provisions:

- 10 lane 25m pool with a ramp access;
- 8x15m hydrotherapy pool 1.1-1.8m with a ramp access;
- Spa pool (we have assumed 10 occupants at one time);
- 10x 15m toddlers/Learn to Swim pool;
- Change rooms- including family change rooms;
- 10-person gym – therefore 10 machine/training spaces;
- A leased café area, office/shop, room for staff, coaches and managers meeting room;
- Leased therapy space (eg physio);
- Pool equipment storage;
- Plant area.

#### High Level Cost Estimate: Option Two

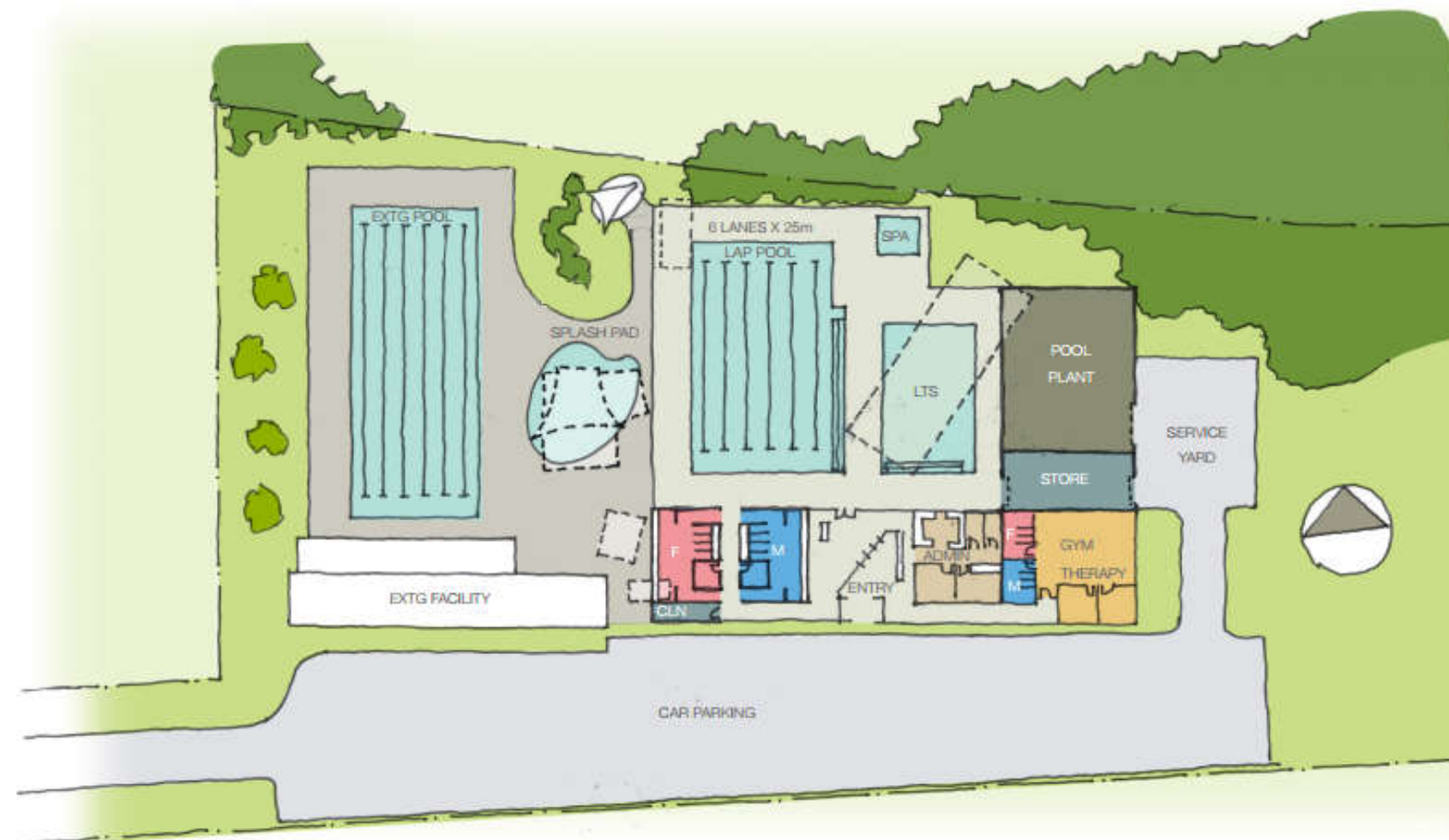
| Item                                                      | Rate (\$) | Area (m²) | Cost              | Comments                                                                                                      |
|-----------------------------------------------------------|-----------|-----------|-------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Buildings</b>                                          |           |           |                   |                                                                                                               |
| Pool Hall Area                                            | 4,750     | 1660      | 7,885,000         | Includes all plant, electrical, fittings and finishes to upper mid range finish (eg tiles on concourse floor) |
| Essential supporting area                                 | 3,500     | 475       | 1,662,500         | Includes change rooms / storage                                                                               |
| Gym/ Therapy                                              | 3,000     | 120       | 360,000           |                                                                                                               |
| Foyer / Circulation Area                                  | 3,000     | 145       | 435,000           | Includes café area                                                                                            |
| Internal Plant Area/AH plant                              | 2,500     | 550       | 1,375,000         | Air handling on roof- allows for safe access and structure                                                    |
| Core Management                                           | 3,500     | 165       | 577,500           | Includes storage/office/misc spaces                                                                           |
| <b>Siteworks and Infrastructure</b>                       |           |           |                   |                                                                                                               |
| Demolition                                                |           |           |                   | Minor for this option- included in below                                                                      |
| Services Supply (electrical, fire, communications, water) | sum       |           | 250,000           |                                                                                                               |
| Hardstanding                                              | sum       |           | 200,000           | Includes reuse of existing carparking                                                                         |
| Landscaping                                               | sum       |           | 150,000           | Includes areas within the facility and across the site- concourse, seating, shade, planting, grass etc        |
| <b>Sub Total</b>                                          |           |           | <b>12,894,500</b> |                                                                                                               |
| Resource and Building Consent                             | 2%        |           | 257,890           |                                                                                                               |
| Professional Fees                                         | 15%       |           | 1,934,175         |                                                                                                               |
| Contingency                                               | 10%       |           | 1,289,450         | 10% of construction estimate only                                                                             |
| <b>Total</b>                                              |           |           | <b>16,376,015</b> |                                                                                                               |
| Escalation                                                | 5%        |           | 818,800           | Applied across all costs and in place only until design is completed and relates to high level early stage    |
| Current Total Budget Allowance                            |           |           | 17,200,000        | \$17,194,815 rounded.                                                                                         |

|                          |               | 2019       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2031       | 2032       | 2033       | 2034       | 2035       | 2036       | 2037       | 2038       |
|--------------------------|---------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                          |               | Yr1        | Yr2        | Yr3        | Yr4        | Yr5        | Yr6        | Yr7        | Yr8        | Yr9        | Yr10       | Yr11       | Yr12       | Yr13       | Yr14       | Yr15       | Yr16       | Yr17       | Yr18       | Yr19       | Yr20       |
| <b>Staff Costs</b>       |               |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Wages -                  | Pool General  | \$ 369,060 | \$ 394,082 | \$ 417,017 | \$ 417,017 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 | \$ 367,378 |
|                          | LTS           | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       |
|                          | Gym/Other     | \$ 150,728 | \$ 160,947 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 | \$ 170,314 |
| Facility Manager         |               | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  | \$ 75,000  |
| Professional development |               | \$ 5,948   | \$ 6,300   | \$ 6,623   | \$ 6,623   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   | \$ 6,127   |
| Admin                    |               | \$ 35,561  | \$ 37,972  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  | \$ 40,182  |
| <b>Operating Costs</b>   |               |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Chemicals                |               | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  | \$ 55,614  |
| Energy                   | Existing Pool | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  | \$ 12,793  |
|                          | Other         | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 | \$ 211,129 |
| Water                    | Existing Pool | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       |
|                          | Other         | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       | \$ -       |
| Grounds                  |               | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   | \$ 2,550   |
| Planned maintenance      |               | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  | \$ 20,307  | \$ 16,429  |
| Reactive maintenance     |               | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  | \$ 25,384  | \$ 13,143  |
| Cleaning                 |               | \$ 14,224  | \$ 15,189  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  | \$ 16,073  |
| Sundry                   |               | \$ 51,300  | \$ 49,027  |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |

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## Option Three | Out of Scope



### AREA SCHEDULE / m<sup>2</sup>

|                 |             |
|-----------------|-------------|
| Pool Hall       | 1150        |
| Pool Change     | 190         |
| Entry           | 145         |
| Admin           | 100         |
| Gym             | 85          |
| Therapy         | 35          |
| Gym Change      | 35          |
| Stores          | 90          |
| Pool Plant      | 270         |
| AH Plant (Roof) | 200         |
| Misc.           | 50          |
| <b>Total</b>    | <b>2350</b> |



# SK03

WESTERN BAY OF PLENTY DISTRICT COUNCIL - DAVE HUME POOL  
VESSEY STEWART RESERVE, KATIKAKI  
OPTION 3

Plot Date: 20/09/2019 2:30:17 PM

Cad File No: P: SRP205/19/design/03-concept/option 1

Level 5, 5/40 Collins St, Victoria, Australia 3000, Tel: 03 9230 0000, Fax: 03 9230 0001, Email: info@watershed.co.nz, www.watershed.co.nz

scale  
date  
rev  
job no. 12916719

@A3

**GHDWOODHEAD**  
creativespaces



Option Three provides a new indoor facility, with reduced offerings, beside the existing outdoor pool, with a splash pad.

- 6 lane 25m pool with a ramp access;
- Spa pool (we have assumed 10 occupants at one time);
- 10x 15m toddlers/Learn to Swim pool;
- Existing outdoor main pool;
- Outdoor splash pad;
- Change rooms- including family change rooms;
- 10-person gym – therefore 10 machine/training spaces;
- A leased café area, office/shop, room for staff, coaches and managers meeting room;
- Leased therapy space (eg physio);
- Pool equipment storage;
- Plant area.

#### High Level Cost Estimate: Option Three

| Item                                                      | Rate (\$) | Area (m²) | Cost (\$)         | Comments                                                                                                      |
|-----------------------------------------------------------|-----------|-----------|-------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Buildings</b>                                          |           |           |                   |                                                                                                               |
| Pool Hall Area                                            | 4,750     | 1150      | 5,462,500         | Includes all plant, electrical, fittings and finishes to upper mid range finish (eg tiles on concourse floor) |
| Essential supporting area                                 | 3,500     | 315       | 1,102,000         | Includes change rooms / storage                                                                               |
| Gym/ Therapy                                              | 3,000     | 120       | 360,000           |                                                                                                               |
| Foyer / Circulation Area                                  | 3,000     | 145       | 435,000           | Includes café area                                                                                            |
| Internal Plant Area/AH plant                              | 2,500     | 470       | 1,175,000         | Air handling on roof- allows for safe access and structure                                                    |
| Core Management                                           | 3,500     | 150       | 525,000           | Includes storage/office/misc spaces                                                                           |
| Water Toys                                                |           | 100       | 300,000           | This figure can increase or decrease as required- nominated arbitrary number for approx. 100m² splash pad     |
| <b>Siteworks and Infrastructure</b>                       |           |           |                   |                                                                                                               |
| Demolition                                                |           |           |                   | Minor for this option- included below                                                                         |
| Services Supply (electrical, fire, communications, water) | sum       |           | 250,000           |                                                                                                               |
| Hardstanding                                              | sum       |           | 200,000           | Includes reuse of existing carparking                                                                         |
| Landscaping                                               | sum       |           | 150,000           | Includes areas within the facility and across the site- concourse, seating, shade, planting, grass etc        |
| <b>Sub Total</b>                                          |           |           | <b>9,959,500</b>  |                                                                                                               |
| Resource and Building Consent                             | 2%        |           | 199,190           |                                                                                                               |
| Professional Fees                                         | 15%       |           | 1,493,925         |                                                                                                               |
| Contingency                                               | 10%       |           | 995,950           | 10% of construction estimate only                                                                             |
| <b>Total</b>                                              |           |           | <b>12,648,565</b> |                                                                                                               |
| Escalation                                                | 5%        |           | 632,428           | Applied across all costs and in place only until design is completed and relates to high level early stage    |
| Current Total Budget Allowance                            |           |           | 13,300,000        | \$13, 280,993 rounded.                                                                                        |



Operational Modelling: **Option 3**  
Client: **Western Bay of Plenty District Council**  
Pool: **Dave Hume Swimming Pool**  
Date: **18-Sep-19**

|                                   |                      | 2019         | 2020         | 2021         | 2022         | 2023         | 2024         | 2025         | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         | 2033         | 2034         | 2035         | 2036         | 2037         | 2038         |
|-----------------------------------|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                   |                      | Yr1          | Yr2          | Yr3          | Yr4          | Yr5          | Yr6          | Yr7          | Yr8          | Yr9          | Yr10         | Yr11         | Yr12         | Yr13         | Yr14         | Yr15         | Yr16         | Yr17         | Yr18         | Yr19         | Yr20         |
| <b>Staff Costs</b>                |                      |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Wages -                           | Pool General         | \$ 347,216   | \$ 394,082   | \$ 417,017   | \$ 417,017   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   | \$ 367,378   |
|                                   | LTS                  | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         |
|                                   | Gym/Other            | \$ 150,728   | \$ 160,947   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   | \$ 170,314   |
| Facility Manager                  |                      | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    | \$ 75,000    |
| Professional development          |                      | \$ 5,729     | \$ 6,300     | \$ 6,623     | \$ 6,623     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     | \$ 6,127     |
| Admin                             |                      | \$ 35,561    | \$ 37,972    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    | \$ 40,182    |
| <b>Operating Costs</b>            |                      |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Chemicals                         |                      | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    | \$ 42,686    |
| Energy                            | Exisiting Pool       | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    | \$ 12,793    |
|                                   | Other                | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   | \$ 158,929   |
| Water                             | Exisiting Pool       | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         |
|                                   | Other                | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         |
| Grounds                           |                      | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     | \$ 2,550     |
| Planned maintenance               |                      | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    | \$ 19,014    | \$ 14,877    |
| Reactive maintenance              |                      | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    | \$ 23,768    | \$ 11,902    |
| Cleaning                          |                      | \$ 14,224    | \$ 15,189    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    | \$ 16,073    |
| Sundry                            |                      | \$ 41,095    | \$ 38,839    | \$ 41,372    | \$ 98,971    | \$ 41,372    | \$ 38,971    | \$ 41,372    | \$ 98,971    | \$ 41,372    | \$ 38,971    | \$ 41,372    | \$ 38,971    | \$ 41,372    | \$ 103,971   | \$ 101,372   | \$ 38,971    | \$ 41,372    | \$ 38,971    | \$ 106,372   | \$ 98,971    |
| Rates                             |                      | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         |
| Insurance                         |                      | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     | \$ 3,750     |
| <b>Compliance</b>                 |                      |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Water testing                     |                      | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     | \$ 4,150     |
| Compliance                        |                      | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     | \$ 2,500     |
| Security                          |                      | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     | \$ 7,757     |
| Health & Safety                   |                      | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         | \$ -         |
| Total                             |                      | \$ 947,450   | \$ 990,221   | \$ 1,044,478 | \$ 1,086,074 | \$ 994,343   | \$ 975,939   | \$ 994,343   | \$ 1,035,939 | \$ 1,059,343 | \$ 975,939   | \$ 994,343   | \$ 975,939   | \$ 994,343   | \$ 1,040,939 | \$ 1,054,343 | \$ 975,939   | \$ 994,343   | \$ 975,939   | \$ 1,059,343 | \$ 1,035,939 |
| Annual Opex                       |                      | \$ 947,450   | \$ 990,221   | \$ 1,044,478 | \$ 1,086,074 | \$ 994,343   | \$ 975,939   | \$ 994,343   | \$ 1,035,939 | \$ 1,059,343 | \$ 975,939   | \$ 994,343   | \$ 975,939   | \$ 994,343   | \$ 1,040,939 | \$ 1,054,343 | \$ 975,939   | \$ 994,343   | \$ 975,939   | \$ 1,059,343 | \$ 1,035,939 |
| Council Service Delivery Contract |                      | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   | \$ 100,000   |
| Deficit/Surplus                   |                      | \$ (847,450) | \$ (890,221) | \$ (944,478) | \$ (986,074) | \$ (894,343) | \$ (875,939) | \$ (894,343) | \$ (935,939) | \$ (959,343) | \$ (875,939) | \$ (894,343) | \$ (875,939) | \$ (894,343) | \$ (940,939) | \$ (954,343) | \$ (875,939) | \$ (894,343) | \$ (875,939) | \$ (959,343) | \$ (935,939) |
| Annual Swims Required             | Child \$3.20 inc gst | 270,967      | 284,643      | 301,991      | 315,292      | 285,961      | 280,076      | 285,961      | 299,261      | 306,744      | 280,076      | 285,961      | 280,076      | 285,961      | 300,860      | 305,145      | 280,076      | 285,961      | 280,076      | 306,744      | 299,261      |
|                                   | Adult \$4.80 inc gst |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Daily Swims Required              |                      | 749          | 786          | 834          | 871          | 790          | 774          | 790          | 827          | 847          | 774          | 790          | 774          | 790          | 831          | 843          | 774          | 790          | 774          | 847          | 827          |

