Ōtūmoetai Pool - Information Pack

This information pack has been prepared to support the community conversation about the future of a pool in Ōtūmoetai. It includes information requested by members of the community following a meeting at Ōtūmoetai College on 20 February 2024.

This document is split into five sections: **Pools Usage**, **Condition Assessments**, **Budgets**, and **Specific Questions & Answers and the Desktop analysis of the alternate locations for Memorial Park** .

1. **Pools Usage**

- Total visits to Ōtūmoetai Pool, Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre over the past three financial years.
- Ōtūmoetai Pool six-year average usage, broken down into the main user groups.
- The 2022/23 financial year for Ōtūmoetai Pool, Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre, broken down into the main user groups.

2. **Condition Assessments**

- **Appendix A:** A (visual only) Condition Assessment Report from 2017.
- **Appendix B:** A (visual only) Condition Assessment Report from 2024.
- **Appendix C:** A letter from engineering consulting company Beca outlining its knowledge of the area from previous pieces of work, with suggestions on what is required moving forward.
- A location map with contours shown in the area.

3. **Budgets**

- 2020/21, 2021/22, and 2022/23 budgets for Ōtūmoetai Pool, with comparisons to Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre.
- Current 2023/24 budget for Ōtūmoetai Pool and Greerton Aquatic & Leisure Centre.
- 2020/21, 2021/22 and 2022/23 budgets for Matua Hall.
- Summary of 2016/17 to 2022/23 renewals budgets for Ōtūmoetai Pool, with comparisons to Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre.

4. **Specific Questions and Answers**

5. **Desktop analysis of the alternate locations for Memorial Park**

1. Pools Usage

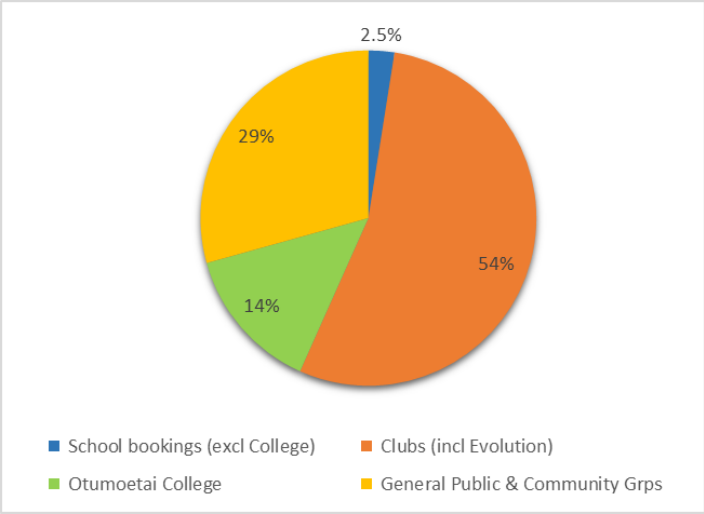
The table below outlines total visits to Ōtūmoetai Pool, Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre over the past three financial years.

Annual Visits [aquatics only]	2020/21	2021/22	2022/23
Baywave	341,226	261,276	319,468
Greerton	89,763	57,566	87,541
Memorial	30,087	19,539	23,390
Ōtūmoetai	50,831	37,454	39,621

Items to note:

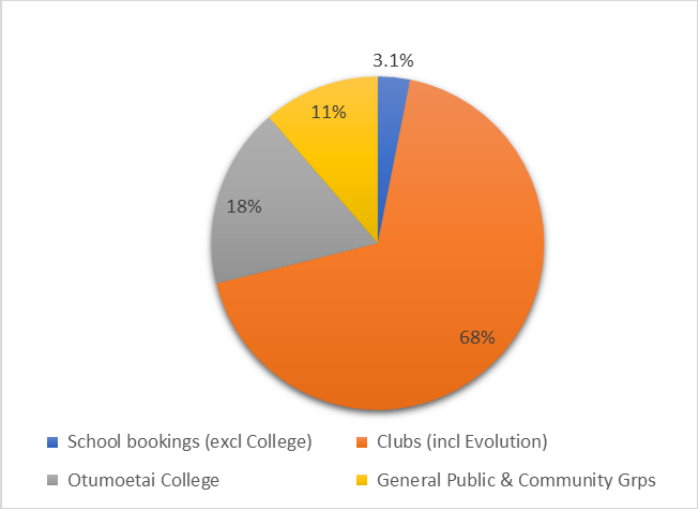
- Baywave closed for routine renewals from mid Jan – early Apr 2023.
- Greerton closed for routine renewals and facility upgrade from Feb – Apr 2022.
- Ōtūmoetai pool closed for routine renewals May – Jun 2022 and then again Jul – Sep 2022 to fix cracks.
- Memorial is an outdoor seasonal pool open 5-6 months a year. 2022 was a very wet summer which affected usage.

The chart below outlines Ōtūmoetai Pool's six-year average usage, broken down into the main user groups. The facility's limited pool space and consistent usage patterns have made it possible to provide this comprehensive information.

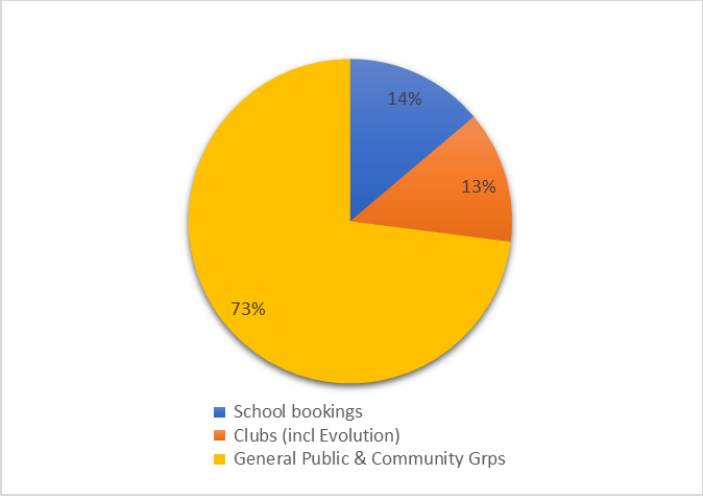


The charts below outline the 2022/23 financial year for Ōtūmoetai Pool, Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre, broken down into the main user groups.

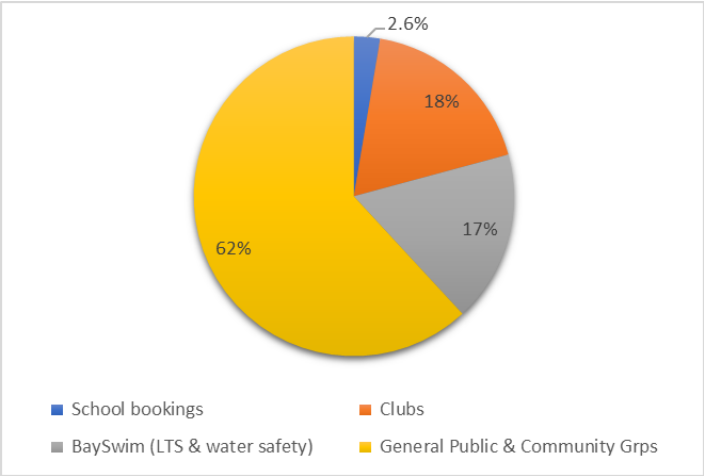
Ōtūmoetai Pool



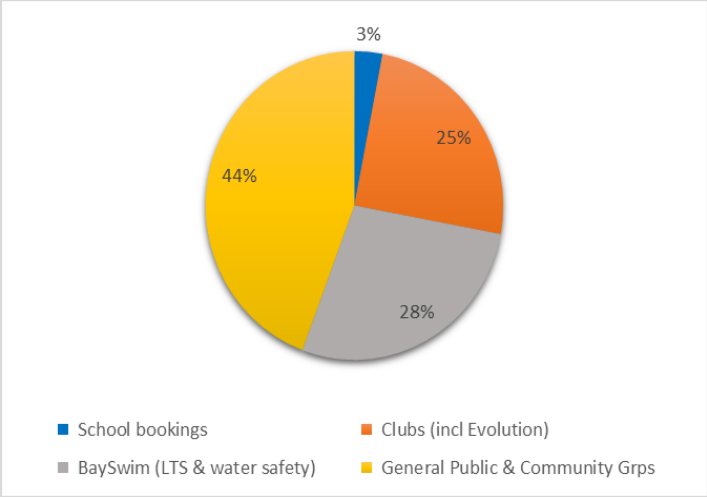
Memorial Pool



Baywave Aquatic & Leisure Centre



Greerton Aquatic & Leisure Centre



Items to note:

- The Bay Venues leisure software system records entry transactions by payment type (cash, card, visit pass, membership entry), not in the category breakdown requested in the LGOIMA.
- Bay Venues staff have endeavoured to extract data from the software system to meet the LGOIMA requests, however this has proved to be a very complex, manual and lengthy process. For this reason, we have analysed the data and provided the 2022/23 breakdown only.
- BaySwim visits at Baywave Aquatic & Leisure Centre and Greerton Aquatic & Leisure Centre encompass learn-to-swim and water safety lessons managed by Bay Venues. The school bookings recorded are made directly by schools.

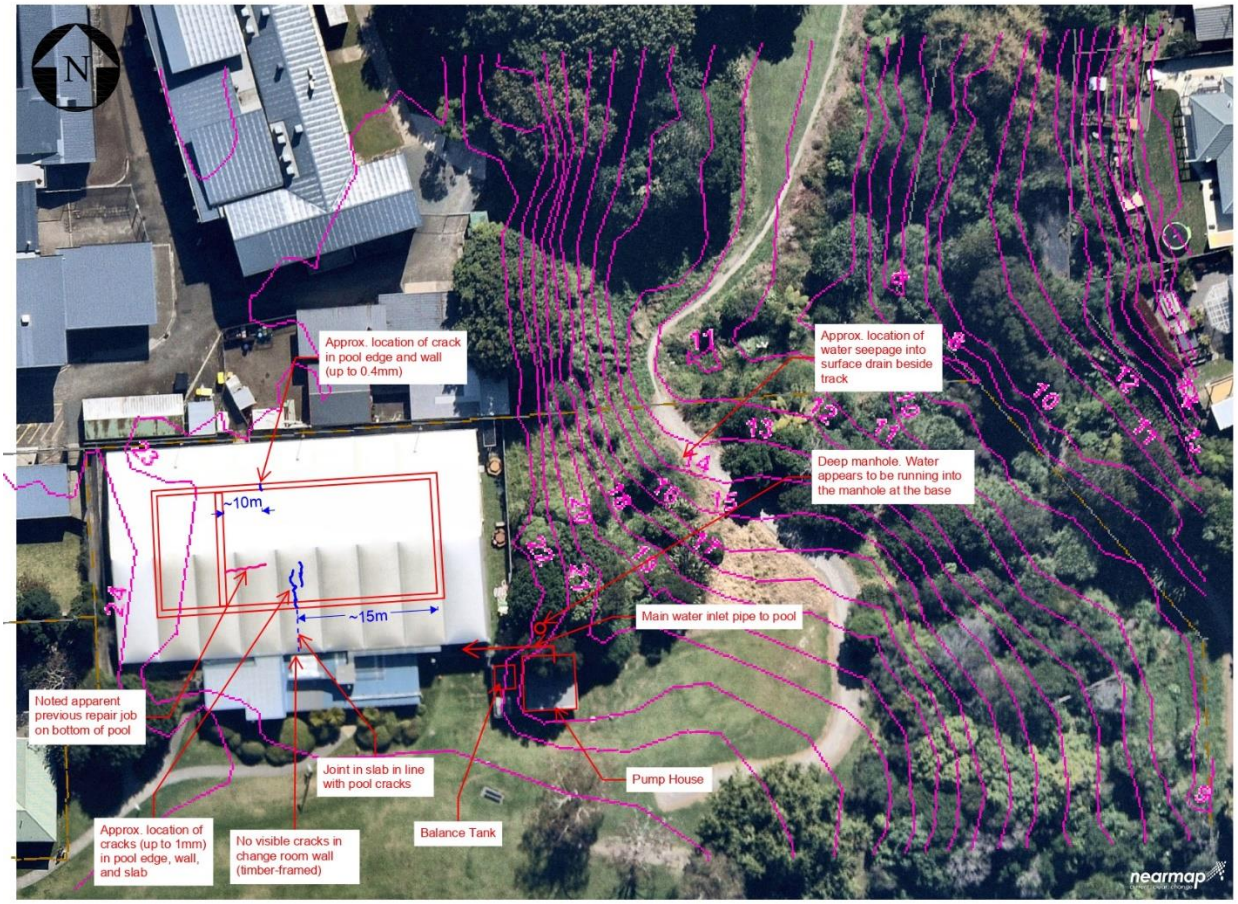
2. Condition Assessments

There are two external consultant reports attached as additional appendices (**Appendix A** and **Appendix B**). Note: these were both visual-only condition assessments. The first one was undertaken in 2017 and the second was completed in 2024.

The most recent condition assessment report recommends a more intrusive condition assessment be undertaken (including geotech work) to help guide the next steps and inform the suggested community working group. We are currently putting together the scope for this work with specialist geotech and aquatics consultants.

There is also a letter attached from engineering consulting company Beca (**Appendix C**), making suggestions on what is required moving forward.

Below is a location map with contours shown in the area.



3. Budgets

The table below outlines 2020/21, 2021/22, and 2022/23 budgets for Ōtūmoetai Pool, with comparisons to Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre.

Aquatics	Ōtūmoetai			Memorial		
	2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
Employee Expenses	303,541	354,555	329,191	135,876	109,209	176,806
Repair & Maintenance	14,951	53,656	24,942	57,097	15,662	8,995
Operational Expenses	72,052	88,483	81,679	41,423	40,150	38,617
User Fees Total	213,784	171,104	144,507	78,423	59,347	71,377
Ratepayer Subsidy to operate the pool	176,759	325,590	291,305	155,972	105,675	153,041
	Greerton			Baywave		
	2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
Employee Expenses	426,015	472,020	574,254	712,153	917,475	934,065
Repair & Maintenance	28,593	77,136	34,736	123,161	133,971	186,272
Operational Expenses	224,059	173,563	215,490	530,224	558,836	558,689
User Fees Total	308,139	228,676	287,350	1,499,377	1,220,904	1,389,590
Ratepayer Subsidy to operate the pool	370,529	494,044	537,130	0	389,377	289,436

The table below outlines the current year (2023/24) budget for Ōtūmoetai Pool, which was included in the Bay Venues presentation shared at the recent Ōtūmoetai Pool community meeting. The table below also outlines the current year (2023/24) budget for Greerton Aquatic & Leisure Centre

Aquatics	Ōtūmoetai	Greerton
	2023/24	2023/24
Employee Expenses	498,485	642,993
Repair & Maintenance	27,625	62,110
Operational Expenses	118,535	257,211
User Fees Total	197,066	342,251
Ratepayer Subsidy to operate the pool	447,579	620,063

The table below outlines 2020/21, 2021/22 and 2022/23 budgets for Matua Hall.

Operational Expenses	Matua Hall		
	2020/21	2021/22	2022/23
Employee Expenses	0	0	0
Repair & Maintenance	2,222	2,830	3,487
Operational Expenses	12,501	11,184	14,969
User Fees Total	35,201	22,986	27,778
Ratepayer Subsidy	0	0	0

Items to note:

- Allocation for Matua Hall employee expenses is grouped and assigned to another facility.
- Expenses provided exclude overhead allocations.

The tables below outline the summary of 2016/17 to 2022/23 renewals budgets for Ōtūmoetai Pool, with comparisons to Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre.