Assumptions  
The facility is open for 362 days per annum  
After the 1 April 2021 we have not allowed for any increase in the minimum wage  
The above assumes a minimum roster of 2 FTE which increases to 4 FTE during peak periods and 5 FTE when the Outdoor Pool is open  
We have not allowed for any inflation in general costs  
Pool painting occurs on a 5 year cycle  
Interior repaint is allowed for every seven years commencing 2026 and is included under sundry items  
There is an annual allowance for planned and reactive maintenance. This does not fall in an even pattern so in years where full funding is not expensed funds should be accrued for future years  
We have not allowed for any pool plant replacement as this should be covered under capex  
A leased Café has been excluded from these figures



Operational Modelling: **Learn To Swim (applicable to options 1, 2 & 3)**  
Client: **Western Bay of Plenty District Council**  
Pool: **Dave Hume Swimming Pool**  
Date: **18-Sep-19**

|                                                   | 2019      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2031      | 2032      | 2033      | 2034      | 2035      | 2036      | 2037      | 2038      |
|---------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                   | Yr1       | Yr2       | Yr3       | Yr4       | Yr5       | Yr6       | Yr7       | Yr8       | Yr9       | Yr10      | Yr11      | Yr12      | Yr13      | Yr14      | Yr15      | Yr16      | Yr17      | Yr18      | Yr19      | Yr20      |
| <b>Staff Costs</b>                                |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Wages - LTS                                       | \$ 18,126 | \$ 19,268 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 | \$ 20,314 |
| Professional development                          | \$ 181    | \$ 193    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    | \$ 203    |
| Admin                                             | \$ 5,501  | \$ 5,874  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  | \$ 6,216  |
| <b>Operating Costs</b>                            |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| General costs covered under facility cost options | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      | \$ -      |
| Sundry                                            | \$ 5,952  | \$ 6,334  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  | \$ 6,683  |
| <b>Total Costs</b>                                | \$ 29,761 | \$ 31,668 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 | \$ 33,417 |
| <b>Revenue</b>                                    |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Swim Lesson Fees                                  | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 | \$ 78,261 |
| Sundry                                            | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  | \$ 3,600  |
| Total Revenue                                     | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 | \$ 81,861 |
| Surplus/Deficit                                   | \$ 52,100 | \$ 50,193 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 | \$ 48,444 |

*Assumptions*  
*After the 1 April 2021 we have not allowed for any increase in the minimum wage*  
*Operating costs are covered under facility costs*  
*There is an average of 150 clients per term. There are 4 terms per annum with 10 lessons per term*  
*There is an average class size of 3.5*  
*Fees are \$15 inc gst per lesson*  
*We have not allowed for any inflation in general costs or revenue*

Summary Table

| Option One                                                      | Option Two                                                                                    | Option Three                                                                                  |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Highest capital cost                                            | Mid price (slightly lower than option one)                                                    | Lowest capital cost                                                                           |
| Lowest operational costs                                        | Highest operational cost                                                                      | Mid point operational cost (no Hydrotherapy pool)                                             |
| No children’s leisure water                                     | No children’s leisure water                                                                   | Outdoor splash pad included                                                                   |
| No outdoor facility                                             | Outdoor pool and concourse area                                                               | Outdoor pool and concourse area                                                               |
| No seating for event spectators (10 lane pool)                  | No seating for event spectators (10 lane pool)                                                | No seating for event spectators (6 lane pool)                                                 |
| No aquatics service for approx. 18 months during construction   | Able to be delivered whilst existing outdoor main pool is open                                | Able to be delivered whilst existing outdoor main pool is open                                |
| Standard year round service provision                           | Viable summer and winter operational options                                                  | Viable summer and winter operational options                                                  |
| Hydrotherapy pool                                               | Hydrotherapy pool                                                                             | No Hydrotherapy pool                                                                          |
| Tiling saves pool paint cost in opex, but costs more in capex   | Mixture of tiling which saves pool paint (cost in opex, but costs more in capex) and painting | Mixture of tiling which saves pool paint (cost in opex, but costs more in capex) and painting |
| Reduced lifeguard costs when compared with option two and three | Highest lifeguard costs year-round                                                            | Splash pad has no specific lifeguard costs                                                    |

The success of an aquatic facility is not measured in designing, building or opening the building, but in the operability and efficiency of the asset and user satisfaction. Important to the client and decision making is that the future consultant and client representative team present and guide decision making based on whole of life costing and operations.

Pool services have a strong interrelationship with other works streams and will be considered a measure of the success of the facility, both in what the public see and enjoy, but in the back of house operability and function.





The following information is based on experience with the choices available at existing facilities, positives and negatives of each, and where relevant any downstream consequences of decision making. It also considers any specific issues that have arisen through previous design workshops or specific issues raised by stakeholders in numerous other similar projects.

When considering the filter options available, there are several points that need to be considered based on their relative merit, including how they address the site or facility specifically. Filter options have been evaluated on the following criteria:

- Water quality outcomes and performance;
- Efficiency for Cryptosporidium and Giardia removal;
- Capital plant cost;
- Plant room space requirement;
- Cost and time to operate both facility staff and specialist;
- Ideally manufactured and supported locally in New Zealand;
- Proven in-service track record;
- Approximate 15–25 year filter life (depending on maintenance);
- Compliance with NZS 4441:2008;
- Other site specific considerations.

The following are considered to be primary indicators of successful water quality:

- Visual water clarity;
- Taste;
- Smell;
- Cleanliness (free from germs).

## Filtration Options

### Sand Filters

Filter sand is very rough when new, which makes it efficient at filtering the water. As this roughness is smoothed out over time the filter's efficiency decreases and therefore in a commercial pool the sand should be replaced approximately every 5–10 years. This frequency is dependent on the type of pool, and its backwash frequency.

A sand filter's ability to remove cryptosporidium and giardia is improved through the use of a supplementary coagulant/flocculent (filter aid), depending on the type of pool and bather load expectations.

A coagulant is a chemical that causes dispersed fine particulate matter to coagulate as larger clusters to allow more efficient removal in the water filter. The coagulation (sometimes called flocculation) process enhances the removal of small particulate matter and is essential in helping to remove the infective Oocysts of Cryptosporidium (size range typically 4 to 6 microns) and Giardia cysts (size range typically 8 to 12 microns), and other compounds (such as humic acid and phosphates) that otherwise pass through a sand filter.

The flocculants must be used with a medium rate deep bed filter (typically 600 to 1000 mm deep bed) to ensure the coagulant/ flocculent does not pass into the pool. The coagulant / flocculent (filter aid) must be continually dosed.





In New Zealand there are two possible types of sand filters currently available – Pressure Sand and Vacuum Sand:



**Pressure Sand Filters**



**Vacuum Sand Filters**

### **Pressure Sand (with Coagulant/Flocculent)**

Pressure Sand Filters can typically filter down to 18 to 20 microns unaided. They can filter down to lower micron levels when used with a suitable coagulant/ flocculent.

Advantages of Pressure Sand include:

- Easy operation;
- Requires little or no specialist input between sand changes;
- Long media life approx. 5-10 years;
- Re-use of backwash water is possible (subject to effluent pre-treatment);
- Range of suppliers and service options.

Limitations include:

- Typically lower efficiency for cryptosporidium and giardia removal;
- Can consume larger volumes of water during backwash;
- Requires ongoing investment in coagulant/flocculent;
- Larger footprint (m<sup>2</sup>).

### **Vacuum Sand**

Relatively new in the New Zealand market Vacuum sand filter manufacturers (Natare of USA) claim that Vacuum Sand filters can produce very high quality water through a number of different processes including the addition of Perlite, and the slow nature of water movement through the filter bed.

Perlite is added manually immediately following the air purging cycle, and subsequently as a slurry via a dosing pump at a rate of 15mL per minute. Natare literature states no flocculent is required.



The manufacturer claims a reduction in water use at backwash time of between 80% and 90% over Pressure Sand filters, due to the use of an air scour system at backwash time and the infrequency of backwashing, which can be up to 30 days. This may present some issues with regard to dilution of pool water to maintain water quality, leading to the need to dump or drain pools. This would negate to some extent any water savings made through the frequency of backwashes.

Vacuum sand filters do not require a balance tank, when combined with the overflow channels that the supplier can provide. If the supplier overflow channels are not used, a deeper overflow channel can be used, with appropriate valving to the filter, or a "traditional" balance tank configuration can be used (as would happen on the existing main outdoor pool). The supplier advises that sand does not need replacing for the life of the filter, and that the standard warranty/guarantee is 10 years "bumper to bumper", and 15 years on the structure. There has been no clarity provided on what limitations there are to this such as water chemistry conditions, for example.

Critically, with regard to filter type, Vacuum Sand filters do not currently comply with NZS4441:2008;

*"17.1; Granular media filters shall be of the sealed pressure type."*

This presents some challenges to Council as the client and the statutory body regarding "stepping outside the standards". It is important to note that where the Standard notes "shall" these are a requirement for compliance with the Standard. We understand the New Zealand supplier will be looking to work with Standards New Zealand when the standard is next updated.

Advantages include:

- Excellent water quality and low turbidity;
- High efficiency for cryptosporidium and giardia removal (when using perlite dosing);
- Reduced water consumption when compared with all other filter types;
- Reduced plant areas (m<sup>2</sup>);
- No balance tank required when used with the suppliers proprietary gutter system;
- No media replacement required;
- No lint strainer required on main circulation pump (saving operator time).

Limitations include:

- Currently Non-compliant with NZS4441:2008
- Perlite needs to be added to achieve highest rate filtration
- Media storage is required- one m<sup>2</sup>
- Pre-coat (Perlite) is a hazardous dust requiring gloves and mask when handling
- A settlement tank may be required if utilising the perlite option.

## Pre-Coat Filters

Precoat media filters can typically filter down to 2 to 3 microns. There are two common pre-coat media (DE and Perlite). Both start off as natural products mined from the ground and are heat treated to achieve the desired crystalline structure required for the pool filtration.

As an industrial dust it must be handled and stored following appropriate health and safety methods (including gloves and facemask), however in its wetted condition does not pose the same degree of risk. A pre-coat filter will achieve a higher efficiency for cryptosporidium and giardia removal than a sand filter.



Currently there are two types of pre-coat filter installed in the Auckland region. The two types are pressure pre-coat filtration and vacuum pre-coat filtration. A variant on pressure pre-coat filtration (Defender – manufactured by Neptune Benson of USA) has also recently been installed at the Olympic Pool in Newmarket, and at Northern Arena:



Pressure Pre-coat Filter  
(Atlas)



Pressure Pre-coat Filter  
(Neptune)



Vacuum Pre-coat Filter

## Pressure DE Filtration

Pressure pre-coat media filter construction typically comprises of a stainless-steel vessel with vertically suspended filter element coated with a media, typically DE or Perlite. Back wash is required every 7-10 days and due to limitations on waste disposal requires an additional settlement tank to separate the liquid (backwash water) to waste from the solids (dirty DE/Perlite) that is then removed by waste/sucker truck.

Filter media is completely replaced after each backwash to recoat the filter elements.

Advantages include:

- Excellent water quality and low turbidity;
- High efficiency for cryptosporidium and giardia removal;
- Reduced water consumption when compared with sand;
- Reduced plant areas (m<sup>2</sup>).

Limitations include:

- Higher degree of operator skill and training required;
- Operator time for backwash is slightly longer due to pre coating required;
- Media needs to be replaced at each backwash;
- Media storage is required- one to two m<sup>2</sup>;
- Pre-coat is a hazardous dust requiring gloves and mask when handling;
- A settlement tank may be required in order to dispose of spent DE compliantly;
- Septum (element covers) require periodic replacement (allow 20% pa after two years).



## Vacuum DE Filtration

Vacuum pre-coat media filters comprise of an open filter tank typically constructed from concrete with suspended filter elements coated with DE or Perlite. Vacuum pre-coat filters have longer cleaning cycles of up to 3-6 months and therefore the backwash water quantity is reduced. This is the filter type in use for the main pool at present.

The benefits of vacuum vs. pressure pre-coat filtration relates primarily to operator preference and the effect of building space planning, additionally thereafter there is a reduction in water consumption with vacuum DE filtration.

Advantages include:

- Excellent water quality and low turbidity;
- High efficiency for cryptosporidium and giardia removal;
- Reduced water consumption compared to Pressure DE or sand;
- Filter septum condition is visible to the operator.

Limitations include:

- Higher degree of operator skill and training required;
- Media needs to be replaced at each clean cycle;
- On-going re-coating between cleaning cycles;
- Pre-coat is a hazardous dust requiring gloves and face mask when handling;
- A settlement tank may be required in order to dispose of spent DE compliantly;
- Septum's (element covers) require periodic replacement every three to five years;
- Less flexible plant area than pressure DE (but less space required compared to sand);
- The backwash process is complex and time consuming;
- Media storage is required- one to two m<sup>2</sup>.

## Ultrafiltration

Ultrafiltration is used in several pools, primarily in Europe. Traditionally ultrafiltration has been used downstream of larger filtration such as sand or carbon in water treatment plant situations.

Ultrafiltration is very fine filtration through a membrane (similar to plastic) inside a pressure vessel. The membrane captures undissolved molecules down to a very small size. The level of filtration possible means that water quality is very high- to drinking water standard.

Untested at this level in New Zealand, we believe the operational risk, potential costs of servicing (annually by the supplier) and the lack of available and complete information is a risk for this facility, particularly understanding the specialist nature of this option. For these reasons, and the lack of commentary in NZS4441:2008 supporting Ultrafiltration as an option we have discounted it as a viable option to consider further.



## Water Quality including Maximising Cryptosporidium & Giardia Removal

Both sand and pre-coat filters will achieve very good to excellent water quality visually.

A pressure sand filter continually dosed with a supplementary coagulant and flocculent or a vacuum sand filter with additional continually dosed filter aid such as perlite typically achieves an approximate efficiency of up to 90% for cryptosporidium and giardia removal, depending on a variety of operational conditions.

The coagulation/ flocculation process enhances the removal of small particulate matter and is essential in helping to remove the infective Oocysts of Cryptosporidium (size range typically 4 to 6 microns) and Giardia cysts (size range typically 8 to 12 microns), and other compounds (such as humic acid and phosphates) that otherwise pass through a sand filter.

The Flocculant dosing must be used with a medium rate deep bed filter (typically 600 to 1000 mm deep bed) to ensure the coagulant/ flocculent does not pass into the pool. The coagulant/ flocculent must be continually dosed.

The addition of flocculant to pressure sand filters is considered preferable to the use of secondary disinfection as regular automated dosing of flocculant is performed by relatively simple plant, and is therefore, by comparison, inexpensive to replace and maintain. Additionally, plant room space requirements are reduced when compared with secondary disinfection yet water quality is delivered to similar levels as with secondary disinfection.

A pre-coat filter will typically achieve an approximate efficiency of 99.5% for cryptosporidium and giardia. Backwash water usage is less than Pressure Sand filtration; however the operation requires more operator input for re-coating the filters after each cycle. Filter media (DE or Perlite) is a hazardous dust requiring gloves and face mask when handling.

Flocculent dosing is not required with precoat filtration.

Comparable water quality (to pre coat filtration) can be achieved in Pressure Sand filters through the use of flocculent dosing. Filter efficiency can be increased by selecting deep bed nozzle plate filters.

## Plant Space Requirements

The sand filter options require a greater floor area than the equivalent precoat filter alternative, however the proposed plant room floor area has been modelled to reflect pressure sand filter needs as a 'worst case' option.

Pressure Sand filters do not require any plant room storage space for media (DE/ Perlite) supply.

## Operational Costs & Maintenance

Operational costs across all filter options generally become cost neutral during the lifetime of the plant, with the exception of instances where specialist service contractors are required to perform servicing. This is particularly true where additional chemical treatment options are selected, in addition to primary and /or secondary systems. This cost and supplier risk can also occur where one supplier for plant or a product exists.