Please see Appendix D, E, F & G for The detailed renewals information on to Ōtūmoetai Pool, Memorial Pool, Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre (excluding any Gym specific renewals for both Baywave Aquatic & Leisure Centre, and Greerton Aquatic & Leisure Centre)

Ōtūmoetai Pool

2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
$24,975	$117,518	$50,934	$63,684	$7,371	$476,831	$19,326	$760,639

Memorial Pool

2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
$84,006	$49,433	$21,914	$63,894	$0	$0	$2,814	$222,060

Baywave Aquatic & Leisure Centre

2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
$254,222	$426,733	$456,859	$1,931,827	$151,225	$205,713	$3,309,957	$6,753,014

Greerton Aquatic & Leisure Centre

2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
$627,383	$80,693	$63,956	$22,623	$101,396	$1,427,927	$2,272,497	$4,497,745

4. Specific Questions & Answers

1. **Are there any details in council plans, or NZ town planning, on what is the optimum target number of pools to have for a population the size of Tauranga? A best practice of such?**

There's no best practice figure on the number of pools per capita that we are aware of. Sport NZ is in the process of updating its guidance on aquatics. We have established a figure of 45 people per m2 of indoor pool space as a benchmark. This informs our Level of Service, which is used for our Development Contributions policy. The reality is more nuanced – people have varying aquatics demands beyond just 'pool space per capita'.

Our network plan for aquatics, which dates to 2019/20, primarily considers the Council/Bay Venues managed facilities, but also accounts for other pools such as at Toi Ohomai. It was informed by extensive consideration of population distribution (current and projected), travel times, facility condition, national guidance on water space requirements of various types (e.g. lanes, learn-to-swim, hydrotherapy), community surveys etc. Whilst that plan guides our investment decisions, we also adjust our plans in light of new information on facility condition, use, budget constraints etc.

2. **What is the optimum or target number of people to live within a designated radius of a public pool (i.e. what measurements do you use to assess the viability of a public pool)? Or how far do people generally travel for regular visits?**

The network planning work identified preferred catchments of circa 9km and 30,000 people. As is noted above, this is one input to the set of factors that we take account of in deciding where and when to invest or divest of facilities.

3. **What is the cost of building basic public 25m pools? $122m sounds a lot when Baywave I believe was $20m. I appreciate construction costs have increased, although 6 times in 20 years is a great return for someone.**

There are lot of variances around the costs to build a pool. Ground conditions, indoor or outdoor, ancillary services and building size, car parking etc. so there is not an easy answer to that question. Memorial Park will feature much more than a 25m pool, which is to ensure that this new facility meets wider aquatic needs. This includes catering for a mix of uses including leisure, clubs, hydrotherapy, and learn to swim. The huge popularity of Baywave demonstrates how wider aquatic options can benefit the local community.

4. **From a utilisation and accessibility perspective, building a pool next to the waterfront would seem less than ideal since half of your surrounding area is waterfront, as opposed to a suburb with a population that could walk to and make use of the pool. Instead, it seems you're planning on 50,000 visits (with half in after school programmes) to travel through the CBD between 3pm and 6pm (at peak commuter travel times). And then we're looking at tolling traffic in Tauranga to reduce travel to CBD during this time.**

The proposal to locate the new facility at Memorial Park was based on catchment, transport and site analysis that considered the current and future states of population size and distribution and multi-modal access across the city.

5. The desktop analysis of the alternate locations for Memorial Park

The purpose of this analysis was to sense check the location of the Facility, given concerns about geotech costs at Memorial Park and the relocation of the indoor courts project to the Cameron Road site. The original decision to locate at Memorial Park has been responded to in an earlier LGOIMA response. Please note, some information within this document has been redacted as it is commercially sensitive.

Please see Appendix H.

OPUS

Otumoetai Pool

Asset Condition Assessment

Otumoetai Pool

Asset Condition Assessment

Prepared By:

Mariusz Tarnowski
Technical Principal (Building Services)

David Dekker
Technical Principal Earthquake Engineering and Building Structures

Opus International Consultants Ltd
Hamilton Office
Opus House, Princes Street

Private Bag 3057, Waikato Mail Centre,
Hamilton 3240
New Zealand

Telephone: +64 7 838 9344
Facsimile: +64 7 838 9324

Date: September 2016
Reference: 2-76069
Status: Final rev2 March 2017

Contents

1 Executive Summary 1

2 Introduction 2

3 Scope of Work 3

4 Structural Assessment 3

4.1 Scope 3
4.2 Remaining Useful Life 3
4.3 Cost of Maintenance 4
4.4 Building Description 4
4.5 Maintenance Issues 6
4.6 Seismic Performance 8

5 Pool Services 9

5.1 Pool Filtration 9
5.2 Pool Bore Water Supply 9
5.3 Pool Water Treatment 9

6 Heating and Ventilation 9

6.1 Recommendations 10

7 Electrical Services 10

7.1 Main Switch Board 10
7.2 Pool Lighting 12
7.3 Emergency Lighting 12

8 Security 12

9 Fire Protection 12

10 Summary of Recommendations and Costs 13

10.1 Structural 13

1 Executive Summary

This assessment is based on a **visual inspection** of the facility only. The report has not considered any assessment or condition of underground services which are likely in very poor condition considering their age and the amount of recent repairs done on them. Therefore **it is difficult to assess how long this facility could operate satisfactorily without considerable expenditure required to maintain status quo**. In addition to this, a wider picture has to be considered when assessing the lifespan of this facility given the major shortcomings it presents.

The major shortcomings of the existing facility include:

- The building is located at the far back of a narrow access path with no road frontage which result that the facility is only known to well informed local residents.
- The general standard of the facility in comparison with other facilities run by local authority as "Spartan" and possibly would be adequate for a small community needs some time ago. Nowadays standards have considerably changed and it will be very hard to bring these buildings into modern standards without major expenditure
- Compliance issue: any reasonable upgrade of the facility which would require a Building Consent will trigger a compliance issue for the remaining building which could be linked to a needs for an upgrade to the latest requirements for good practices for pool facilities. Specific examples of the issues for consideration are:
  - No hot water showers in changing rooms, only temporary portable showers available near the pool
  - No family changing facilities
  - Inadequate dimension of doors, overhangs etc
  - No pool water separation and compliant filtration rates for the main pool and separate for learn to swim. Two bodies of water are not separated.
  - Excessive condensation inside pool hall (potential risk and hazard due to fogging).
  - Poor general condition of existing buildings structure (except the fabric enclosure frames), external services, spouting etc which is rotten and only looks good in places because recent coats of paint.
  - No road access for delivery of pool chemicals, general supplies, parking near- by.
  - No disable access (ramp) to pools or change facilities
  - Limited revenue growth potential due to sub-standard facility and potentially relatively low attractiveness to general community having higher expectations for a range of available activities.
  - No gymnasium, cafe, rest area, shop, family changing rooms etc. which would make a better appeal to the general public.

- Relatively high for the size of the facility current maintenance costs including needs for regular replacement of the roof panels at $20,000 each due to deterioration (solar or vandalism)
- Very limited internal security of the space due to nature of the fabric of the walls (can be easily cut with a knife)
- Pool concourse in poor state and a range of cracks
- Pool surround wall around scum channel - chipped in a lot of places and patched up with a sealant – adequate only as a temporary measure.
- Heavily rusted bleaches (high humidity)
- Upgrading heating and filtration for learner's pool would cost in excess of $300,000.

Based on our visual inspection, generally the pool including changing rooms are in acceptable condition considering the age of the facility. Without taking into account the likely underground issues and major shortcomings, after applying recommended repair and maintenance work this facility could possibly operate satisfactory for the next 10 years. However we would recommend caution when considering the lifespan of this facility and no doubt that considerable expenditure needs to be allocated to maintain the facility fully operational into the future.

The obvious main work required is associated with the following areas:

- Sealing the pool concrete structure/joints, repair cracks on concourse, replace grout around tiles, adjust pool enclosure steel stays etc
- Repair electrical components
- Repair/check air handling system
- Investigate, repair/upgrade pool balance tank piping and manhole lids seals
- Replace pool water circulation system including associated pipes and valves.