Annual "pull apart" maintenance will be required on pre-coat filters. Pressure Sand filters will require an annual acid wash, with a five year inspection and a five to ten year sand replacement. We have been advised Vacuum Sand filters do not require media replacement, for at least 20 years, but cannot verify this.

All Sand filters enable a wider range of subcontractors to provide parts and labour when maintenance is required in future years.





## Backwash Water Consumption

Pressure Sand and Pressure pre-coat filters require regular backwashing and both have similar filter cycles between backwashes of approximately 1–2 weeks. The manufacturer advises that vacuum sand filters typically will have longer filter cycles between backwashes of up to 3–4 weeks.

Pressure Sand filter efficiency can be increased by the utilisation of a “nozzle plate system” type filter. The nozzle plate system also allows the introduction of pressurised air directly into the bottom of the filter media. Uniform introduction of air and water through the nozzle plate provides vigorous agitation and filter media bed expansion required for an effective air/water backwash.

This leads to reduced backwashing times and reduced volumes of water and can save up to 25% of backwash water.

Pressure pre-coat filters require the approved media (DE or perlite) to be being re-introduced after each backwash into the filters. Sand filters do not require this.

Vacuum Sand filters (to achieve cryptosporidium and Giardia control) require the addition of Perlite at each backwash, and during the filter cycle.

## Backwash Water & Backwash Settlement Tank Infrastructure Requirements

We have been advised that backwash water is suspected of being discharged into the Uretara Stream at present as there is resistance to the used DE being discharged into the sewer system.

Future design decisions should consider and aim to eliminate this as accepted practice. The current backwash water contains “organics” and DE powder from the main pool filter, and “organics” from the Pressure Sand filter used for the toddlers pool.

Pressure Sand filters have no waste discharge concerns with regular backwash water entering the sewer system, other than requiring a slow release tank detention tank to trickle backwash water to the sewer (generally based on discharge flow rate).

There are also improved possibilities for possible future reuse of backwash water as it does not contain any filter media as is the case with pre-coat and Vacuum Sand.

## Filtration Summary

We do not consider Vacuum pre-coat filters appropriate for this facility **across all pools** primarily due to the risk factors with the pool type profile and expected usage levels. In the event of a faecal accident a shutdown will be required to meet or exceed NZS5826:2010 (pool operational standard). One unplanned shutdown will negate any water or labour savings that may be suggested. Whilst this risk is lower in the main leisure pool, and a Vacuum pre-coat filter may be appropriate for this pool, this would mean different operational models across the pools. This isn't necessarily a “deal breaker”, but should be considered.

We do not consider Defender Pressure perlite media filters appropriate for the facility primarily due to the ‘bump’ feature of the system. This process regenerates the pre-coat media and appears to contravene that as expressly noted in NZS5826:2010 (clause A8.2); *“The practice of drop coating (that is, recycling used pre coat previously deliberately dropped to the bottom of the vessel) shall not be practised”*.

- The need for additional tank(s) to detain DE/Perlite sludge in an easily accessible part of facility environment should also be considered when looking at DE filtration.
- Tanks could be buried; however concrete buried tanks are at a cost premium.
- Consider too, the need to have sucker truck removal of DE/Perlite sludge on a regular basis and the costs this incurs.
- Additional space is required for DE/Perlite storage
- Regular handling of the media by staff.

The above concerns do not exist with Sand filtration.





Vacuum sand filters as supplied by Ntare require the addition of Perlite to reach the levels of filtration stated for the removal of cryptosporidium. Pressure sand filtration can be enhanced in this way and a number of options exist as turnkey solutions (such as Wapotec), or systems can be designed through the eventual project design team.

NZS4441:2008 states (clause 17.1) that *"Granular media filters shall be of the sealed pressure type"*. This places Vacuum sand filters outside the Standard. We also have some concern that additional media (DE or Perlite across a sand bed) also contravenes NZS4441:2008, clause 17.2.

We have considered a number of scenarios for filter plant and have developed the following options, in no particular order:

- Pressure DE filtration for all pools;
- Vacuum DE filtration for the (existing) Main Pool and either pressure DE filtration or Pressure Sand filtration on the remaining pools;
- Pressure sand filtration for all pools;
- Vacuum sand filtration for all pools.

NZS4441:2008 is restrictive on the filter options available for consideration if the standard is adopted as the guiding document for compliant, healthy, safe, and well operated pools. We have based our recommendation on the basis of the Ntare Vacuum Sand filters not complying with the standard.

Should the supplier (Ntare) provide evidence to Council's satisfaction that the Standards Committee accepts the Ntare filters as a compliant option, then the Ntare option becomes more attractive.

If this was the case the remaining 'issues' to resolve include:

- The available clear head space allows for the minimum 4.0m required;

Pressure Sand filtration is able to be provided by a range of suppliers, and servicing (beyond the warranty period) is also delivered by a range of contractors.

In summary, Pressure Sand filtration has the following advantages:

- Simple operation;
- Ease of backwash;
- Increase of filter efficiency and reduced backwash volumes if nozzle plate filters are used;
- Standard systems;
- NZS4411:2008 compliance;
- No media storage requirements;
- Low risk waste water disposal;
- Lower head height requirements than other options;
- No regular media disposal issues;
- Future reuse of backwash water is possible (subject to appropriate effluent treatment);
- Comparable water quality;
- Tested and widely supported method of filtration;
- Cost neutral when compared with other filtration options in the medium to long term.



We therefore recommend the facility design is further developed on the basis of deep bed nozzle plate Pressure Sand filtration throughout, with the addition of flocculant. This would include replacing the existing Vacuum DE filter in use for the main pool as it is undersized. **Therefore, it is important that capital is not expended on the filter upgrade, as outlined and allowed for above, if this approach is adopted.**

## Disinfection

This section looks to review the Primary Disinfection chemicals available for use. It has been developed considering a number of influences and is based on experience with the choices available at existing facilities, positives and negatives of each, and where relevant any downstream consequences of decision making.

### Chlorine Gas (100% Strength)

Chlorine gas is available in 45kg cylinders or 900kg drums. 900kg drums require delivery/replacement/change every 5-7 months. Chlorine Gas has a very high compliance requirement due to its risk profile. Compliance requirements include:

- Site and staff certification is required. This means attendance at courses focussed on chlorine gas safety for all staff that may be expected to interact with the drum or the dosing plant.
- Site certification is complex and requires gas detection equipment, physical isolation, and delivery restrictions, separate external access in a purpose built building and breathing apparatus.
- Chlorine gas is supplied by one supplier.

Over recent years facilities have been removing Chlorine Gas installations from their swimming facilities, primarily as a result of increased compliance costs and the associated risks of the chemical and its use. For these reasons we recommend Chlorine Gas is not considered a suitable option for further investigation.

### Calcium Hypochlorite (60-65% Strength) (dry chlorine)

Calcium Hypochlorite is delivered as fine granules, generally in a 40Kg drum. Traditionally this chemical has been used at school pools and small community pools. Prior to the development of purpose designed plant, the use of Calcium Hypochlorite required slurry tanks, transfer of the liquid and disposal of the residual slurry. This disposal and intensive handling was the primary reason that Calcium Hypochlorite was not used beyond the type of facility outlined above.

In the past five years, over 200 commercial pools throughout Australia have started using Granular Calcium Hypochlorite (dry chlorine), including pools from 1000L to 6 000 000 L, and the system is in use by Auckland Council at some pools.

Liquid chlorine is high in TDS and increases TDS levels in swimming pool water approximately 5-7 times more than dry chlorine. Due to this reduction in TDS the use of dry chlorine will result in reduced backwashing due to high TDS levels.



Sample chlorination system for



three pools using Calcium Hypochlorite

Calcium Hypochlorite has a trigger volume of 400kg, which means beyond that volume stored on site, specific containment and handling requirements need to be met.

We have been advised that cost savings of around 30% can be achieved over Sodium Hypochlorite.

Additionally, the balance chemical best suited is Sulphurous Acid, which has a medium risk profile and specific Health and Safety needs. It is purchased in a pre-diluted state, thereby reducing the risk profile. CO<sub>2</sub> gas and /or Sodium Bisulphate are also able to be used.

Calcium Hypochlorite has a pH of 9-11, 3-5 lower than Sodium Hypochlorite. The use of dry chlorine will see a saving in pH control due to the addition of a lower pH product from the outset.

Both Calcium Hypochlorite and Sulphurous Acid are available from a wide range of local/domestic suppliers, and dosing can be controlled for FAC, TAC, pH, TDs and any combination of detection required.

### **Commercial Strength Sodium Hypochlorite (13-15% Strength)**

Commercially available Sodium Hypochlorite is a by-product of the pulp and paper industry and is available in 5, 20, and 200 litre containers, or in bulk deliveries from tankers, and is currently in use at the facility.

Compliance requirements are relatively light and reflect the risk profile of the chemical. The trigger volume of an individual tank is 5000 litres. At this level only site certification of the tank is required, as opposed to chlorine gas where individuals and the site have compliance requirements.

This facility will require storage for around 5000 litres on site. With Sodium Hypochlorite having a ½ life of 3 months we would expect deliveries at intervals of two to three months to refill the storage tanks, based on the storage volume and expected usage.

Specific requirements include a bunded and ventilated tank, easy tanker access and fill point, safety shower and hose facilities.

Sodium Hypochlorite is available from a small number of suppliers in bulk, or a range of suppliers if purchased in smaller volumes. The use of Sodium Hypochlorite requires pH depression. The balancing chemicals used are generally CO<sub>2</sub> gas, and/or Sodium Bisulphate, both of which are easily handled and have a relatively low risk profile.

### **Self-Generated Sodium Hypochlorite (1-3%)**

Onsite generation of Sodium Hypochlorite is achieved through electrolysis that converts salt into a weak Sodium Hypochlorite solution. Salt is purchased in 25kg bags and manually dosed into the vessel for conversion. This is an ongoing continuous process that produces Sodium Hypochlorite that is stored in bulk for dosing to the pool.

Historically plant was purchased as a capital cost item at construction, or was purchased under a lease to own agreement. Most recent installations however are operated under an agreement whereby the plant is owned by the salt supplier. The agreement allows the plant owner to invoice the operator based on the litres of chlorine produced, and the salt must also be purchased through the same supplier.

Inherently safer than commercial Sodium Hypochlorite due to its low concentration strength, there are however a number of specific requirements;

Isolation of the salt store due to its corrosive nature.

Salt is required to be purchased on a pallet basis. A facility such as those proposed (all options) would require space for one pallet, holding roughly 1.2 tonnes of salt.

Salt handling requires relatively low level PPE.

Typically, facilities that operate self-generation plant are required to maintain a supply of commercial strength Sodium Hypochlorite in order to boost chlorine levels from time to time. This occurs when the demand for chlorine residual (by swimmers using the pool) outstrips the chlorine levels capable of being dosed in a short period of time.



Understanding usage profile of this facility and relatively light bather loads this can be expected to occur on a relatively infrequent basis. This addition of chlorine is generally undertaken manually, and whilst it may be via a dosing pump, still requires operator intervention and an understanding of the implications.

The balancing chemical required for Self-Generated chlorine is Hydrochloric Acid, which requires manually mixing with water to dilute, and has a high-risk profile and specific Health and Safety needs.

Finally, the weakness of the generated chlorine means that a reasonable volume is required to be dosed, directly from bulk storage tanks. We expect this would be a similar volume to commercial strength Sodium Hypochlorite, however with a greater turnover, and the previously mentioned need to support it with a commercial strength supply.

## Disinfection Summary

We believe the Chlorine Gas and Self-Generated chlorine options are the least preferred of the options available.

Chlorine gas presents a compliance and operational challenge and its installation would oppose the direction that most councils have been heading with regard to chlorine choice. Purchasing restrictions through one supplier may also impact future capex needs when any pricing, compliance or delivery requirements are changed. Additionally, there is a real impact on the landscape due to the load and unload requirements for the 900kg drums, as well as the driveway and delivery truck operational needs.

Self-Generated chlorine restricts council to a lease and supply arrangement with one supplier and an ongoing commitment to the system and salt supply. There are some concerns with the corrosive nature of the salt which would mean a structure similar to that required for Chlorine Gas storage. Most importantly, the need to maintain a supply of commercial strength Sodium Hypochlorite is perhaps the biggest operational challenge.

Both options above also remove most decision making related to the dosing system that can be used, due to their specific dosing requirements. Considering the options, we do however recommend Calcium Hypochlorite as the main chlorine source, with our next preferred option being full strength commercial Sodium Hypochlorite.

Both options have similar positive benefits to the project, with Calcium Hypochlorite requiring less plant space, and having a lower compliance need than Sodium Hypochlorite. The current modelling of the size of plant rooms and storage areas provides for a "worst case scenario" with Sodium Hypochlorite being allowed for with regard to space and plant room requirements.

Benefits of both options include:

- On-going supplier choice;
- Low to moderate compliance needs;
- Choice of dosing systems available;
- Smallest impact on landscape and ancillary building needs;
- Cost effectiveness.

We are confident either option will provide a compliant, easily managed and cost-effective water management system, once paired correctly with dosing plant, with Calcium Hypochlorite being the most preferred due its reduced plant room and storage needs, lower compliance threshold, lack of tanker deliveries, reduced pH correction and resultant cost effectiveness.

## Governance and Management

As the tables above demonstrate, there is significant capital and operational investment required for any of the options being considered.

The opportunity exists, as part of facility and options development to consider operational models that reflect some level of commercial risk and return, and seek to minimise Council or DHT exposure. The options below are intentionally high level and are intended to promote further discussion.



### **Option One; The Status Quo.**

- Council subsidises the operational costs of the facility (currently \$100,000.00 p.a.) to an agreed figure;
- Council covers the costs of upgrades (capex) works via the LTP;
- DHT operates the pool, managing the staff, and facility operations;
- Pool space is made available to groups who may or may not pay for access at rates that are negotiated;
- Income is retained by DHT to offset operational costs.

This model possibly presents some challenges with regards the financial responsibilities then placed on DHT, and therefore the Trustees, of operating a \$1m p.a. business.

### **Option Two; Licence to Operate.**

- Council (and possibly other funders) fund and Council owns the facility;
- A Licence Agreement is sought via a tender process to identify an experienced Operator to run the “business” – this could be either underneath, or in fact be DHT;
- The Operator collects all income and covers all operational costs;
- Council subsidises the Operator to an agreed figure based on minimum service delivery expectations;
- Future capex works are paid for by Council, via the LTP, and in conjunction with the Operator;
- The Operator meets compliance, maintenance, reporting, and service delivery minimums.

This model reduces the financial and operational risk to Council and DHT but relies on the ability to secure an experienced Operator that can deliver aquatics and associated programs, and has a proven track record of service delivery and operational skills to enable good community outcomes.

### **Option Three; Mixed Model.**

- DHT operates the facility on a commercial basis;
- Aspects of the facility are leased/licenced to private operators– gym, Learn to Swim, café/shop;
- Income from leased aspects is paid to the DHT;
- Council subsidises DHT to an agreed figure based on minimum service delivery expectations;
- DHT is responsible for compliance, maintenance, reporting, and service delivery minimums.

This model requires a number of commercial leases or licences to be undertaken. It reduces the operational aspects of the facility that DHT is responsible for as these are operated by “experts” in that field. There is some financial risk to DHT, although less than option One, and community outcomes can be delivered and managed more closely than perhaps in Option two.

### **Option Four; Council.**

- Council maintain and operate the facility and its operations;
- All staff are Council employees;



- Council manages the specialist aspects of the facility such as gym, café and Learn to Swim;
- Council can measure its own service delivery and community outcomes;
- Council can retain any profit, but will need to absorb and manage all costs.

This model places the operational burden on Council, but does provide some measure of autonomy and improved ability to meet the needs of the community without agreements or licences having an influence.

Critically, there is no “right answer”. DHT and Council will need to consider the operational, financial and reputational risks of all options, and the ability for any provider to deliver positive community outcomes at a cost-effective price.

## Conclusion- Where to From Here?

The Bay of Plenty Spaces and Places Strategy released in March 2017 makes several relevant points around the development of any new facilities in the region.