2 Introduction

This is a review/update (2016) of the original asset condition survey that was carried out in February 2011 on behalf of Bay Venues previously known as Tauranga City Aquatics Limited (TCAL). The purpose of this review is to identify a future strategy for maintenance and operation of the facility including commentary of end of life aspects of the pool structure and enclosure. This documents intended use is for future considerations of the long term plan for the facility.

3 Scope of Work

The asset condition survey included the following;

- Review of previous report date February 2011 and update findings
- Provide commentary on end of life aspects of the pool structure and services and options for future.

4 Structural Assessment

4.1 Scope

The structural components assessed in this report include the:

- Pool Tank (not re-inspected in 2016 as in use)
- Balance Tank
- Pool Concourse including Bleachers
- Pool Roof Structure
- Pool Grandstand

We had no structural or architectural drawings for the assessment. Therefore we know little about the actual detailing of the structure. All recommendations and the cost estimate are based on a visual inspection and a rough measure up.

4.2 Remaining Useful Life

We expect that the current structure expected life span would be variable and predominantly would depend on the amount of maintenance applied and it would be difficult to assess at this stage.

Parameters that affect the expected lifetime of concrete structures include:

- quality of lining (paint and/or tiling)
- presence / quality of joint sealant
- concrete density
- crack inhibiting reinforcement
- concrete cover to the steel reinforcement and
- chlorine content in the pool water.

We have been asked to base our estimate of remaining useful life on a visual inspection and we do not know most of the parameters listed above. However, we have not observed signs of reinforcement corrosion or concrete spalling and consider the structure is sound

Parameters that affect the expected lifetime of metal structures include:

- quality of corrosion protection system
- material properties
- chlorine content in the air

- detailing (crevices, water ponding, condensation etc.) and
- frequency of cleaning.

We have visually inspected the metal components of the Roof Structure. Some elements require maintenance, however, the structure appears to be well constructed and sound.

4.3 Cost of Maintenance

We estimate the cost for maintenance of to be in the order of $140,000 to $180,000. The maintenance work should be undertaken within recommended timeframes provided in section 9.

The above figures can be reduced by approximately $50,000. The above figures include a complete sealing of the concourse slab and the bleachers with an epoxy based product. This epoxy sealing would have a significant beneficial effect on the durability of the slab and the bleachers. Higher durability would mean less damage and maintenance work in the future. In addition the sealing would also promote a more hygienic and easy to clean surface. However, focusing on the bare minimum maintenance that is required at this time, it would also be acceptable to only address the current problems and seal cracks, gaps and exposed reinforcement bars. Hence, the possible cost reduction.

4.4 Building Description

4.4.1 Pool Tank

The Pool Tank comprises a cast-insitu concrete floor with what appears to be precast concrete walls. Behind the side walls a concrete scum channel forms the transmission to the concourse. The floor is painted and the walls are tiled. The pool tank accommodates a 7 lanes pool and a non-swimmer pool. The areas are divided by a concrete bulkhead.

4.4.2 Balance Tank

The Balance Tank is located outside the Pool Shade Structure and only partially embedded into soil. The whole structure is cast-insitu concrete. A round steel lid provides access. A few air holes are built into the concrete top.

4.4.3 Concourse and Bleachers

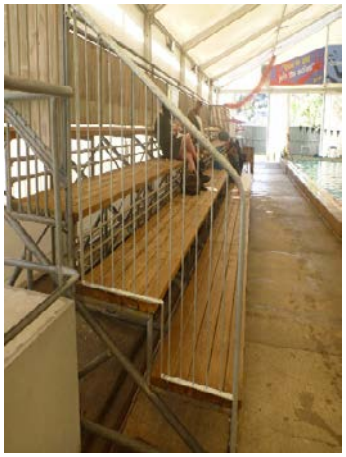
A concrete slab forms the pool surrounding concourse. The slab is joint at regular intervals.

Bleachers are located at the end where the learners pool is. The Bleachers are constructed of concrete block walls and cast-insitu concrete slabs.

4.4.4 Roof Structure

The pool shade structure has been supplied by “Karl Hocker Stahlbau GmbH, Germany” and has been constructed about 2002. The structure comprises aluminium portal frames, stainless steel bracing cables and mild steel components like base plates and some connection elements

4.4.5 Pool Grandstand



The pool grandstand is located along the northern side of the lane pool, providing seating for swimmers and spectators. The grandstand consists of timber seating spanning between triangulated frames fabricated from galvanised steel tubes.

4.5 Maintenance Issues

4.5.1 Pool Tank

Bay Venues have verbally confirmed that previously recommended maintenance has been undertaken. This was not sighted as the pool was in use.

4.5.2 Balance Tank

There appears to be minor water leakage through the construction joint between the tank walls and roof slab. There is no spalling apparent, so reinforcement corrosion is not significant yet. This does pose a long term durability issue however unless it is addressed.

Repair options include epoxy grout injection of the crack or providing an internal membrane to the tank.

4.5.3 Concourse and Bleachers

Bay Venues have verbally confirmed that previously recommended maintenance has not been undertaken. Recommendation from the previous assessment remain.

4.5.4 Roof Structure

There is minor surface corrosion evident to wire rope bracing cables, ferrules, thimbles, eye bolts, turnbuckles and bolts, most likely due to condensation. While not structurally significant, this is a long term durability issue and these items will require replacement.

There is minor surface corrosion evident to the roof frame baseplates due to water ponding. While not structurally significant, this is a long term durability issue. It is recommended that the baseplates and bolts are cleaned and corrosion protection reinstated.

The roof external gutter shows signs of corrosion in a number of places. While most are minor surface corrosion, some exhibit complete failure. As the gutters are thin folded metal, complete replacement is recommended for long term continued use.

4.5.5 Pool Grandstand

The frame connections at the front of the grandstand all show signs of corrosion, varying from relatively minor to full through thickness failure. The corrosion is limited to the joint locations where original corrosion protection has been affected by welding and either not or insufficiently reinstated. The corrosion is due to the aggressive pool water being splashed onto the frames from the concourse slab. This is a short tem durability issue.

Other frame connections also show signs of corrosion, though not as significant as the front as they are elevated and more distant from the pool and less likely to be splashed. The corrosion is likely to be due to water dripping from swimmers on the grandstand and condensation.

It is recommended that the grandstand structure be repaired by removing surface corrosion and reinstating corrosion protection to joints as required. The joints at the front of the frames may require partial replacement where corrosion and loss of material thickness is significant. A higher specification corrosion protection should be considered here (two component epoxy paint) as well as lifting the grandstand slightly to prevent immersion in ponding water.

4.6 Seismic Performance

An Initial Seismic Assessment (ISA) of the pool Changing Rooms and Amenities Building was undertaken by Opus in October 2014, on behalf of Tauranga City Council. An ISA is considered to provide a relatively quick, high-level and qualitative measure of the building's performance based on available documentation and a non-intrusive walk through inspection. The ISA assumes that the building has been designed and built in accordance with the building standard and good practice current at the time. It tends to be somewhat conservative, however some unidentified design or construction issues not picked up by the ISA process may result in the building performing not as well as predicted.

The Otumoetai pool Changing Rooms and Amenities Building structure was designed in 1967. The building is a rectangular, part double storey structure. The west end of the building consists of a concrete masonry structure below with a lightweight upper storey extension. The east end of the building is a single storey timber framed building. The buildings are well divided with internal walls. The external façade consists of timber weatherboard and concrete masonry. The roof is lightweight.

The ISA assessment for this building indicates an overall score of 55%NBS which corresponds to a Grade C building, as defined by the NZSEE building grading scheme. This is above the threshold for Earthquake Prone Buildings (34%NBS) and below the threshold for Earthquake Risk Buildings (67%NBS) as defined by the NZSEE and the New Zealand Building Code.

The ISA identified the following potentially severe Critical Structural Weaknesses in the building:

- High liquefaction risk
- Out of plane capacity of concrete blockwork with bond beam.

If confirmed as structural weaknesses by a Detailed Seismic Assessment, these could have the potential to significantly reduce the resilience the building and adversely affect its performance in severe earthquakes.

5 Pool Services

5.1 Pool Filtration

Pool filtration system consists of a single vacuum DE filter unit, and a single pool circulation pump. The second pump is not required as the pool filter is located below the balance tank level. The condition of the filter septums are good, they are regularly cleaned and no physical damage was visible during the inspection.

The filter basin (concrete enclosure) – has been recently repainted and it does not show any signs of deterioration predominantly.

The pump system is based on recently replaced centrifugal back-pull out close coupled pump which is in satisfactory condition.

The piping is predominantly PVC and it is in poor to average condition. A progressive replacement would be required at the same time as the pumps replacement. Expected life of underground services would be 25-30 years when installed and these are a potential risk in the next 5-10 years to come as their failure rate has increased and some major repair work needed to be done.

It was reported in the past of a considerable water overflow at the one of two manholes outside one of the scum channel - during heavier bather load.

It is assumed that the problem is now resolved.

5.2 Pool Bore Water Supply

Bore water is used via dedicated heat exchanger for heating of the following areas:

- Pool water
- Pool hall ventilation
- Domestic hot water for changing rooms and poolside showers

Bore water pump is relatively new (less than 5 years old) and operates satisfactory. The system used re-injection to dispose the bore water.

Recommendations: clean the heat exchanger plates on regular bases.

5.3 Pool Water Treatment

Pool water treatment is based on dosing of a 1% strength of on side generated sodium hypochlorite from third party equipment.

The system operates satisfactory.

6 Heating and Ventilation

Pool Hall is ventilated and heated via roof mounted air handling unit (AHU) fitted with heating coil of capacity approximately 120-150KW. The heating is provided from bore water heat exchanger. Air is distributed at high level via flexible PVC ducts to mesh diffusers.

The system is intended to operate at full fresh air while the pool is in operation and partial recirculation when the pool is covered. There is also a high humidity extract fan fitted to ensure effective removal of moist air from the space, therefore reduction of fogging.

The pool current operating hours are: from early morning to late, all year around.

The pools are fitted with insulated pool covers which are used after hours.

The problems indicted by the pool operates are:

- Heavy condensation of the pool enclosure fabric
- Heavy Fogging during cold and humid mornings in winter
- Feeling that the ventilation system does not operate correctly (cannot maintain temperature)

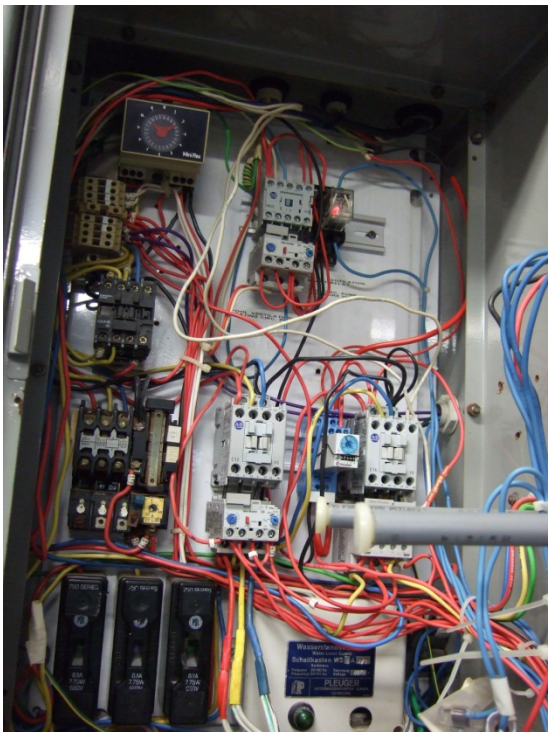
6.1 Recommendations

- Check operation of the AHU (filters, speed, coils) – monitor supply air temperature from the air outlet or a sample hole drilled into AHU. Adjust – repair, modify as required.
- Check controls
- Introduce a manual operation mode for recirculation of re-used air damper, to ensure that the recirculation system only operates outside pool hours when pools are covered.
- Consider introduction of flexible opening hours for the complex in winter – this is to avoid condensation and fogging at early hours. For example opening at 10am during winter (say for two-three months period), when the outside air is warmer and less fogging may occur.

7 Electrical Services

7.1 Main Switch Board

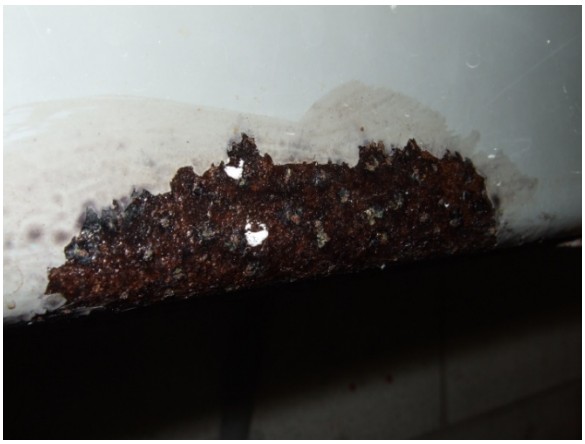
The main switchboard was manufactured by Gael Switchboards Ltd and is made of steel with a painted finish. The board is made up of three cabinets. The cabinet on the left is the meter panel and has new metering in it which can be re-used. The centre cabinet is for distribution and consists mainly of fuses but a new three phase RCD and MCB has been installed for pool cleaner socket outlet. A RCD for the plant room power points also exists but is an older model and would only have a remaining life of approximately 3 years.



The cabinet on the right is a motor control cabinet and consists of direct-on-line starters inside and rotary switches, push buttons and indicator lamps on the panel door. There are contactors and overloads which have a limited life span remaining and will require an upgrade in the next year. The remaining contactors and overloads have a further five year life span.

The main switch is new and was replaced approximately four months ago. The expectant life cycle of the new switch is ten years.

The main switchboard shows considerable signs of rust due to the environment that it is situated in.



7.2 Pool Lighting

All pool lighting are now modern LED type.

7.3 Emergency Lighting

There are illuminated exit signs above the doors and emergency lights around the pool areas. There are also emergency lights outside the office.

The emergency lighting system is tested by Fire Security Services Ltd on a regular basis and do not require any further upgrade.

7.3.1 Recommendations:

- The main switchboard, located in the plant room, consisting of metering panel, distribution panel and control panel, to be upgraded.
- Main switch and metering equipment to be re-used but fuses in DB replaced with MCB's and control panel replaced with new contactors, controllers, overloads, push buttons, rotary switches and indicator lights.

8 Security

Security alarm monitored by Watchdog. Alarm panel inside the office with PIR sensor.

New sensors for pool area are installed in 2016.

9 Fire Protection

Manual fire alarm connected to Watchdog alarm system. Fire protection system maintained by Wormald.