*“With the limited resources available it is not possible to meet all of the communities’ sport and recreation facility desires. Therefore, this strategy provides direction on what should be done and crucially, what should not be done in the region. It is intended that the strategy will provide a consistent approach to strategic decision making and ensure greater collaboration regarding sport and recreation facility planning and provision in the region.”*

*“The return on investment needs to be considered carefully as each investment comes with an opportunity cost. As capital funding is limited, an investment in one project will likely mean others do not proceed. It is important that the sporting return (socially and economically) on the funded project delivers as much or more than any project it displaces.”*

*“Facility Hierarchy Definitions The following general facility hierarchy definitions have been used within the Strategy: International: A facility with the ability to host international competitions / events (i.e. between nations). National: A facility with the ability to host regional representative competitions (including professional and semi-professional franchise competitions involving teams from outside New Zealand) and / or to serve as a national high-performance training hub for one or more sports codes. Regional: A facility with the ability to host inter-regional and internal regional competitions and /or serves as a regional high-performance training hub for one or more sports codes. Sub Regional: A facility with the ability to draw significant numbers of participants/teams/competitors from across adjacent territorial authority boundaries for either competition or training purposes. District: A facility with the ability to serve a catchment’s basic sporting needs. This catchment will predominantly be drawn from within a single territorial authority (covering more than two suburbs). Local: a facility which often facilitates people’s introduction to sports and recreation and primarily serves a town or suburb (or potentially two suburbs) only.”*

These three key points need to be considered carefully in the context of redeveloping the Dave Hume Pool.

1. Does a redevelopment of the scale of the options in this report support region-wide decision making?
2. Does the return on investment reflect the opportunity cost for Council? And the benefit for the wider community?
3. Where do the options fall in terms of facility hierarchy?

An aquatic centre is a unique facility that does not present many viable opportunities to share facilities. The wide demographics of users, the need to change and shower, and the time of day when peak usage occurs all point to a standalone facility. Therefore there are limited opportunities for sharing resources or facilities.

Population growth predictions demonstrate around a 10% increase in regional population by 2043. At first glance this figure does not support the required swimmers per day to make the facility “self-supporting”, in any of these options. However, there are numerous examples where recent population growth has outstripped predictions, and the recent growth in the Bay of Plenty area has surprised many. Therefore, we have taken a neutral position on population versus swimmers but note it is a risk on the current cost modelling.

For comparison, the current level of swimmers is roughly 10% of what is required to enable a self-sustaining facility.

Council should consider whether they are providing the service or providing the opportunity for the service. This is particularly true when considering gym, café and Learn to Swim facilities as there are typically private local businesses who raise issues with “ratepayers’ money” subsidising and competing with their privately run and funded businesses. Café’s and gyms are a good example of this.





Does Council have a commitment to provide or subsidise swimming lessons?

Figures from DHT reporting indicate \$36,000.00 income from all goods and services in 2018, this figure seems very light when there is an average of 250 Learn to Swim swimmers per month.

In order to progress any re-development we believe the process needs to be broken down to enable informed decision making and consultation;

- If there is general agreement that *something* will be done to the facility the current main pool should have the filter upgraded or replaced to achieve compliance. This should be planned for 2022 when the pool repaint is due.
- The addition of the ramp could be considered for the same time, but this may be dependent on accessibility requirements given all new pools will be designed with ramp access. We suggest the ramp is added to the outdoor pool as it clearly provides year-round, all pool, access for the entire community.
- The existing toddlers pool should not have the filtration upgraded until wider facility re-development decisions are made.

This work would signal to the community that aquatics provision is important, and it can continue while the design, fundraising and planning is underway.

The design and scope decisions of the future facility need to consider the points made throughout this document in terms of what is delivered, and what is economically viable. Specifically, we note:

- The region wide facility hierarchy should be considered in light of the 10-lane pool requirement. A 10-lane pool would typically require a reasonable marshalling area and spectator seating as the facility can and should be hosting at least regional, if not national events. There is no indication that there is an appetite for the facility to provide this function for the region. Note too this then raises additional office, timing and auxiliary services requirements.
- We believe an additional 6 lane indoor pool is adequate, based on swimmer numbers, and the Learn to Swim provision.
- In summer, and the shoulder seasons, a large portion of the regular swimmers will opt to use the outdoor pool. In winter, numbers will fall, and regular swimmers will have more opportunity (lane space) to swim indoors.
- Based on 6 lanes, five swimmers per lane is considered a low number, and this provides for 30 swimmers at one time, in that one pool.
- A hydrotherapy pool has specific (relatively costly) design requirements. The need should be carefully considered and weighed against the Learn to Swim pool and Spa pool- both of which offer a wide range of users a broad experience, that they pay more to use.
- Entry fees need to be increased gradually in order to prepare users for the true and realistic pricing that will be required to support a new re-developed facility.
- Learn to Swim pricing (including what the provider pays) should be reviewed as soon as possible.
- The café, gym and physio aspects should be assessed early with existing providers in Katikati, as an extension of their current offering. We note mixed success at other facilities where the catchment is greater, and proximity to choice is further away than it would be at this facility.
- There is limited provision for children's leisure, although option three provides for a splash pad. This should be reviewed and understood through the design process and may be as simple as ensuring anchors for inflatable toys, proximity of power points to run them, and similar.



## General Information

This document is based on information supplied by Western Bay of Plenty District Council as part of the RFP for the Dave Hume Pool Feasibility Report.

This report has been prepared under the following conditions:

The report is based on visual inspection, information provided and responses to direct questioning.

This report is provided for the use of the Dave Hume Trust and Western Bay of Plenty District Council and their representatives only. Watershed accepts no liability to third parties who may act on the contents of this report.

Thank you for your instruction, we trust this report meets your expectations, and we are of course available to assist with developing any options as required.,

Yours sincerely

**Watershed Limited**

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*Western Bay of Plenty  
District Council*

# Recreation and Leisure Strategy Levels of Service

## Discussion Paper

February 2019

Produced by  
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## 1.0 Background

### 1.1 What will the Recreation and Leisure Strategy review consider?

Council is currently reviewing the Recreation and Leisure Strategy. This strategy provides the overarching direction for recreation and leisure facilities and open space, and Council's role in this. A scoping paper was discussed at the 5 December 2018 Policy Committee workshop. This identified that the strategy review would focus on:

1. A review of the current levels of service for recreation and leisure.
2. A review of the financial contribution funding of recreation and leisure projects.
3. The impact of Council's strategic assumptions on recreation and leisure.
4. Community engagement to understand recreational preferences and how the network meets community needs; both targeted and general engagement.
5. Alignment of strategic direction such as the Bay of Plenty Spaces and Places Strategy and Council's Communities Strategy.

This paper is the starting point for the level of service review.

### 1.2 What are levels of service and why do we have them?

Council has levels of service in place to guide provision of reserve land and recreation facilities.

A level of service is a measurable description of what Council delivers (or intends to deliver) and will always relate to something that Council can control. Levels of service help to achieve:

- Fairness and equity.
- Identification of priorities for timing and commitment of resources.
- Certainty to the community and ourselves on what we will provide and at what cost.
- Alignment with strategic direction that identifies what we want to achieve and the level of service identifies what we will do to make that happen.
- Consistency of decision making.

All of these points are important for us particularly due to the nature of our District. We have a large spread out rural land area, many small rural communities, several urban centres spread throughout some of which continue to experience population growth, and the impact of Tauranga city and their significant growth.

The level of service review focuses on facilities and spaces that are either directly provided by Council or have a formalised community access arrangement in place. There are also facilities and spaces that are privately provided with no Council input but serve a need in the community. Council cannot be involved in everything and instead focuses on the areas of greatest need and return on investment.

### 1.3 What guides our current level of service approach?

The current strategy tells us what we are wanting to achieve which is:

- That *recreation and leisure facilities are well planned and safe to meet the diverse and changing needs of our community.*
- That Council will provide a *basic range of public facilities across our District, ensure resources are secured to provide for future public recreation and leisure needs in response to population growth, changing recreational trends and demographics, and Council will work and collaborate with the wider community to do this.*

### 1.4 What are our current levels of service?

The basic range of public facilities that Council will provide is identified as:

| Facility                                                               | Level of service                                                                                                                                                                                                           |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sports parks                                                           | Greater than or equal to 1.5ha sports park per 1,000 residents reducing to 1.0ha/1000 by 2028.                                                                                                                             |
| Hard courts                                                            | 1 court per 1,000 residents                                                                                                                                                                                                |
| Sports fields                                                          | 0.7 fields per 1,000 residents                                                                                                                                                                                             |
| Swimming pools                                                         | 2 – based on current provision                                                                                                                                                                                             |
| Skatepaths/parks                                                       | 6 – based on current provision                                                                                                                                                                                             |
| Boat ramps                                                             | 18 – based on current provision                                                                                                                                                                                            |
| All tide boat ramps                                                    | 2 – based on current provision                                                                                                                                                                                             |
| Actively maintained parkland                                           | Greater than or equal to 4.8ha/1,000 residents reducing to 4.0ha/1000 by 2028.                                                                                                                                             |
| Natural land                                                           | Greater than or equal to 16.7ha/1,000 residents.                                                                                                                                                                           |
| Playgrounds                                                            | Greater than or equal to 3 playgrounds per 1,000 children (under 15yrs)                                                                                                                                                    |
| Total land provided for recreation or conservation per 1,000 residents | Greater than or equal to 23ha/1,000 residents, reducing to 21ha/1000 by 2028 (excluding subregional parks).<br>Greater than or equal to 40ha/1,000 residents, reducing to 36ha/1000 by 2028 (including subregional parks). |

Levels of service for public toilets and camp grounds are based on current provision and for walking and cycling, the level of service is determined by the Walking and Cycling Strategy 2009.

The current strategy and levels of service provide information on our current status across most of these facilities. However there is limited direction on whether these levels of service are fit for purpose for future populations, what happens when the existing provision no longer meets community needs or requires replacement, and Council's role in this on an ongoing basis.

This is a current issue for swimming pools which is the focus of the first level of service discussion. The remaining levels of service for various facilities will be discussed at subsequent workshops.

## 2.0 Swimming Pools

### 2.1 Purpose

Swimming pools provide flat water space for lane swimming, recreation, learn to swim, events and swim club training. They benefit our communities by providing opportunities for people to be active in the water, feel safe and confident in the water, keep fit and have fun. Aquatic centres tend to provide a wider range of activities than just swimming pool space and include gym and leisure facilities, hydrotherapy, water slides and activity areas for children.

### 2.2 Current Provision

An interactive map will be used to show swimming pool provision across the Western Bay of Plenty District and Tauranga City.

Council provides two swimming pools in the District that are under two different models of ownership. The Dave Hume Swimming Pool in Katikati is owned by Council (land and pool) and the Te Puke Memorial Pool is owned by Te Puke High School (land and pool). Both pools are operated and managed under a Council funded service delivery contract with an external organisation. It is assumed that Te Puke caters to the eastern area (24,292 people) and Katikati to the western area (24,993 people). Further information on these pools is provided at the end of this report.

WBOPDC contributed \$961,000 in 2007 towards Baywave Aquatic and Leisure Centre.

In addition to the Council facilities, there are school pools, retirement village pools, and private learn to swim pools. Sit and soak pools with a leisure and tourism focus are located in various places across the subregion such as Oropi, Mount Maunganui and Athenree.

### 3.3 Current Level of Service

Council will provide a basic range of public facilities across our District. For swimming pools our level of service is the provision of a Council funded swimming pool in Katikati and one in Te Puke.

Level of service guidelines state that we may subsidise public access to specialist recreational facilities provided by other organisations where there is



community demand for access (references swimming pools and indoor events centres).

There is no clear direction on Council's role in the replacement or development of new pools across the District. Instead, proposals for new pools, replacements or upgrades are to be considered on a case by case basis following a full feasibility study (demand, growth, trends).

### 3.4 Benchmarks

#### National Facilities Strategy for Aquatic Sports

Four additional standard pools (calculated a 25m x 20m 8 lane pool) are required in the Bay of Plenty region to address the current shortage of facilities in these areas. However, at a subregional level (WBOPDC and TCC) there is an oversupply of pool space based on the benchmarks outlined in the National Strategy (people per m2 of pool space).

The region is likely to experience an increase in swim visit demand by 2031 (9%).

#### Other Local Councils

| Council | Stats <sup>1</sup>                                                                              | Pool provision                                                                                                                                                                                                                                                                                                                                                       | Plans                                                                                                                                                                                                                                                                                                                                                          |
|---------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waipa   | 46,000 population with growth occurring.<br><br>District geographic area of 1473km <sup>2</sup> | <u>Cambridge Municipal Pool</u> – under redevelopment \$17.6m (\$2m external funds).<br><br><u>Livingstone Aquatic Centre</u> in Te Awamutu - 25m pool, slide, hydrotherapy, learners, spa, obstacle course.<br><br>Council provided pools. Community Facilities Trust holds the management contract for managing bookings, water quality and day-to-day operations. | The redevelopment includes an upgrade of the existing outdoor pool, a new 10-lane indoor pool and learner's pool, a hydrotherapy pool, spa and sauna and a children's splash pad. This will ensure a wider range of the community can enjoy the facility, cater to growth and ageing population and ensure the right features are provided to a high standard. |

<sup>1</sup> WBOPD population is 49,235 and will grow to 55,500. Geographic area of 2120km<sup>2</sup>.

| Council           | Stats <sup>1</sup>                                                                                   | Pool provision                                                                                                                                                                                                                                                                                                                                                       | Plans                                                                                                                                                                                                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thames-Coromandel | <p>29,000 population with seasonal growth.</p> <p>District geographic area of 2297km<sup>2</sup></p> | <p>One Council owned and operated pool. The <u>Thames Centennial Pool</u> has a 25m outdoor pool which provides a variety of programmes from learn to swim to academy training. The pool is available all year round with a removable dome used during cooler months. Also network of community and school pools run by other organisations.</p>                     | <p>The Thames pool needs to be replaced by 2027 due to asset condition and land needs to be vacated.</p> <p>Options considered include like for like replacement or larger facility with more services catering to a wider catchment with discussions with Hauraki District Council on this.</p> |
| Whakatane         | <p>34,000 population with seasonal growth.</p> <p>District geographic area of 4457km<sup>2</sup></p> | <p><u>Whakatane Aquatic and Fitness Centre</u> - indoor and outdoor pools, leaner pool, hydroslide, spa pools, and fitness centre.</p> <p><u>Murupara Aquatic Centre</u> open in summer with a 33m outdoor pool and toddler pool.</p> <p>Both owned and operated by Council.</p> <p>Community share agreement with <u>Edgecumbe College Pool</u> for summer use.</p> | <p>Plans to cover the Whakatane outdoor pool with PVC due to growing demand for all year round use (approx. \$1m).</p>                                                                                                                                                                           |

### 3.5 Future Considerations

#### WBOPDC 2018-2028 LTP projects:

- Dave Hume Pool feasibility study (\$50,000 in 18/19).
- Service delivery contracts for Te Puke (\$1.18m over 10 years) and Katikati (\$1m over 10 years – note a decision was made in the 2018-28 LTP to increase the budget by \$242k over 10 years).
- Te Puke pool painting (\$100,000 in 2020/21).
- District wide swimming pools (\$469,000 in 2020/21).

The funding source is District wide rates<sup>2</sup> because ratepayers will use different facilities in different ways at different times. There is no financial contribution funding towards these projects.

The District Wide Swimming Pool project provides a contribution to;

*“Proposals for upgrades or facilities expansion that will be considered on a case-by-case basis following a full feasibility study that has regard to the nature of demand, forecast growth, changing demographics, likely user needs and the availability of alternative facilities.”*

This will be applied on a first in first served basis.

## Considerations

### Community expectations

Feasibility work has been undertaken on the existing swimming pools that has identified a need for replacement facilities to be provided or major upgrades. None of the recommendations from these reports have been implemented. Council received 10 submissions to the 2018-28 LTP on the existing pools and a proposed pool in Omokoroa. In the 2015-2025 LTP submissions suggested improving the Dave Hume Pool and providing a new pool for Te Puke.

### Current facilities and Council's role

Current provision operates under two different models. The facilities are coming to the end of their asset life and/or are no longer meeting the needs of the community. Based on information to date, it is more than likely that a higher level of service will be provided as a replacement.

A cost estimate for a small aquatic centre development<sup>3</sup> is around \$10m for a covered four lane pool (25m x 10m), combined learn to swim and leisure pool, toddlers pool, family spa, fitness centre and a one court sports facility. Operating net cost per annum is \$1,465,000. This facility would provide for a typical catchment of less than 10,000 people. It is recognised that the feasibility study for each pool development will define what is required and costs could either be higher or lower.

Relevant (recent) Council decisions:

- Continue to operate the Te Puke Memorial Pool for the undetermined remaining life at the existing level of service, noting that the new proposed facility is a community driven initiative and further direction is expected from the Aquatic Centre Action Group which is currently defunct (see recent issues outlined in Attachment A).
- Consider the need for a new swimming pool at Omokoroa once the structure plan has been completed for Omokoroa. The need will be assessed against the Bay of Plenty Spaces and Places Strategy.