10 Summary of Recommendations and Costs

10.1Structural

10.1.1Pool Tank

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Floor	The pool floor is a concrete slab on grade.	The pool floor shows signs of previous cracking. We do not know when this happened, however, the cracks have been sealed with a non-elastic material and painted together with the rest of the pool floor.	The remedial measure appears to have performed well. The cracks have not opened up again.	9.1.1.1	N/A	N/A
Walls	The walls are concrete panels with joints at regular intervals.	The pool sealants at the wall panel joints are in very poor condition and have dissolved in most places.	Replace with suitable flexible sealant (e.g. Sika Seal Pool)	9.1.1.2	N/A	N/A
		The tiles on the wall faces are in fair condition.	Retain	9.1.1.2	N/A	N/A
		The brown tiles on the wall top and next to the scum channel are in poor condition. Many tiles are chipped and some have been repaired with a white substance. The mortar has become brittle and has been washed out at many places.	Replace damaged tiles and re-grout.	9.1.1.3	N/A	N/A

10.1.2 Balance Tank

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Concrete Box	The balance tank is cast-insitu concrete box.	We have not noted structural damage. The walls are discoloured, however, this has most likely been caused by corroding steel pipes leading from the pool into the balance tank. There are signs of water leakage through the original wall to roof construction joint though no signs of reinforcement corrosion are evident as yet. The pool operator reported that the capacity of the tank is insufficient at peak times.	The construction joint should be injection grouted with epoxy to fill and seal the construction joint, preventing further ingress of water and oxygen to arrest reinforcement corrosion. BVL may decide to act on the observed under-capacity and replace or extent the tank.	9.1.2.1 9.1.2.2	1 year	$2k to $2.5k

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.2.1			9.1.2.2			

10.1.3 Pool Concourse and Bleachers

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Slab	The concourse slab is cast-insitu concrete on grade with joints at regular intervals.	The slab is significantly cracked and reinforcement bars are exposed. The condition is considered to promote an unhygienic environment.	Clean exposed reinforcement from rust, remove loose concrete particles. Seal cracks with epoxy based product. Apply an epoxy based product (Sikafloor264) over the whole floor area.	9.1.3.1 9.1.3.2 9.1.3.3	1 Year	$50k to $65k
		Movement joints are not sealed.	Reseal with suitable flexible sealant (e.g. Sika Seal Pool).	9.1.3.3	1 Year	$2k to $2.5k
Bleachers	The bleachers comprise concrete block walls and cast-insitu concrete slabs.	Broken face shell of a concrete block forming the bottom wall of the bleachers.	Replace or fill the concrete block with cement grout.	9.1.3.4	1 Year	$300
		Many gaps and crevices.	Seal with suitable epoxy based product (e.g. Sikafloor264).	9.1.3.4 9.1.3.5	1 Year	$10k to $15,k
						
9.1.3.1 Severe Cracking			9.1.3.2 Exposed Reinforcement			

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.3.3 Unsealed Joints			9.1.3.4 Broken Concrete Block			
						
9.1.3.5 Gaps and Crevices						

10.1.4 Pool Shade Structure

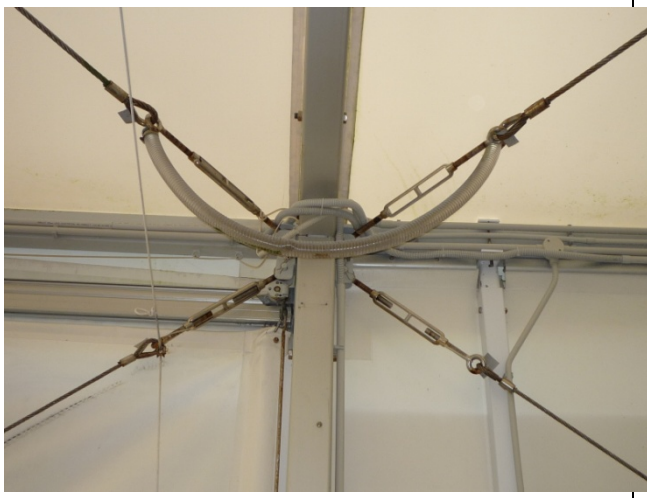
Component	Description	Findings	Recommendation	Photo	Timing	Cost
Cover	The cover is fabric of unknown material.	No signs of wear and tear or UV damage.	Retain	9.1.4.1	N/A	N/A
	Base fixings	One fixing into bleacher concrete block has come loose.	Reinstate	9.1.3.4	1 Year	$100
Portal Frames	The portal frames are made of aluminium at regular intervals.	The frames appear in very good condition, no visible signs of corrosion.	Retain, wash regularly with clear water.	9.1.4.2	N/A	N/A
Bracing	The cables and fittings providing bracing are stainless steel.	Light surface rust.	Wash regularly with clear water. Will require replacement in medium term.	9.1.4.3	10 years	$20k to $25k

Component	Description	Findings	Recommendation	Photo	Timing	Cost
	Some steel elements have been used for connection brackets.	The painted protection system appears to break down at some areas.	Reinstate. Will require replacement in medium term where reinstatement not possible.	9.1.4.4	1 Year	$15k to $20k
Base Plates	The base plates and connection cleats to the aluminium frames are made of "black" steel.	The protection system appears to break down at some areas with minor surface corrosion evident.	Reinstate corrosion protection system. Seal crevice between steel and concrete.	9.1.4.5	1 Year	$20k to $25k

9.1.4.1 Fabric in Good Condition

9.1.4.2 Aluminium Frame

9.1.4.3 Painted Steel Bracket



9.1.4.4 Stainless Steel Bracing

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.4.5 Painted Frame Base Plates						

10.1.5 Pool Grandstand

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Seating support frame	Galvanised steel tube triangulated frame.	Significant corrosion to frame joints at front. Surface corrosion to some other joints also.	Locally replace frame members where loss of section significant. Clean and repaint elsewhere	9.1.5.1 9.1.5.2 9.1.5.3	1 year	$20kto $25k
						
9.1.5.1 Full loss of section			9.1.5.2 Surface corrosion			

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.5.3 Surface corrosion at rear						

10.1.6 Pool Services

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Pool water circulation pump	New pump installed	OK	none		Annual service	$500
Pool water heat exchanger	Alfa Laval	Good working condition	Inspect and clean	9.1.6.1	Annual service	$1k
Pipes and manholes	Pipes to pools and balance tanks	Water over flowing through manholes	Inspect pipes for blockages, seal manhole lid		Annual service	$500
Balance tank levels, floats.	Floats and levels		Inspect condition and operation of floats and levels		N/A	$3k
Balance tank	Balance tank appears to be to small		Enlarge balance tank if required		N/A	$50k

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.6.1 Pool Water Heat Exchanger						

10.1.7 Heating, Ventilation and Air Conditioning

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Air Handling unit	Check operation in winter	Reported poor performance, heavy condensation in winter	Inspect AHU and monitor air temperature		N/A	$5k
Dampers	Check operation	It appears than damper is set in fixed position	Modify damper system and controls for manual control operation		N/A	$3k
AHU	Check	Possibly corroded inside, checked filters and coils	Repair AHU if required		N/A	$10k

10.1.8 Electrical Services

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Main Switchboard	MSB, DB and control panel	Considerable rust on panels, original fuses, old type contactors and overloads, damaged push buttons and indicator lights	Replace complete SWB, DB and control panel		2 years	$12k

Opus International Consultants Ltd
Opus House, Princes Street
Private Bag 3057, Waikato Mail Centre,
Hamilton 3240
New Zealand

t: +64 7 838 9344
f: +64 7 838 9324
w: www.opus.co.nz

OTUMOETAI POOLS CONDITION ASSESSMENT

21 MARCH 2024

WSP
Hamilton
Level 2, 99 Bryce Street, Hamilton 3204
Private Bag 3057, Waikato Mail Centre, Hamilton 3204

+64 7 838 9344
wsp.com/nz

REV	DATE	DETAILS
D	21/3/2024	Final

	NAME	DATE	SIGNATURE
Prepared by:	Mariusz Tarnowski	21/2/2024	
Reviewed by:	Tim Fowler	21/2/2024	
Approved by:	Dave Singh	21/2/2024	

TABLE OF CONTENTS

EXECUTIVE SUMMARY IV

1 INTRODUCTION 1

2 SCOPE OF WORK 2

3 STRUCTURAL ASSESSMENT 3

3.1 SCOPE 3

3.2 REMAINING USEFUL LIFE 3

3.3 COST OF STRUCTURAL MAINTENANCE 4

3.4 BUILDING DESCRIPTION 4

3.4.1 POOL TANK 4
3.4.2 BALANCE TANK 4
3.4.3 CONCOURSE AND BLEACHERS 5
3.4.4 ROOF STRUCTURE 5
3.4.5 POOL GRANDSTAND 5
3.4.6 RAMP ACCESS 6