In making these decisions, Council recognised the need to determine ownership and the role of Council in ongoing operations (management and funding) for

<sup>2</sup> 2015-25 LTP decision to change the funding to District wide rating through the UAGC as this would be more affordable as the rate would be spread across the District and aligned with how other recreational facilities are rated in the District.

<sup>3</sup> <https://sportnz.org.nz/assets/Uploads/SNZ-Com-Facilities-Guide-2017-2.pdf>

both Te Puke and Katikati pools. This is also a consideration for any future provision in Omokoroa.

#### Catchment and distribution

There is no specified catchment for each facility but it is assumed that Te Puke caters to the east and Katikati caters to the west. If this is the case, the impact of the Tauranga City Council (TCC) network, its capacity and future provision, and a potential new facility in Omokoroa should be a key consideration in determining future levels of service for swimming pools in the District. This will then help determine the area of benefit, potential partnership opportunities and potential for growth funding (FINCO) for any facility replacement or new provision.

Note TCC's 2018-2028 LTP includes:

- Swimming pool provision in Te Tumu (\$14m not including land purchase).
- Swimming pool provision in the Western Corridor – Tauriko and The Lakes area (\$14m not including land purchase).
- Potential replacement facility for Memorial Pool and Otumoetai Pool (\$30m).

#### National direction

The National Facilities Strategy for Aquatic Sports recognises the changing role of pools from traditional swimming pool space to more diverse spaces for health, wellbeing and recreation. The recreation and leisure market makes up 60-70% of aquatic facility users and is usually made up of families coming with friends and groups for fun, relaxation, social activity and low-level competition and participation. Competitive/training/fitness makes up 20-30% of users and health and therapy 10% of users.

Research throughout New Zealand and overseas indicates that the recreation and leisure market will continue to be the largest as it contains people of all ages, abilities, interests and genders.

#### Bay of Plenty Spaces and Places Strategy direction

The high priority Bay of Plenty Spaces and Places Strategy actions for aquatic facilities are:

- TCC and WBOPDC - in partnership with other potential partners explore pool space provision in the City and District taking into account the outcome of the Bay Venues feasibility study on Memorial/Otumoetai pools.
- TCC - priority asset types for Wairakei/Te Tumu growth areas include an aquatic facility with a focus on co-location and partnership opportunities e.g. multi use facilities with WBOPDC and/or schools.

The delivery of aquatic facilities and services will need to be suitable for the widely dispersed rural populations for much of the District. Schools and other private pools should be considered for an increasing role in provision particularly in geographically dispersed population areas and urban areas with high demand and strong ageing.

### School pools

School pool numbers are declining due to the cost of operations and many pools coming to the end of their asset life. There is no MoE funding for new or replacement pools. However schools can use board funding (such as grants and fundraising) for this purpose. Through the Community and Facilities Fund, Council has provided funding towards pools for some local schools. The MoE encourages schools without pools to collaborate with local community groups and councils, or each other to co-own facilities and redevelop existing pools. Historically MoE investment required community share facilities to be located on MoE land however this approach may have changed in recent times.

### 3.6 Summary

- Our swimming pool level of service is currently based on actual provision with no direction on Council's role in replacement or new facilities other than to consider on a case by case.
- Current Council provision operates under two different ownership models, therefore any new facility provision requires direction on which model would be applied or if a new model is required for ownership and delivery.
- There is no catchment of area of benefit specified for existing facilities to determine the extent to which they provide for existing and future populations.
- The changing nature of aquatic facilities to providing a more diverse range of all year round health and recreation experiences will likely influence any replacement or new swimming pool provision.
- Council's 2018-28 LTP swimming pool investment falls significantly below any potential investment in replacement or new swimming pools both from a capex and opex perspective, assuming that a higher level of service will be provided and that Council will continue to invest in these facilities to provide community access. If the expectation is that the majority of capital costs will be secured through community funding, it is likely that Council would need to invest more than \$469,000 to enable a community group to leverage external funding. There is also the question of how the increased operational costs will be funded.
- Since 2010, Council has allocated \$100,000 to feasibility studies (\$25k each for Te Puke and Katikati in 2010 and another \$50k for Katikati in 2018/19). Any capital spent has been in response to maintaining pool operation or minor renewals only, not facility replacement or upgrades.
- The Bay of Plenty Spaces and Places Strategy identifies priority actions for TCC and WBOPDC to work together on pool space provision across the subregion. WBOPDC will need to provide clear direction on our ongoing role in swimming pools as part of this process.
- MoE and the Bay of Plenty Spaces and Places Strategy place a strong emphasis on partnerships with other organisations to provide swimming pools for the community.

### 3.0 Discussion

1. Are there any questions or clarification on the information provided?
2. Does Council consider that it has an ongoing role in providing or securing access to swimming pools for the community?
3. If so, what role does Council see it having in terms of ownership and operations?

| OPTIONS                           | Ownership                                  | Management                                                     | Funding                                                                                                                                                                | Example                                                                                    |
|-----------------------------------|--------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Full Council provision            | Council own land and facility              | Council contract out management and operations                 | Council fund majority of capex and fully fund ongoing operational costs including depreciation.                                                                        | Dave Hume Pool                                                                             |
| Council Partnership (eg with TCC) | Councils jointly own the land and facility | One Council contracts out management and operations on behalf. | Different models for this – could be 50/50 funding or based on population ratio.                                                                                       | TECT All Terrain Park                                                                      |
| Community Partnership             | No Council ownership of land or facility   | Could be contracted by Council or community share partner.     | Council effectively 'purchases' community access to the facility through a contribution to capex and opex which reflects the percentage of community access available. | Previous arrangements for Te Puke Memorial Pool (prior to Council taking over operations). |
| Community contribution            | No Council ownership of land or facility   | No Council responsibility for management and operations.       | Council provides a grant towards the development of the facility and has no further involvement.                                                                       | Baywave Aquatic and Leisure Centre                                                         |



4. Should we have a consistent level of service in place to guide our role and investment across the District?
5. If we continue to operate on a case by case basis, what will be used to guide decision-making to ensure consistency, fairness and equity across the District?
6. What opportunities do elected members see in working collaboratively with TCC to consider swimming pool provision across the subregion? What about other areas such as Hauraki District, Rotorua and Whakatane District?

## Attachment A - Te Puke Memorial Pool

- Built in 1961.
- Located at Te Puke High School (land owned by iwi). Facility is owned by the school (MoE).
- Outdoor 33 metre 6 lane pool with an additional learners pool and dive pool.
- Te Puke High School closed the pool in 2010 due to not wanting to fund required pool repairs or operational delivery and this resulted in closure for two seasons. In 2012, Council (with agreement from Te Puke High School) commenced major repairs to restore pool operations, eventually reopening in 2013. Council investment since 2012 has comprised the following:
  - o Pool & plant repairs - \$300,000 (\$230k of this was in the 2012-2014 period comprising of geothermal bore compliance works).
  - o Pool painting - \$110,000 (repainted 2016, this will repeat every five years).
  - o Pool capital works - \$40k budgeted in 2018/19 to replace the fencing.
  - o Service Delivery Contracts - \$660,000 (two separate contracts are involved – one for managing the people component of operating the pool – lifeguards, cleaning etc and the other contract manages water quality/plant system operation).
- Council funds ongoing operations through a service delivery contract with an external provider who operate and manage the facility (approx. \$100,000 per annum).
- Council is working through a draft lease/licence to occupy with MoE to recognise Council's role in the pool funding and operations. There is also a 30 year access agreement in place (from 2005 – the initial 20 year term expires 2025 which has 2 further 5 year terms rights of renewal, i.e. 2035). Staff are of the view that due to the condition and age of the facility, along with the recent failure of the pump and associated pipe work, that the current access agreement is unlikely to require renewal (either a new facility will be necessary or significant renewal investment in the current pool if feasible) before then.
- Te Puke High School pay \$7,000 per year for access to the pool.
- In 2017/18 this facility was open from October to April with a mix of use across all ages. The total numbers of users for the 2017/18 year is 12,369 people. This appears to be fairly consistent from year to year.
- The pool is currently closed until further notice due to a pump failure.



A Feasibility Study jointly funded by Council and Te Puke High School in 2010 identified the following:

*The findings from the feasibility study have identified that there is a demonstrated need for a new aquatic and indoor recreation facility in Te Puke, in partnership with Te Puke High School.*

*The review of the existing network of aquatic and indoor recreation facilities has highlighted that Te Puke currently has limited access to indoor sport and recreation facilities. The key findings are:*

- *Te Puke has one pool of sufficient size for club and community use, but this is nearing its use by date.*
- *Bay Wave in Tauranga is the closest aquatic facility open 12 months of the year that could provide some of the recreational and swim sport needs of the Te Puke residents, but this is already operating at capacity at peak times.*
- *With regards to indoor recreation space there is currently no community focused indoor recreation centre in Te Puke, or surrounding areas, apart from the Te Puke High School gymnasium (which is being replaced) and the Te Puke Sports Club indoor court. The closest indoor community recreation centre is in Tauranga.*

*The consultation process with key stakeholders has identified strong support for the development of an aquatic and indoor recreation facility in Te Puke.*

*Two options considered and costed were a covered pool and recreation centre (\$15m) and an uncovered pool and recreation centre (\$11.5m). The preliminary operational budgets for both facility options have highlighted an operational deficit of approximately \$60,000 - \$65,000 per annum [NOTE these figures are now 9 years old].*

*It is recommended that 'OPTION 3 - A Holistic Site-Wide Trust Model' be the preferred governance model for the proposed Te Puke aquatic and indoor recreation facility. A community Trust is formed which owns and governs the facility (and oversees its development). The Trust either directly manages the facility or engages external expertise to manage the facility.*

## Attachment B - Dave Hume Swimming Pool

- Opened in 1963 and developed by a community group.
- Council took over ownership of facility (and already owned land) from when it was constructed in 1973.
- Outdoor 33 metre 6 lane pool with an additional children's pool facility and two outdoor spas. A development in 2005 added two spa pools but these were decommissioned in 2012 due to unaffordable operational costs.
- Council funds ongoing operations through a service delivery contract with the Dave Hume Trust who operate and manage the facility (approx. \$100,000 per annum).
- Katikati College has an agreement for access and pays around \$7,000 per annum for this.
- The facility is open to the local community for a minimum of 26 weeks, between the months of September and April. In 2017/18 it was open for 131 days with 13,094 patronage and a mix of general public access, masters and school access. The average patronage per day has decreased from 77 people in 2015/16 to 66 people in 2017/18.
- The pool facility is depreciated. Total accumulated depreciation is currently \$251,000 since accumulating in 2010. The low value represents the relatively low book value of the facility and the fact that depreciation was not separated out from other Council property assets – so any previous depreciation accumulated between 1973 and 2010 has been accounted for differently and there is no clear record of expenditure against this.



A Feasibility Study funded by Council in 2011 identified the following:

*There are many issues currently associated with the operation of the complex. These issues are widely acknowledged by the Trust and the pools core stakeholders. Some of these issues are:*

- *The pools are only open during the summer months.*
- *Swimmers having to travel to Tauranga during winter months.*
- *Limited access and space for casual and recreational community pool use.*
- *Competing demands from the various private coaches and learn to swim operators.*

*The decision to redevelop the aquatic facilities will in large part be dependent on sustainability issues. Retaining an outdoor pool and building a new indoor pool will likely generate the highest operational costs. If this option is chosen the operational costs, in our opinion, will be a significant challenge. Also the decision on whether to develop a new indoor pool complex or to cover the existing outdoor pool with one of the three construction options identified within this report will have a significant impact on the final capital costing of the project.*

*Cost estimates for capex ranged between \$3.4m to \$7.2m for a covered existing pool to a new indoor pool complex. Operational costs estimates for either a new indoor pool or covering the existing pool identified an operational deficit of approximately \$30,000 to \$60,000 per annum.*

*A further feasibility study was completed in 2015 by the Dave Hume Swimming Pool Development Committee on the potential for enclosing the pool. This study did not address a number of design issues so WBOPDC staff arranged a visit to aquatic facilities in Auckland and Hamilton for the purpose of educating the Trust Committee on what constitutes good and bad design for pool complexes. There is now a clearer understanding of the level of service sought in the years to come, resulting in the 2018-2028 LTP Council resolution to fund up to \$50,000 for an updated feasibility report. A procurement process is currently underway for this. The Trust Committee have expressed concern that regardless of the quality and detail of the new feasibility report, Council may not support any change and additional investment required.*

## Recreation and Leisure Strategy Review

### Swimming Pool Level of Service

Elected Member Workshop – 13 February 2019

#### Considerations

Need to define options for what a basic level of service could look like (and associated capex and opex costs). Could do this through using info like the Sport NZ Guidelines, National Strategy and feasibility studies. Will need costing and funding information to support this.

Need to consider actual viability of this approach to LOS – could a facility still succeed with that level of Council funding? Will it compromise the ability to provide fit for purpose facilities to the community? If ancillary facilities like gyms, cafes etc are provided, will they generate sufficient revenue to offset operational costs over and above Councils contribution and user fees and charges? Feasibility study will determine viability – if facility doesn't look sustainable (how do we define this – should include depreciation too) then it shouldn't proceed. Opex likely to be key factor here.

No direction on Council's role re provision of land – assume this is a case by case basis consideration.

No direction on Council's role in depreciation of the assets. Assume if not Council owned we won't depreciate but then what does this mean when it needs replacement? Might be a schedule of assets that clearly shows ownership and responsibility, and evidence that depreciation is being planned for regardless of who owns.

Collaboration and partnerships should drive our future approach. MOE policy is that they do not contribute towards shared facilities on public (Council) land – by they will accept contributions for facilities on their land. LOS for land provision needs to be clarified when taking this into account for shared facilities.

#### Outcomes:

1. Council's role is to provide a basic level of service for swimming pools. This reflects the social responsibility that Council has to provide learn to swim opportunities in the community and access for all. It is assumed that the basic level of service would be reflected in the level of capex and opex contribution made by Council.
2. Anything above the basic level of service would need to be either provided by the community through their own means (capex and opex) or could potentially be considered as subregional provision (eg Baywave) whereby Council could consider a contribution to that facility towards additional activities not currently provided for within the District (eg leisure, therapy etc).
3. Responsibility for determining the need for swimming pool provision and/or upgrade is led by the community. Need to think about how this works in terms of role of Council in the actual build process.
4. Should consider what sub-regional provision looks like – and talk to TCC about future plans.
5. FINCO funding should be considered as a potential funding source.

Next steps

Issues and options paper to be prepared that outlines level of service options (what could be provided, rationale for this, costs and potential funding sources) for discussion with elected members. This will need to be clear about direction that has been provided that these are community led projects as this clarifies the role of Council (not proactively planning for swimming pool provision, leave it to the community to decide what they need but we have a clear LOS in place to help guide their feasibility process.



# **JOB BRIEF**

## **Dave Hume Trust Swimming Pool Facility Development Feasibility Report**



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# 1. Purpose

The purpose of this Request for Proposal (RFP) is to obtain the services of an appropriately qualified/experienced aquatics industry consultant to prepare a feasibility report to inform future development of the Dave Hume swimming pool facility, in Katikati. The consultant must consult appropriately with the stakeholders.

The Client for this project is the Western Bay of Plenty District Council, who is working in collaboration with the Dave Hume Swimming Pool Trust.



# 2. Background

**Dave Hume Pool is located at Vesey Stewart Reserve, Carisbrooke Street, Katikati**

Opened in 1973 and mostly unchanged since then, Western Bay of Plenty District Council owns the land and facilities.

Since 1996 the pool has been operated under a Council funded Service Delivery Contract by the Dave Hume Swimming Pool Trust (DHT). The DHT consists of 8 trustees, representing the community, pool user groups and Council.

The pool shares a common boundary with Katikati College which is the predominant user during school hours. The DHT employ and train the lifeguards, which are present only when the public is using the pool. The College and other local area schools provide their own lifeguards when they are using the facility.

### **Two open air geothermally heated pools which operate for 7 months of the year**

The main pool is six lanes wide and 33.3m long, with depth from 0.94-1.14m – adequate only for child swim competitions. The learner pool is approximately 9x8m and 0.8m deep. The facility is only open for use 7 months of the year, depending on seasonal conditions.

Considering the pool is nearly 50 years old, the facility is maintained to a high standard by the DHT. Council maintains a close relationship with the Trust to support the operation and management of the pool and facilities. Recent minor improvements include shade structures, redecorated ablutions/changing room, and pool covers, which have improved the experience for all users.