3.5 MAINTENANCE ISSUES 6

3.5.1 POOL TANK 6
3.5.2 CONCOURSE AND BLEACHERS 7
3.5.3 ROOF STRUCTURE 8
3.5.4 RAMP ACCESS 9
3.5.5 COVER BASE FIXING 10

4 POOL SERVICES 11

4.1 POOL FILTRATION 11

4.2 POOL BORE WATER SUPPLY 11

4.3 POOL WATER TREATMENT 11

5 HEATING AND VENTILATION 12

5.1 RECOMMENDATIONS 12

6 ELECTRICAL SERVICES 13

6.1 MAIN SWITCH BOARD 13

6.2 POOL LIGHTING 14

6.3 EMERGENCY LIGHTING 14

7 SECURITY 15

8 FIRE PROTECTION 16

9 SUMMARY OF RECOMMENDATIONS AND COSTS 17

9.1 STRUCTURAL 17

9.1.1 POOL TANK 17
9.1.2 BALANCE TANK 19
9.1.3 POOL CONCOURSE AND BLEACHERS 20
9.1.4 POOL SHADE STRUCTURE 21
9.1.5 RAMP ACCESS 24
9.1.6 POOL SERVICES 26
9.1.7 HEATING, VENTILATION AND AIR CONDITIONING 26

EXECUTIVE SUMMARY

This assessment is based on a visual inspection of the facility. The report has not considered any assessment or condition of underground services which are likely in a very poor condition, considering the facility age and the number of recent repairs done on them. Therefore, it is difficult to assess how long this facility could operate satisfactorily without considerable expenditure required to maintain status quo. In addition to this, a wider picture has to be considered when assessing the lifespan of this facility given the major shortcomings it presents. It is noted that the facility is approximately 66 years old and has a current building warrant of fitness (BWOF).

Approximately 5 years ago, Bay Venues has noticed cracks on the concourse. Since then, the facility had undergone a significant number of repairs in 2022, to the under-pool piping system and pool slab due to subsidence. Bay Venues have been monitoring the water line at the eastern end of the pool. It is possible based on historical settlement events that further settlements leading to pool cracks can occur in future. The risk of uneven overflow of water into the gutter will result in uneven pool skimming process, this will lead to uneven water treatment of the pool water. This means stagnant and untreated water will be at the non-skimmed areas of the pool. Manual dosing can be carried out to treat non-skimmed areas of the pool.

The major shortcomings of the existing facility include:

- The building is located at the far back of a narrow access path with no road frontage therefore the facility is only known to well informed local residents. This lack of access impacts access for construction vehicles, deliveries and adequate maintenance of the building.
- The building site is located close to the school boundary on the north end and the building is close to steep contour at the eastern end of the site. This is identified in the council public repository – MAPI. Geotechnical investigations should determine the risk associated with further subsidence.
- The general standard of the facility in comparison with other facilities run by local authority is as “basic” and possibly would have been adequate for a small community. Nowadays standards have considerably changed, and it will be very hard to bring these buildings into modern standards without major expenditure. However, it is noted that an accessible change facility had been constructed in 2022 within proximity of the pool and within the building footprint.
- Compliance issue: any reasonable upgrade of the facility which would require a Building Consent could trigger a compliance issue for the remaining of the building, which could result to a need for an upgrade to the latest requirements for good practices for pool facilities. Specific examples of the issues for consideration are:
    - No family changing facilities except portable units.
    - Inadequate dimension of doors, overhangs etc e.g. the Main public entry door.
    - No pool water separation and compliant filtration rates for the main pool and learn to swim pool. Two bodies of water are not separated.
    - Excessive condensation inside pool hall (potential risk and hazard due to fogging).

- No road access for delivery of pool chemicals, general supplies or parking near- by.
- Limited revenue growth potential due to sub-standard facility and potentially relatively low attractiveness to general community having higher expectations for a range of available activities.
- No gymnasium, cafe, rest area, shop, family changing rooms etc. which would make a better appeal to the general public.
- Relatively high for the size of the facility current maintenance costs including needs for regular replacement of the roof panels at ~ $30,000 - $40,000 each due to deterioration (solar or vandalism).
- Very limited internal security of the space due to nature of the fabric of the walls (can be easily cut with a knife)
- Pool concourse in poor state and a range of cracks
- Upgrading heating and filtration for learner's pool would cost in excess of ~$300,000.

Based on our visual inspection, generally the pool including changing rooms are in acceptable condition considering the age of the facility and upgrades in recent times. Without considering the likely underground issues and major shortcomings, after applying recommended repair and maintenance work this facility could possibly operate satisfactory for the next 5- 10 years. However, we would recommend caution when considering the lifespan of this facility and no doubt that considerable expenditure needs to be allocated to maintain the facility fully operational into the future.

The obvious main work required is associated with the following areas:

- Repair/check air handling system if required.
- Investigate, repair/upgrade pool balance tank piping and manhole lids seals.
- Replace pool underground water circulation system including associated pipes and valves. Use of PE pipes is recommended.
- Earthing/bonding upgrade to the facility if major changes/upgrade to the pool is planned.

Cost indicated in this report is a very high-level estimate. Bay Venues are to seek quotations from suitable contractors to better inform these costs.

1 INTRODUCTION

This is a review/update (Feb 2024) of the previous asset condition survey that was carried out in September 2016 on behalf of Bay Venues Ltd. The purpose of this review is to:

1. Document current state of the existing facility
2. Identify a future strategy for maintenance and operation of the facility including commentary of end-of-life aspects of the pool structure and enclosure.

This document's intended use is for future considerations of the long-term plan for the facility.

2 SCOPE OF WORK

The asset condition survey included the following.

- Review of previous report date September 2016 and update findings
- Provide commentary on end-of-life aspects of the pool structure and services and options for future.

3 STRUCTURAL ASSESSMENT

3.1 SCOPE

The structural components assessed in this report include the:

- Pool Tank (not re-inspected in 2016 as was in use)
- Balance Tank
- Pool Concourse including Bleachers.
- Pool Roof Structure
- Pool Grandstand
- Ramp Access

We had no structural or architectural drawings for the assessment. Therefore, we know little about the actual detailing of the structure. All recommendations and the cost estimate are based on a visual inspection and a rough measure up.

3.2 REMAINING USEFUL LIFE

We expect that the current structure expected life span would be variable and predominantly would depend on the amount of maintenance applied and it would be difficult to assess at this stage.

Parameters that affect the expected lifetime of concrete structures include:

- quality of lining (paint and/or tiling)
- presence / quality of joint sealant
- concrete density
- crack inhibiting reinforcement
- concrete cover to the steel reinforcement and
- chlorine content in the pool water.

We have been asked to base our estimate of remaining useful life on a visual inspection and we do not know most of the parameters listed above. However, we have not observed signs of reinforcement corrosion or concrete spalling and consider the structure is sound.

Parameters that affect the expected lifetime of metal structures include:

- quality of corrosion protection system
- material properties
- chlorine content in the air
- detailing (crevices, water ponding, condensation etc.) and
- frequency of cleaning.

We have visually inspected the metal components of the Roof Structure. Some elements require maintenance; however, the structure appears to be well constructed and sound.

3.3 COST OF STRUCTURAL MAINTENANCE

We estimate the cost for maintenance of to be in the order of $190,000 to $240,000. The maintenance work should be undertaken within recommended timeframes provided in section 9.

The above figures can be reduced by approximately $75,000 with a reduced scope. The above figures include a complete sealing of the concourse slab and the bleachers with an epoxy-based product. This epoxy sealing would have a significant beneficial effect on the durability of the slab and the bleachers. Higher durability would mean less damage and maintenance work in the future. In addition, the sealing would also promote a more hygienic and easier to clean surface. However, focusing on the bare minimum maintenance that is required at this time, it would also be acceptable to only address the current problems and seal cracks, gaps and exposed reinforcement bars. Hence, the possible cost reduction.

3.4 BUILDING DESCRIPTION

3.4.1 POOL TANK

The pool tank comprises a cast-insitu concrete floor with what appears to be precast concrete walls. Behind the side walls a concrete scum channel forms the transmission to the concourse. The floor is painted, and the walls are tiled. The pool tank accommodates a 7 lanes pool and a non-swimmer pool. The areas are divided by a concrete bulkhead.