### **Council's level of service for swimming pools**

Council is currently reviewing its Recreation & Leisure Strategy which will confirm Council's future role in the provision of swimming pool facilities and define what its 'Level of Service' (LOS) of swimming pool provision throughout the District is to be and define Council's contribution when it comes to upgrading or replacing the existing pool.

For the purpose of this feasibility report, assume that Council's LOS for public swimming pools includes:

- Council owned land of a similar area as the existing facility
- Outdoor main pool 25m long, 6 lanes wide, 1.3-1.8m deep (sufficient for local competition swimming) and a disability access ramp
- Outdoor toddlers / learners pool 0.8m deep
- Pool water heating system to maintain an average main pool temperature of 26 degrees and 30 degrees in the learners pool
- Ablution / changing room facilities including hot water showers
- Office (including basic staff kitchen), staff toilet, foyer, plant room building
- Outdoor seating and shade
- Pool operational equipment such as pool covers & retractor reels/motors, robotic vacuum cleaner
- Fencing
- Summertime operation only (approximately 7 months), as the facility is outdoors.

### **Higher level of service considerations**

Community demand and expectations for an indoor 12 month operated aquatic facility has been growing since before the last feasibility study undertaken in 2010 (refer Attachments). Strong population growth continues and the existing pool services a large geographical area from Waihi through to Omokoroa. There are no other equivalent facilities in these other

areas and to experience a higher level of service than what the existing Dave Hume Pool offers, users travel to Tauranga.

Dave Hume Trust (DHT) as community representatives and contracted operators of the pool feel strongly that it is time to begin the planning for the construction of a new low maintenance modern indoor aquatic facility. User statistics have remained fairly static over the last several years - but this might just mean that the existing facility does not actually fit the needs of the growing and changing community. The most recent 2018/19 season has seen a spike in numbers likely reflective of a warmer summer than normal.

The new "higher level of service" facility would enable lane swimming and aqua-fit capability throughout the day, while a hydrotherapy pool could be utilised by general users, sports people, those recovering from illness or surgery, and/or by people who have a permanent disability. There would also be commercial space opportunity for a small gym and café.

Funding for this higher level of service (both Capital and Operating costs) would need to be met by the community.

**The DHT vision for the future new indoor facility includes:**

- a 10 lane 25m main pool, depth 1.3-1.8m, with an access ramp
- an 8x15m hydrotherapy pool, depth 1.1-1.8m, with an access ramp
- a spa pool
- a 10mx15m toddlers / learners pool to depth 0.7m
- changing rooms (with underfloor heating)
- a gymnasium (allow 10 places)
- a café (leased)
- an office and merchandise area
- rooms for staff, learn to swim coaches and manager
- a meeting room
- a room for a therapy type service (leased)
- storage for swimming equipment
- pool water treatment infrastructure and storage for chemicals.

DHT's ultimate desire would be to build the new covered facility beside the existing main pool and learners' pool so that both would operate during summer, and the covered pool all year round. This is identified in the deliverables section as New Indoor Facility Option 2.

**Operation and governance**

For such a significant upgrade, operational and governance roles need to be reviewed. The report should consider what a new operating model would look like for Council and what role the DHT plays.

For the existing facility, the DHT is funded approximately \$100,000 per year (via a Council Service Delivery Contract) to supplement pool user income. The DHT manage all



operational costs (chemicals, power, etc.) and maintain the facility including life guarding staff.

Pool/plant repairs and renewals are funded from a separate Council budget of approximately \$300,000 over 10 years (reviewed annually with any significant adjustments every 3 years through the Long Term Plan).



*View of the pool entrance from Carisbrooke Street driveway*



*Toddlers/Learners Pool*

### 3. Objective and Deliverables

**The Objective** of the Feasibility Report is to update and inform stakeholders about the future development options for the Dave Hume Swimming Pool facility, so that robust decisions about its future can be made.

#### Stakeholders

Dave Hume Trust, Pool users, External Funding Agencies and Western Bay of Plenty District Council

Except for external funding agencies, the Consultant will be expected to consult appropriately with stakeholders. Refer Attachments for some of the key reference material. Additional information will be provided on request.

#### Deliverables

- 1. A Formatted Report** with the deliverable items 2 to 6 below, presented in an easy read style that will assist Council, the Dave Hume Trust and potential funding agencies decision making processes.
- 2. Council's Level of Service for swimming pools**
  - a) Comment on and provide a capital cost estimate and projected 20 year operational costs for a new facility with a "basic level of service", referred to on page 4. The purpose of this deliverable is to understand the size of investment and ongoing operational cost needed for a new facility at a basic level of service.
- 3. Existing Pools**
  - a) Comment on and provide an estimate of capital and operating investment to extend useful lives (for example, plant treatment / plumbing specific items).
  - b) Considerations include:
    - i) whether the existing 33m main pool and learner pool should continue to be a painted concrete structure or be internally clad with a stainless steel Natare or similar system, with overflow channels, and any impact this would have on the balance tank
    - ii) any worthwhile changes/modifications to the existing disinfecting and filtrations systems and their locations
    - iii) any suitable remodelling/rebuilding of the existing building for changing rooms, storage and entry/exit and office/merchandise/staff areas and storage for chemicals and equipment
    - iv) how the development could be economically staged, if possible.



#### 4. New Indoor Pool Facility

*NOTE - Two options are requested for this deliverable:*

**Option 1** - A new indoor pool facility constructed on the existing site or

**Option 2** - A new indoor pool facility constructed and to operate beside the existing pools:

- a) Comment on and provide a detailed capital cost estimate for the construction of a new indoor aquatic facility (refer "DHT Vision" characteristics on page 5). There should be an indicative capital and operating cost for each of the higher level of service "vision" items. Assume construction would begin within the next five years.
- b) Provide detailed asset capital renewal schedules and operational cost estimates projected over 20 years (inflation excluded).
- c) Specification considerations for a new indoor facility include:
  - i) The type of covered pool structure that provides:
    - (1) low maintenance in a high humidity environment
    - (2) good insulation and acoustics
    - (3) natural light and sides that can be opened to the outside
  - ii) Suitable alternatives as to pool type, size, depth & usage
  - iii) Location of a common entry/exit points, and potential control types.
  - iv) Types of design and construction of the indoor pools.
  - v) Quiet and efficient air handling systems.
  - vi) The most suitable and cost efficient disinfecting and filtrations systems, and their locations.
  - vii) Whether the existing hot water bore and its consent is adequate to heat all pools and if not, whether the bore can provide more and if the consent can be increased or what supplementary form of heating should be used.
  - viii) What and where additional car parking could be built.
  - ix) How the development could be economically staged, if possible.

#### 5. Governance Structure

- a) Comment on what the operational / governance management structure for New Indoor Facility Options 1 & 2. Identify options and recommend the best fit solution for each of the two upgrade options. Assume full ownership of the new assets by WBOPDC.
- b) Staffing assumptions for both upgrade options:
  - i) Staffing numbers and remunerations bands align with aquatics industry benchmarks
  - ii) The pool operator will employ its own learn-to-swim coaching staff to cater for in any one calendar year, up to:
    - (1) 40 – up to five year olds
    - (2) 400 - five to 14 year olds
    - (3) 10 - adults.

**6. Prepare a Scaled Floor Plan** of the combined facilities showing the 'footprint' and "vision" features for New Indoor Facility Options 1 & 2.

**Assumptions**

The report should:

- consider the projected population increases and their demographics
- the likely increase in pool patronage for a year round covered facility - compare with other centres where a covered facility replaced or supplemented an outdoor pool.

**Out of scope**

We do not want a detailed cost/benefit analysis or an analysis or comparison of other smaller pools between Omokoroa and Waihi (which provide lesser public access and level of service).

## 4. Additional Information

**Existing facility**

The existing facility is heated by a hot water bore located on the premises. The Bay of Plenty Regional Council Resource Consent permit No. 67567 allows for 420m<sup>3</sup>/day. The pools currently use up to about 300m<sup>3</sup> a day maximum.

In 2017, the changing rooms (1970's build, concrete block) were modified, with the addition of extra showers and cubicles. The office was refurbished and shade structures installed for spectators.

The Trust reports...

*"The world has moved on significantly since 1973 when the pool was built. People's expectations and desires have also changed significantly. In the 21st century there is a much greater emphasis on health and well-being. When the pool was built, it was to serve the purpose of teaching school children to swim, who are currently the major users of the facility. The population of Katikati at that time was approximately 1,200.*

*...There is sufficient evidence accumulated that a large number of local community and pool users favour an all year round indoor aquatic facility in Katikati."*

**Catchment**

The 'local community' catchment is seen as that between and including, Waihi to Omokoroa townships. Paeroa/Te Aroha are potential sources of users for an indoor pool.

## Recent expenditure

During the 2016/17 season the pool:

- was open 193 days
- had expenses of approximately \$125,000
- had income of approximately \$127,000.

In 2017/18, Council's annual Service Delivery Contract budget was \$73,500.

The 2018-2028 Long Term Plan increased the Service Delivery Contract funding as shown below:

| Year                          | 2019      | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026      | 2027      | 2028      |
|-------------------------------|-----------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|
| <b>LTP Budget (thousands)</b> | <u>95</u> | <u>100</u> | <u>102</u> | <u>105</u> | <u>103</u> | <u>102</u> | <u>100</u> | <u>98</u> | <u>96</u> | <u>93</u> |

This was due to:

- increased staff costs due to staff profile changes,
- increases in the adult minimum rate and Health & Safety risk mitigation factors
- increasing in line with the planned increase in the adult minimum wage, up to 2021.

## Expected population increase

|              | 2013         | 2018         | 2023         | 2028         | 2033         | 2038         | 2043         |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Ohinemuri    | 3250         | 3470         | 3550         | 3600         | 3590         | 3530         | 3420         |
| Waihi        | 4730         | 5200         | 5270         | 5300         | 5270         | 5170         | 5050         |
| Waihi beach  | 2010         | 2220         | 2330         | 2420         | 2500         | 2550         | 2580         |
| Athenree     | 700          | 720          | 740          | 760          | 770          | 790          | 820          |
| Island View  | 560          | 610          | 610          | 610          | 600          | 580          | 560          |
| Tahawai      | 1780         | 1860         | 1910         | 1950         | 1970         | 1980         | 1970         |
| Katikati     | 4190         | 4760         | 5030         | 5270         | 5480         | 5690         | 5910         |
| Aongatete    | 2960         | 3320         | 3480         | 3610         | 3700         | 3750         | 3770         |
| Omokoroa     | 2630         | 3160         | 3480         | 3790         | 4090         | 4370         | 4640         |
| <b>Total</b> | <b>22810</b> | <b>25320</b> | <b>26400</b> | <b>27310</b> | <b>27970</b> | <b>28410</b> | <b>28720</b> |
| Paeroa       | 4070         | 4460         | 4600         | 4690         | 4730         | 4730         | 4720         |

Source: <http://statsnz.maps.arcgis.com/apps/webappviewer/index.html>

**Pool usage statistics (2015 to 2019)**

| <b>Season</b>                           | <b>2018/19</b>         | <b>2017/18</b>       | <b>2016/17</b>      | <b>2015/16</b>      |
|-----------------------------------------|------------------------|----------------------|---------------------|---------------------|
| Days open                               | 199                    | 131*                 | 193                 | 172                 |
| Last day                                | Thursday 18 April 2019 | Sunday 22 April 2018 | Sunday 9 April 2017 | Friday 8 April 2016 |
| Concession cards                        | 7075                   | 3562                 | 6158                | 5960                |
| Under 16                                | 4115                   | 2302                 | 3396                | 3243                |
| Adults                                  | 1663                   | 947                  | 1145                | 1283                |
| Pre school                              | 1262                   | 603                  | 613                 | 860                 |
| Senior                                  | 198                    | 142                  | 104                 | 170                 |
| Aqua                                    | 802                    | 456                  | 767                 | 496                 |
| Group                                   | 10                     | 23                   | 47                  | 298                 |
| Pre sch adult                           | 1241                   | 603                  | 613                 | 860                 |
| Masters                                 | 1103                   | 619                  | 1041                | 938                 |
| KK Community centre                     | 300                    | 239                  | 399                 | 281                 |
| <b>Total general public</b>             | 17769                  | 9496                 | 14283               | 14389               |
| Katikati College                        | 3600                   | 2454                 | 4176                | 3568                |
| Katikati Primary school                 | 938                    | 706                  | 778                 | 1144                |
| Matahui school                          | 341                    | 308                  | 408                 | 417                 |
| Pahoia Primary school                   | 10                     | 6                    | 122                 | 105                 |
| Other schools                           | 107                    | 84                   |                     |                     |
| Other                                   |                        | 40                   | 166                 | 30                  |
| Total schools                           | 4996                   | 3598                 | 5650                | 5264                |
| <b>Grand total</b>                      | 22765                  | 13094                | 19933               | 19653               |
| Concessions cards sold                  | 592                    | 290                  | 592                 | 473                 |
| <b>Included in general public total</b> |                        |                      |                     |                     |
| Waihi Bch surf club                     | 963                    | 726                  | 1496                |                     |
| Learn to swim coaching                  | 2088                   | 241                  | 2498                |                     |
| Average public swims per day 2018/19    | 89                     |                      |                     |                     |
| Average public swims per day 2017/18    |                        | 72                   |                     |                     |
| Average public swims per day 2016/17    |                        |                      | 74                  |                     |
| Average public swims per day 2015/16    |                        |                      |                     | 84                  |

\*2017/18 was a short season due to the weather related late painting of the main pool

**2018/19 swim season statistics (to understand seasonal variances):**

|                                         | Sept 18 | Oct 18 | Nov 18 | Dec 18 | Jan 19 | Feb 19 | Mar 19 | Apr 19 | 2018/19 | 2016/17 | Difference |
|-----------------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|---------|---------|------------|
| Days open                               | 1       | 31     | 30     | 30     | 30     | 28     | 31     | 18     | 199     | 193     | 6          |
| Concession cards                        | 31      | 1069   | 1037   | 957    | 1400   | 1506   | 762    | 259    | 7021    | 6158    | 863        |
| Under 16                                | 12      | 572    | 322    | 724    | 1152   | 832    | 391    | 107    | 4112    | 3396    | 716        |
| Adults                                  | 7       | 165    | 115    | 358    | 514    | 341    | 132    | 21     | 1653    | 1145    | 508        |
| Pre school                              | 5       | 125    | 136    | 213    | 344    | 295    | 112    | 28     | 1258    | 613     | 645        |
| Senior                                  | 0       | 16     | 10     | 16     | 70     | 54     | 17     | 10     | 193     | 104     | 89         |
| Aqua                                    | 0       | 105    | 163    | 120    | 0      | 259    | 82     | 73     | 802     | 767     | 35         |
| Group                                   | 0       | 0      | 0      | 0      | 0      | 0      | 10     | 0      | 10      | 47      | -37        |
| Pre sch adult                           | 5       | 125    | 136    | 213    | 333    | 295    | 102    | 22     | 1231    | 613     | 618        |
| Masters                                 | 12      | 208    | 155    | 175    | 156    | 165    | 146    | 67     | 1084    | 1041    | 43         |
| KK Community centre                     | 0       | 62     | 0      | 0      | 238    | 0      | 0      | 0      | 300     | 399     | -99        |
| <b>Total general public</b>             | 72      | 2447   | 2074   | 2776   | 4207   | 3747   | 1754   | 587    | 17664   | 14283   | 3,381      |
| College                                 | 0       | 324    | 526    | 326    | 0      | 1145   | 1279   | 0      | 3600    | 4176    | -576       |
| Primary                                 | 0       | 0      | 0      | 299    | 0      | 392    | 247    | 0      | 938     | 778     | 160        |
| Matahui                                 | 0       | 0      | 0      | 0      | 0      | 251    | 90     | 0      | 341     | 408     | -67        |
| Pahoia primary school                   | 0       | 0      | 0      | 0      | 0      | 0      | 10     | 0      | 10      | 122     | -112       |
| Other schools                           | 0       | 0      | 0      | 0      | 0      |        | 107    | 0      | 107     | 166     | -59        |
| Total schools                           | 0       | 324    | 526    | 625    | 0      | 1788   | 1733   | 0      | 4996    | 5650    | -654       |
| <b>Grand total</b>                      | 72      | 2771   | 2600   | 3401   | 4207   | 5535   | 3487   | 566    | 22639   | 21539   | 1,100      |
| Concessions cards sold                  | 16      | 140    | 86     | 68     | 86     | 112    | 35     | 11     | 554     | 592     | -38        |
| <b>Included in general public total</b> |         |        |        |        |        |        |        |        |         |         | 0          |
| Waihi Beh surf club                     |         | 255    | 152    | 161    | 101    | 205    | 57     | 32     | 963     | 1496    | -533       |
| Learn to swim coaching                  |         | 247    | 342    | 280    | 182    | 426    | 398    | 213    | 2088    | 2245    | -157       |
| <b>Av public/day 2018/19</b>            |         | 79     | 69     | 93     | 140    | 134    | 57     | 33     | 89      |         |            |
| <b>Av public/day 2017/18</b>            |         |        |        | 104    | 104    | 81     | 50     | 15     | 72      |         |            |
| <b>Av public/day 2016/17</b>            |         | 69     | 72     | 67     | 89     | 74     | 55     | 6      |         | 74      |            |

NB: January 2018 figures are inflated due to staff error, so the 2016/17 general public figures have been used instead to give a more realistic picture

**Current facility regular users**

| Who                                 | How often                                                                                                                                                               | Number of swims<br>(2016-17 season – 193<br>days open) | Primary contact                                |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|
| KK Masters club                     | 4x a week                                                                                                                                                               | 1040                                                   | Deon Twiss                                     |
| Waihi Beach Surf club               | 6x a week                                                                                                                                                               | 1500                                                   | Nikki Pooly                                    |
| Aquafit                             | 2x a week                                                                                                                                                               | 770                                                    | Kate Bailey                                    |
| Learn to swim                       | 4x a week                                                                                                                                                               | 2000                                                   | Tania Snookes (Evolution aquatics<br>Tauranga) |
| General public                      | 6-9am weekdays<br>11am-6pm<br>weekends<br>6am-6pm sch<br>holidays<br>11am-6pm public<br>holidays                                                                        | 12100                                                  |                                                |
| KK College                          | Daily from mid Oct<br>to mid Dec and<br>early Feb to late<br>Mar. Incl their 3<br>day swimming<br>sports                                                                | 4180                                                   | Adam Walter                                    |
| KK Primary sch                      | Not regular but<br>holds its senior<br>swim sports                                                                                                                      | 780                                                    | Ashley Hills                                   |
| Matahui Primary sch                 | 3x a week term one                                                                                                                                                      | 410                                                    |                                                |
| Pahoia Primary sch                  |                                                                                                                                                                         | 120                                                    |                                                |
| KK Commun ity centre                | Sch summer<br>programme                                                                                                                                                 | 400                                                    | Jan du Faye                                    |
| Northern Cluster swim sports<br>day | Pahoia<br>Omokoroa No1<br>Omokoroa Point<br>Whakamarara<br>Waihi central<br>Waihi east<br>Waihi beach<br>St Josephs<br>Waimata<br>Bethlehem college<br>Te Puna prim sch | 200                                                    | Christine Townsend                             |

**5. Attachments****Feasibility Report 2010 (Visitor Solutions)****Dave Hume Swimming Pool Trust Annual Report 2018****Pool Facility Assessment 2016 (Watershed)**



# Procurement Plan

## Key information

| Topic                    | Detail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project name</b>      | Dave Hume Pool – Bulkhead and Liner Project (Design & Build)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>ID number/s</b>       | <b>Obj Contract no.:</b> 24-1047 <b>LTP Project no.:</b> 258205                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Project staff</b>     | <p><b>Project Manager:</b> Janine Field, Reserves and Facilities Asset Manager</p> <p><b>Procurement support:</b> Margot Miskimmin (Procurement Officer) and Laraine Jackett (Contracts and Procurement Manager)</p> <p><b>Administration support:</b> Sam Keen &amp; Julie Webb, Project Co-ordinators</p> <p><b>Consultants:</b></p> <p>██████████ Veros- Project Manager</p> <p>██████████ Veros- Project Manager</p> <p>██████████ Beca- Senior Mechanical Engineer – Aquatic Services</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Dept. &amp; Group</b> | Reserves and Facilities, Infrastructure Group                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Contract value</b>    | <p>\$ ████████ – GST excluded – Quantity Surveyor's Estimate including contingency</p> <p>83% – Council funded</p> <p>17% – Dave Hume Trust funded (Trust responsible for generating \$ ████████ external funding)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Our requirements</b>  | <p><b>Goods/services description:</b></p> <p>This contract will be for NZS 3916 Design and Build of the following scope;</p> <ul style="list-style-type: none"> <li>• Division of existing 33.5m pool into a 25m lap pool, ~1.5m bulkhead and a new 7m indoor Learn-to-swim pool.</li> <li>• Associated plant equipment for the new pools including filtration systems, pool heating systems and water attenuation for discharge.</li> <li>• Re-lining of all 3 pools (Main pool divided into 2 and existing outdoor Learn-to-swim pool).</li> <li>• Liner upgrades for Solar Weir (or retain existing), and application of an anti-slip surface.*</li> <li>• Upgrade the existing Learn-to-swim pool to be compliant with current NZS5826 Standard Operating Guidelines.</li> <li>• Investigate upgrades to submersible pump and increasing the pump depth (as further outlined in T+T bore testing report). This item will also require confirming and managing a consent (if required) for further works to the bore.*</li> <li>• Review electrical upgrades required for this project, and cost of electrical upgrades for potential future pool roof project*.</li> <li>• Concrete around pools affected by trenching and fill in the splashpad to create a level finish.</li> <li>• Add heaters to the changing rooms, reception area for extended summer season.</li> <li>• Provide new pool covers for all pools.</li> <li>• Provision of Bore water heat exchanger for new learn-to-swim</li> <li>• Provision of 2 new sand filtration systems (as per the Concept Design) for the new pools. This is to be priced as part of the tender.</li> </ul> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>Tenderers will also be asked to submit suitable alternatives to allow for any innovation and overall economy savings.</p> <ul style="list-style-type: none"> <li>• Provision and installation of a disability hoist that can be used in either the new learn to swim or the lane pool/ both.</li> <li>• Upgrades to reception entry (carpark door only), and doors to changing rooms (for heating purposes).</li> <li>• Re-paint existing pool kerb.</li> <li>• CCTV upgrades to use council monitoring systems</li> </ul> <p>*Budget Note: delivery of these items is still to be confirmed and Tenderers will be asked to price this as a separate line item which may or may not be included in the final contract, or may proceed through design but not into construction.</p> <p>The tender comprises of:</p> <ul style="list-style-type: none"> <li>• T+T Pumping Test Analysis and Results report</li> <li>• Beca Concept Design and Specifications</li> </ul> <p><b>Key deliverables:</b></p> <ul style="list-style-type: none"> <li>• Full design including all associated consents required to issue For Construction drawings (and ultimately As Builts following delivery) for the agreed post-tender scope (mentioned above).</li> <li>• Construction delivery of the agreed scope (as above).</li> <li>• Coordination through-out design and construction with key project and Council stakeholders including (but not limited to) Western Bay of Plenty, Dave Hume Pool Trust, Veros and Beca.</li> <li>• All required consents and compliance certificates to support delivery and sign-off of the above scope.</li> </ul> <p><b>Out of scope:</b></p> <ul style="list-style-type: none"> <li>• There may be a separate project (to be confirmed at a later date) to add a Pool Roof and associated services (i.e. HVAC, electricity, hydraulics, security and trenching for associated services), this does not form part of the scope for this Tender and Procurement Plan.</li> </ul> <p><b>Minimum standards that apply:</b></p> <ul style="list-style-type: none"> <li>• NZS4441 Swimming pool design Standard</li> <li>• NZS5826 Standard Operating Guidelines. (swimming pool operation)</li> </ul> |
| <b>Background</b> | <p>Through the 2021-2031 LTP process, Council confirmed its level of service for aquatics, which aims to provide fully covered/enclosed public pools in Te Puke &amp; Katikati, available throughout the year. Western Bay of Plenty District Council (WBOPDC) in conjunction with the Dave Hume Pool Trust have established the need to better utilise the water space at the Dave Hume Pool facility.</p> <p>Work has been done with Fabric Structures to design an enclosure (with associated services) over the existing 33m pool to enable a year-around facility. The forecasts costs at the completion of the design however mean that insufficient budget was available to continue the process without further funds being approved.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

At the same time as the Pool Roof project was being designed, Beca were asked to produce a concept design and specification to be tendered, for dividing the 33m pool into a 25m lap pool and a learn-to-swim, and upgrading the existing learn-to-swim to current operational guidelines. Upon completion of this exercise and given the budget position, a QS was engaged to review the potential costs for these works with the forecast costs also requiring additional funds.

As part of the LTP update, an application was made to Councillors to consider the works to be undertaken at the Dave Hume Pool – this included isolating works to just the pool roof project, just the bulkhead and liner project and hybrids, to balance consideration of the revised service offering to the community as well as the available funds. It was ultimately decided during the Long Term Plan adoption to not to progress the Pool Roof project at this stage, but to progress the bulkhead and liner project as well as upgrade of existing services to bring the existing learn-to-swim facility in line with current operational standards. This decision and adoption, Resolution APLTP24-5.42 was option 6- THAT Council approve completion of the bulkhead, pool liners and make improvements to the existing learn to swim pool which will enable the pool to run for the extended summer season funded through existing budgets from the 23/24 financial year and Dave Hume Pool Trust secured funding AND for future operational costs for the Dave Hume Pool to be considered through the Annual Plan 2025/26. Pending the results of the further work, the roof project shall be referred to the Annual Plan 2025/26 to resolve additional budget requirements, if necessary.

This project to line the existing concrete pool is a minimum necessity as the existing paint system is currently peeling off and has a condition Grade 5. For the pool to continue operating the best value option for the facility is to Install a PVC liner to extend the life of the pool and reduce cost and closures for pool painting.

The construction of a fixed bulkhead across the main pool at the 25m mark, which will ensure that learn to swim space has increased capacity, combined with the heating upgrades to the changing rooms will allow for an extended summer season. The existing site contains a concrete construction ~33.5m lane pool with a depth ranging from ~0.9 – 1.1m, including associated solar weirs, balance tank and pool water services systems.

The intention of this project is to upgrade the current facilities to service the local community until a new aquatic facility is delivered in 2040.

The existing pool is served by plant within a concrete block plant room at the east end of the changing room building, with filtered pool water supplied by 2no. concrete encased sparge pipes running the length of the existing ~33.5m pool at low level. Pool water then returns via low level sumps and solar weirs to the balance tank located below ground directly adjacent to the south end wall of the pool.

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                  |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | <p>Beca's design to date has considered re-use of existing equipment where possible but given the existing filtration system uses diatomaceous earth which is it now understood presents serious health and safety concerns associated with handling. Diatomaceous earth (DE) is classified as a carcinogenic substance (a substance that is known to cause cancer as a result of prolonged or repetitive exposure), and therefore it is used far less frequently as it is difficult to mitigate the risks and hard to justify the risk to operational staff.</p> <p>The existing filtration system presents a Health &amp; Safety concern to not just the handlers of the DE but bags of DE sitting in the corner of the plant room which presents the possibility of 'loose powder' in the plant room and could affect all individuals accessing this area. Replacement of this system mitigates this risk.</p> <p>Given the Health and Safety risk presented by the existing system, the Concept Design has allowed for demolition and replacement of the existing filtration system with 2 new sand filtrations systems (one for each indoor pool). The Tender is not fixed on provision of sand filtration systems, tenderers will be asked if they can put forward other more cost effective options.</p> <p>The existing Learn-to-swim outdoor pool takes ~12 hours to treat after a faecal incident (Beca have advised that this would need to be increased to 3 turnover cycles and therefore 18 hours to be compliant with current operational guidelines) and must remain closed for this duration. The same treatment for the new Learn-to-swim facility would be ~4.5 hours and therefore available for public use much quicker.</p> <p>The existing Learn-to-swim outdoor pool has a capacity of 8-10 people to be compliant with the operating guidelines, upgrades would increase this capacity to allow an increase of up to 32 bathers.</p> |                                                                                                                                                  |
| <b>Implications</b>                           | If we do not procure then we will not be delivering on the new levels of service in 2021-2031 LTP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                  |
| <b>Key stakeholders</b>                       | <b>Internal:</b> <ul style="list-style-type: none"> <li>Reserves &amp; Assets Group</li> <li>Finance Group</li> <li>SLT</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>External:</b> <ul style="list-style-type: none"> <li>Dave Hume Pool Trust</li> <li>Local Community/Public</li> <li>Elected Members</li> </ul> |
| <b>Market analysis</b>                        | There are at least 3 suppliers in the NZ market who we know can deliver on our requirements and are available and interested in tendering this project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                  |
| <b>Market approach &amp; evaluation model</b> | <p><b>Market approach:</b> Open RFT<br/> <b>Response format:</b> soft copies via GETS eTender Box.<br/> <b>Evaluation model:</b> Weighted Attributes.</p> <p><b>Rationale for market approach and evaluation model:</b></p> <ul style="list-style-type: none"> <li>Open: meets Procurement Manual requirements.</li> <li>WA: best fit for purpose.</li> </ul> <p>This approach would enable us to gain open competitive pricing to demonstrate value-for-money for this project.</p> <p>While pricing will be a large component for evaluation, given early-stage of the design there is room for cost-effective substitutions to be considered</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                  |

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
|                          | <p>that would mean the proposals from each party may differ (but would still achieve the same performance requirements required). Therefore we would recommend a weighted assessment of the tender response, considering the options proposed by the respective suppliers.</p> <p>Tender documents will include a Concept Design and Design &amp; Build Performance Specification prepared by Beca. Beca are currently developing the Design and Build Performance specification to reflect the current direction of the project (progressing without the Pool Roof project at this stage) which will be reviewed by Council prior to Tender. This document combined with the Concept Design for all works listed above, will outline the minimum standards required.</p> <p>T+T Pumping Test Analysis and Results report will also be included in the Tender documents to outline the bore capacity and help direct further design for upgrades.</p> <p><b>Rating scale:</b> MBIE 1–10.<br/> <b>Joint responses:</b> accepted.<br/> <b>Alternative responses:</b> accepted.<br/> <b>Supplier briefing</b> will be held as part of the Site Visit.<br/> <b>Compulsory Site visit:</b> Will be held<br/> <b>Evaluation interviews:</b> will be booked in and held if necessary.</p> |                                  |
| <b>Due diligence</b>     | <p>Additional checks we may undertake:</p> <ul style="list-style-type: none"> <li>• reference check the Respondent / named personnel</li> <li>• other checks e.g., Companies Office</li> <li>• interview the Respondent/s</li> <li>• site-visit/s</li> <li>• inspect audited accounts for the last three financial years</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |
| <b>Dispensation</b>      | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |
| <b>Contract details</b>  | <p><b>Contract Terms:</b> 3916 Design and Build Contract<br/> <b>Ozone Payment Method:</b> Contract<br/> <b>Start date:</b> February 2025<br/> <b>End date:</b> December 2025<br/> <b>Total length:</b> Estimated 10 months.<br/> <b>Council Contract Manager:</b> Janine Field.<br/> <b>Payment Approvers:</b> Janine Field, Peter Watson, Sam Keen &amp; Julie Webb.<br/> <b>Basis of Payment:</b> monthly.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |
| <b>Financial details</b> | <b>LTP budgeted:</b> Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Annual Plan budgeted:</b> Yes |
|                          | <p><b>WBOPDC funding available:</b><br/> Option 6 from the Issues and Option paper adopted in the Long Term Plan September 2024, was to utilise funding from the existing Dave Hume Pool projects FY23/24. This would see the follow carry forward funding from the below projects:<br/> Dave Hume Pool Roof (258204): \$ [REDACTED]<br/> Dave Hume Pool Liner and Bulkhead (258205): \$ [REDACTED]<br/> Total funding \$ [REDACTED]<br/> This includes 17% external funding from Dave Hume Pool Trust</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | <p><b>Additional funding source name:</b> Dave Hume Pool Trust \$ [REDACTED] (17% of the project). This amount is variable, based on the estimate it would be \$ [REDACTED] but if all options were completed and the full budget is used it could be as high as \$ [REDACTED]</p> <p><b>Total funding available:</b> \$ [REDACTED]</p> <p>*Refer to earlier Budget Note (under Our requirements)</p>                                                                                                                                                                                                               |
|                                                 | <p><b>Capex:</b> \$ [REDACTED]      <b>Job code:</b> 258205-001 &amp; 258204-001</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                 | <p><b>Finance Business Partner check completed by:</b> Noted that majority spend was budgeted and unspent in 2024 through the Annual Plan. A carry forward request from 2024 is currently before the ELT for approval for \$3.3m across both Dave Hume Pool proj (258204+258205). Based on discussions to date (as at 22/10/24) it is expected to be approved but is a possibility of updating the funding source for the council share depending on other outcomes (ie Internal loan may replace drawdown directly from the Gen rate reserve). AMC 22/10/24.</p>                                                   |
| <p><b>Insurances, bond &amp; warranties</b></p> | <p><b>Professional Indemnity:</b> \$3m<br/> <b>Public Liability:</b> \$5m<br/> <b>Plant:</b> (for plant valued \$50k+) Plant Value<br/> <b>Motor Vehicle:</b> Vehicle value<br/> <b>Construction Works:</b> Contract value<br/> <b>Bond:</b> 10% of Contract value<br/> <b>Defects Notification Period:</b> 12 months<br/> <b>Warranty:</b> 12 months</p>                                                                                                                                                                                                                                                           |
| <p><b>Probity Plan</b></p>                      | <p><b>Conflict of Interest and Confidentiality (COI) forms:</b><br/> A COI form has been completed by the Project Manager. No conflicts were declared. All evaluation team members will complete a COI form once the procurement plan is approved</p> <p><b>Objective tender folder access limited to:</b></p> <ul style="list-style-type: none"> <li>• Project manager, all of their superiors and their Group EA</li> <li>• Project staff</li> <li>• Corporate Services Business Partners</li> <li>• Procurement team staff members.</li> </ul> <p><b>Probity Advisor and or Auditor to be appointed:</b> N/A</p> |
| <p><b>Broader Outcomes</b></p>                  | <p><b>Social &amp; Economic:</b> Local engagement opportunities are being considered as part of the scope for the project and given the pool backs onto a high school, we will look to engage the school in arranging site visits for interested students to learn more about construction, engineering, project management processes and career opportunities.</p>                                                                                                                                                                                                                                                 |

## Key dates

| Action                                              | Indicative date             |
|-----------------------------------------------------|-----------------------------|
| <b>Planning</b>                                     |                             |
| RFx documents developed & approved                  | 13/11/2024                  |
| <b>Advertising period</b>                           |                             |
| RFx advertised on GETS                              | 14/11/2024                  |
| Site visit                                          | Wednesday 20/11/2024 at 9am |
| Supplier briefing                                   | As per site visit           |
| Deadline for Questions                              | 5:00 pm, 4/12/2024          |
| Deadline for Council to answer questions            | Allow 2-3 days              |
| Evaluation team briefing                            | 5/12/2024                   |
| RFx closing date (RFQ = 10 days / RFT = 18-21 days) | 5:00 pm, 11/12/2024         |
| <b>Evaluation</b>                                   |                             |
| Tender opening                                      | 12/12/2024                  |
| Evaluator reading period                            | 12/12/2024 – 20/01/2025     |
| Panel evaluation                                    | 20/01/2025                  |
| Supplier interview/s (optional – if required)       | 29/01/2025                  |
| Due diligence                                       | 30/1/2025–5/2/2025          |
| Contract negotiation                                | 7/02/2025 – 19/02/2025      |
| Panel minutes finalised & recommendation drafted    | 20/02/2025                  |
| Recommendation approved                             | 24/02/2025                  |
| <b>Post-evaluation</b>                              |                             |
| Advise suppliers of outcome                         | 06/03/2025                  |
| Contract execution due by                           | 07/03/2025                  |
| <b>Contract in place</b>                            |                             |
| Contract Award Notice published on GETS             | 07/03/2025                  |
| Contract start date                                 | 10/03/2025                  |
| Contract end date                                   | 19/12/2025                  |
| Practical completion due                            | 19/12/2025                  |
| Defects Notification Period                         | 19/12/2026                  |



## Pre-conditions

| No | Pre-condition                                                                                                                                                                                                                                   |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | <b>Site visit</b><br>The Respondent has attended the compulsory site visit.                                                                                                                                                                     |
| 2. | <b>Health &amp; Safety pre-qualification or equivalent</b><br>The Respondent has evidenced they hold SHE pre-qualification or equivalent confirmed via Tōtika or will attain Health & Safety prequalification prior to commencing the contract. |
| 3. | <b>Site-specific safety plan</b><br>The Respondent has provided a previous example of a site specific safety plan.                                                                                                                              |
| 4. | <b>Solvent and profitable</b><br>Via a letter issued by a Chartered Accountant, the Respondent has evidenced that they are solvent and profitable.                                                                                              |
| 5. | <b>Bond capability</b><br>Via a letter issued by a NZ Bank, the Respondent has evidenced that they can secure a bond for the contract.                                                                                                          |

## Evaluation criteria

| Criterion                                                                                                                                        | Weighting % |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Design (innovation, fit for purpose and value added)                                                                                             | 15          |
| Methodology (coordination, continuity, communication, quality assurance, staging)                                                                | 15          |
| Capability (company's relevant experience and any significant subcontractor and track record, and key personnel's qualifications and experience) | 30          |
| Capacity (company's availability, viability, resources re project continuity, etc.)                                                              | 10          |
| Price                                                                                                                                            | 30          |
| <b>Total</b>                                                                                                                                     | <b>100</b>  |

## Evaluation team

| Evaluation role     | Voting | Name, title, organisation                           |
|---------------------|--------|-----------------------------------------------------|
| Project Manager     | ✓      | Janine Field, Reserves and Facilities Asset Manager |
| Subject Expert      | ✓      | Alexandrine Montgomery, Veros                       |
| Subject Expert      | ✓      | Julie Price, Veros                                  |
| Subject Expert      | ✓      | Aaron Blyleven, Beca                                |
| Senior Manager      | ✓      | Peter Watson, Reserves and Facilities Manager       |
| Procurement Support | n      | Laraine Jackett, Contracts and Procurement Manager  |

## Health and safety, and asbestos risk identification and management

| Risk description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Health and Safety activity risk rating:</b> Medium</p> <p><b>Known hazards:</b></p> <ul style="list-style-type: none"> <li>• Traffic on roads</li> <li>• Site area pedestrian &amp; or vehicle movements</li> <li>• Moving machinery</li> <li>• Overhead power lines &amp; or wires</li> <li>• Electricity transformers</li> <li>• Underground services</li> <li>• Existing underground water mains &amp; stormwater pipelines</li> <li>• Ground water</li> <li>• Drains</li> <li>• Open trenching</li> <li>• Steep banks above &amp; or below access road</li> <li>• Uneven terrain (slip &amp; trip hazards)</li> <li>• Potential for trees to fall</li> <li>• Asbestos Pipe (AC).</li> </ul> <p>Risk rating before mitigation: <b>Medium</b></p> | <p>As the Project Manager, I confirm:</p> <ul style="list-style-type: none"> <li>• I understand Council's requirements as a PCBU</li> <li>• I will pass the list of known hazards onto the contractor/s</li> <li>• I will consult, cooperate and coordinate activities with the contractor/s.</li> </ul> <p>Risk rating after mitigation: <b>Low</b></p>                                                                                                   |
| <p><b>Asbestos</b></p> <p>This project involves work on and or demolition/renovation of a Council asset/s built prior to 2000. Asbestos may be present.</p> <p>Risk rating before mitigation: <b>Medium</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>As the Project Manager, I confirm:</p> <ul style="list-style-type: none"> <li>• I have read and understood the Asbestos Mgmt. Survey (AMS)</li> <li>• I will pass the AMS onto the contractor/s &amp; have the contractor/s sign for receipt of it</li> <li>• I understand a permit is required from Property Services on assets where asbestos has been confirmed as present.</li> </ul> <p>Risk rating after mitigation: <b>Medium</b></p>            |
| <p><b>DE</b></p> <p>This project involves work on and or demolition/renovation of a Council asset/s that contains Diatomaceous Earth (DE) which was advised by Beca as a Health &amp; Safety concern.</p> <p>Risk rating before mitigation: <b>Medium</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>As the Project Manager, I confirm:</p> <ul style="list-style-type: none"> <li>• I have read and understood Beca's recommendations relating to DE.</li> <li>• I will pass on Beca's recommendations regarding DE as outlined in their Concept Design Report to the contractor/s &amp; have the contractor/s sign for receipt of it</li> <li>• Contractor to wear correct PPE when handling DE</li> </ul> <p>Risk rating after mitigation: <b>Low</b></p> |

## General risk identification and management

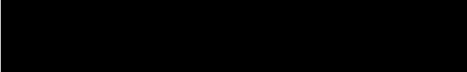
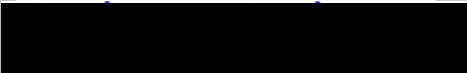
Overall, this procurement is deemed **medium value** and **medium risk**. Refer to Diagram 1 for Risk Rating Framework.

| Risk description                                                                                                                                                                                                                                                                | Mitigation                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>No tenders received</b><br>No tenders received which may impact project deadlines.<br>Risk rating before mitigation: <b>Low</b>                                                                                                                                              | As per the market approach described above, we have contacted potential suppliers to gauge market interest.<br>Responsible: Project Manager<br>Risk rating after mitigation: <b>Low</b>                                                                                                                                                                                                    |
| <b>Budget exceeded</b><br>The Quality Surveyor estimate is within budget, but after the design phase is completed we could exceed the budget.<br>Risk rating before mitigation: <b>Medium</b>                                                                                   | The tender will be structured with options to be priced to confirm estimated values. This will then allow Council to consider the cost benefits of all project components and thus provide a decision on scope. If over budget the Project Manager will assess the scope and as necessary to remain in budget.<br>Responsible: Project Manager<br>Risk rating after mitigation: <b>Low</b> |
| <b>Budget exceeded for tenders</b><br>The tenders received are outside Council's budget and we cannot proceed to let the contract.<br>Risk rating before mitigation: <b>Medium</b>                                                                                              | We will hold a supplier briefing meeting/ site meeting to discuss our requirements and clarify where we propose different risks will sit. Quantity Surveyor separately to review the Contractor's physical works pricing. Option to reduce contract to only a liner project.<br>Responsible: Project Manager<br>Risk rating after mitigation: <b>Medium</b>                                |
| <b>Delayed start</b><br>Inclement weather may cause delay in work programme and impact on key hand over dates.<br>Risk rating before mitigation: <b>Low</b>                                                                                                                     | Inclement weather is unlikely to impact project delivery too significantly, delivery programme to be supplied and reviewed as part of tender.<br>Responsible: Project Manager<br>Risk rating after mitigation: <b>Low</b>                                                                                                                                                                  |
| <b>Project delay</b><br>There is a significant risk that key parts will not be available at commencement of works. Commencement of works has a fixed start date. Delays in parts will cause a high level of financial exposure.<br>Risk rating before mitigation: <b>Medium</b> | Long lead times (14 weeks) for plant equipment is still well within delivery window available, this will continue to be monitored. The procurement of these works has allowed for the long lead times.<br>Responsible: Project Manager<br>Risk rating after mitigation: <b>Low</b>                                                                                                         |

**Diagram 1: Risk Rating Framework**

| Likelihood | Impact         |        |          |           |           |           |
|------------|----------------|--------|----------|-----------|-----------|-----------|
|            |                | Minor  | Moderate | Serious   | Major     | Severe    |
|            | Almost certain | High   | High     | Very High | Extreme   | Extreme   |
|            | Likely         | Medium | High     | Very High | Very High | Extreme   |
|            | Possible       | Low    | Medium   | High      | Very High | Very High |
|            | Unlikely       | Low    | Medium   | Medium    | High      | Very High |
|            | Rare           | Low    | Low      | Low       | Medium    | High      |

## Procurement plan approval

| Role                  | Name & title                                           | Signed & dated                                                                                                                                                                                  |
|-----------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended by        | Janine Field<br>Reserves and Facilities Asset Manager  | <br>Signed by: Janine Field<br>Reserves & Facilities asset Manager<br>Date & Time: 24 Oct, 2024 08:23:22 NZDT |
| Supported by          | Laraine Jackett<br>Contracts & Procurement Manager     | <br>Signed by: Laraine Jackett<br>Contracts & Procurement Manager<br>Date & Time: 25 Oct, 2024 11:53:07 NZDT  |
| Finances confirmed by | Jonathan Fearn<br>Chief Financial Officer              | <br>Signed by: Jonathan Fearn<br>CFO<br>Date & Time: 25 Oct, 2024 13:50:54 NZDT                               |
| Supported by          | Peter Watson<br>Reserves and Facilities Manager        | <br>Signed by: Peter Watson<br>Reserves and Facilities Manager<br>Date & Time: 24 Oct, 2024 15:35:35 NZDT     |
| Approved by           | Cedric Crow<br>General Manager Infrastructure Services | <br>Signed by: Cedric Crow<br>GM<br>Date & Time: 24 Oct, 2024 08:29:50 NZDT                                   |

## Appendix: Conflict of Interest & Confidentiality Agreement

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>Project name &amp; no.</b> | 24-1047 – Dave Hume Pool – Bulkhead and Liner Project (Design & Build) |
| <b>Name &amp; position</b>    | Janine Field, Reserves and Facilities Asset Manager                    |
| <b>Organisation</b>           | WBOPDC                                                                 |
| <b>Role in procurement</b>    | Project Manager & Evaluator                                            |

### Conflict of Interest Declaration

| <b>Conflict</b>                                                                                                                                                                           | <b>Y / N / Potential</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Do you have any personal interest in the supply of goods or services for the above contract?                                                                                              | N                        |
| Are you a relative or close friend of someone with a personal interest in the supply of goods or services to be purchased or who could be personally affected by the purchasing decision? | N                        |
| Do you have any personal obligation, loyalty and/or bias that could influence your providing objective and impartial advice to the contract?                                              | N                        |
| In the last three years have you been offered any special discounts, gifts, trips, hospitality, rewards, favours and/or benefits by a potential supplier of the goods or services?        | N                        |
| Are you aware of anything that could give the appearance that you might be biased towards or against a potential supplier?                                                                | N                        |

### Definitions

- **Actual** is where you already have a conflict.
- **Potential** is where the conflict is about to happen or could happen.
- **Perceived** is where other people might reasonably think you are not being objective. Tick potential if others could perceive you have a conflict of interest.

### Details of a declared Conflict of Interest

If you have answered **yes** or **potential** in the declaration above, please detail your conflict/s here:

|  |
|--|
|  |
|--|

Important: A Conflict-of-Interest management plan must be established for any actual or potential conflicts declared.

### Confidentiality agreement

- I am aware that all of the project material (hard copy and electronic copy), discussions, correspondence and advice are confidential.

- I agree not to divulge this confidential information to any person not in the evaluation team without prior approval from the Contracts and Procurement Manager.
- I will take all reasonable measures to store securely all confidential information that is in my possession.
- At the end of my involvement in the procurement, I undertake to either return all confidential material to the Project Manager, or have the material destroyed.
- I undertake not to provide comment on Western Bay of Plenty District Council contract activities to anyone outside of the evaluation & procurement teams, including the media.
- I will refer all questions, including media enquiries, immediately to the Project Manager and Contracts & Procurement Manager.

### Restrictions on contact with suppliers

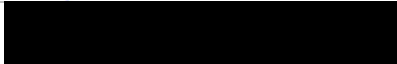
Unless with prior approval of the Contracts and Procurement Manager, I undertake to refrain from the following activities until after all suppliers are formally notified of the RFX outcome:

1. Pass information or make comments to any potential supplier about the RFX or contract.
2. Receive any gift, gratuity, hospitality, benefit or inducement from a potential supplier.
3. Meet with a potential supplier to discuss any Western Bay of Plenty District Council RFX or contract.

Additionally, I will advise the Contracts and Procurement Manager immediately of any request for information, or meetings in relation to the RFX or contract that I receive from a potential supplier.

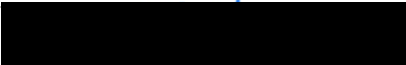
### Agreement

- I undertake to notify the Contracts & Procurement Manager immediately of any actual, potential or perceived conflict that may arise during my involvement with the evaluation of the above contract.
- I confirm that the above details are correct to the best of my knowledge, and that I make this declaration in good faith. I agree to be bound by my undertakings.

|                           |                                                                                                                                                                                                                           |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name &amp; title</b>   | Janine Field, Reserves and Facilities Asset Manager                                                                                                                                                                       |
| <b>Signed &amp; dated</b> | <br><small>Signed by: Janine Field<br/>Reserves &amp; Facilities asset Manager<br/>Date &amp; Time: 24 Oct, 2024 08:23:22 NZDT</small> |

### Contracts & Procurement Manager review

I confirm that I have received this declaration and noted the contents.

|                           |                                                                                                                                                                                                                          |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name &amp; title</b>   | Laraine Jackett, Contracts & Procurement Manager                                                                                                                                                                         |
| <b>Signed &amp; dated</b> | <br><small>Signed by: Laraine Jackett<br/>Contracts &amp; Procurement Manager<br/>Date &amp; Time: 25 Oct, 2024 11:53:07 NZDT</small> |
| <b>Comments</b>           | Management plan <b>not</b> required.                                                                                                                                                                                     |