3.4.2 BALANCE TANK

The balance tank is located outside the Pool Shade Structure and partially embedded into soil. The whole structure is cast-insitu concrete. A round steel lid provides access. A few air holes are built into the concrete top.

3.4.3 CONCOURSE AND BLEACHERS

A concrete slab forms the pool surrounding concourse. The slab is joint at regular intervals.

Bleachers are located at the end where the learners pool is. The Bleachers are constructed of concrete block walls and cast-insitu concrete slabs.

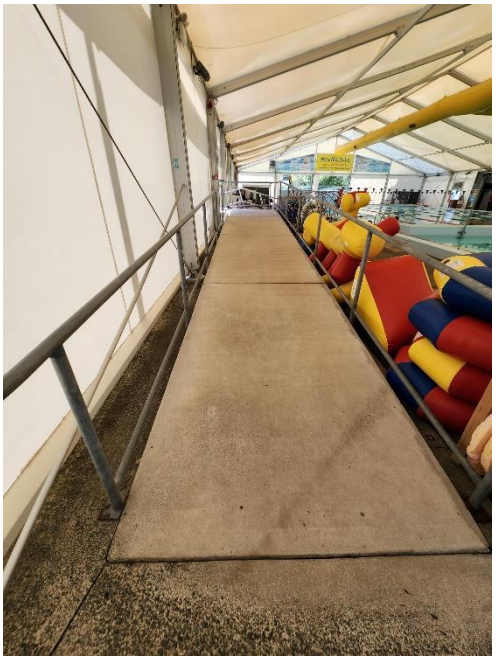
3.4.4 ROOF STRUCTURE

The pool shade structure has been supplied by “Karl Hocker Stahlbau GmbH, Germany” and has been constructed about 2002. The structure comprises aluminium portal frames, stainless steel bracing cables and mild steel components like base plates and some connection elements.

3.4.5 POOL GRANDSTAND

The pool grandstand is located along the northern side of the lane pool, providing seating for swimmers and spectators. Following from the previous report recommendations, the old grandstand was replaced. The new grandstand consists of steel seating spanning between rectangular frames fabricated from galvanised rectangular hollow sections.

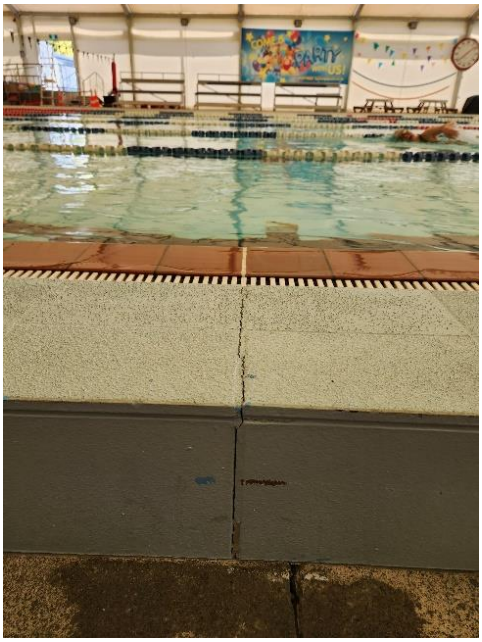
3.4.6 RAMP ACCESS



The ramp access comprises a cast-insitu concrete landing and ramp with a steel balustrade. The ramp accommodates disabled access at the northern end of the pool.

3.5 MAINTENANCE ISSUES

3.5.1 POOL TANK



Approximately 18 months prior to this visit a pipe running under the pool tank had severed likely due to settlement from the western (grandstand) to eastern end. Cracking along the width of the tank was observed. The pool was drained for the cracked section of tank to be cut out, and a flexible pipe was put in place before being backfilled and repaired. Cracking observed in the perimeter blocks could indicate settlement following the repair.

It is recommended that settlement is monitored along the perimeter of the pool at corners, crack locations, and in between – a total of ten points. Standard settlement monitoring pins should be installed close to the scum channel and level surveyed on a monthly basis to determine if settlement is ongoing. Survey intervals can be reviewed after 4 months.

3.5.2 CONCOURSE AND BLEACHERS

The slab is still significantly cracked, and reinforcement bars are still exposed in some areas. It is recommended that rust on exposed reinforcement is removed, and cracks / exposed bar are sealed with an epoxy-based product. Movement joints also remain unsealed, and we recommend that they are also resealed with a suitable flexible sealant.

There are many gaps and crevices in the bleachers and some face shells of the blocks have broken away. It is recommended that the gaps and crevices are sealed with a suitable epoxy-based product, and the gaps in the blocks are replaced or filled with cement grout.

3.5.3 ROOF STRUCTURE

There is still minor surface corrosion evident to wire rope bracing cables, ferrules, thimbles, eye bolts, turnbuckles, and bolts, likely due to condensation. While not structurally significant, this is a long-term durability issue, and these items will require replacement.

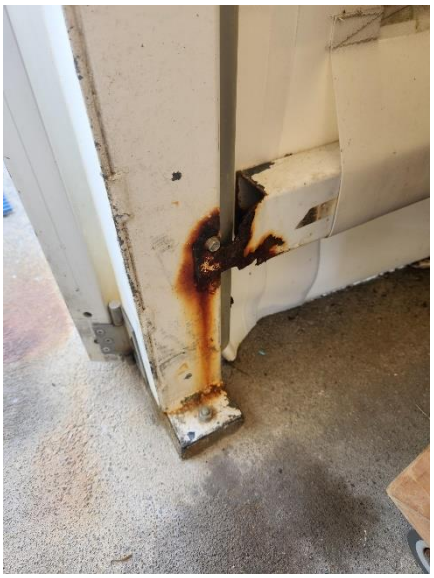
There is still minor surface corrosion evident to the roof frame baseplates likely due to water ponding. While not structurally significant, this is a long-term durability issue. It is recommended that the baseplates and bolts are cleaned, and corrosion protection reinstated.

3.5.4 RAMP ACCESS

There is surface corrosion to the ramp balustrade plate fixings, tubes, and welds, most likely due to pool water running down the balustrade. It is recommended that the rusting areas are cleaned where possible, and corrosion protection reinstated.

There is diagonal tension cracking along the landing of the ramp. It is recommended that the cracks are injection grouted with a suitable epoxy-based product to fill and seal, preventing ingress of water and oxygen to arrest reinforcement corrosion.

3.5.5 COVER BASE FIXING



A RHS section holding the wall cover adjacent to the southeast entrance (entrance closest to the balance tank) has corroded. Associated rust should be cleaned, and corrosion protection reinstated.

4 POOL SERVICES

4.1 POOL FILTRATION

Pool filtration system consists of a single vacuum Perlite filter unit, and a single pool circulation pump. The second pump is not required as the pool filter is located below the balance tank level. The condition of the filter septums are good, they are regularly cleaned, and no physical damage was visible during the inspection.

The filter basin (concrete enclosure) – has been recently repainted and it does not show any signs of deterioration however number of cracks on scum channel indicate ground settlement. Please refer to structural section of this report.

The pump system is in satisfactory condition.

The piping is predominantly PVC and it is in satisfactory condition and some recent replacement is evident. Expected life of underground services would be 25-30 years when new are installed and these are a potential risk in the next 5-10 years to come as their failure rate has increased and some major repair work needed to be done.

Some pool piping between balance tank and the pool tank has been recently replaced/repaired where possible.

4.2 POOL BORE WATER SUPPLY

Thermal bore water is used via dedicated heat exchanger for heating of the following areas:

- Pool water heating.
- Pool hall ventilation (heating coil).
- Domestic hot water for changing rooms and poolside showers.

Bore water pump operates satisfactory. The system used re-injection to dispose the bore water.

There has been report of concerns with the operations of the re-injection bore. Further investigations are recommended to confirm integrity of the bore.

4.3 POOL WATER TREATMENT

Pool water treatment is based on dosing of a 1% strength of on side generated sodium hypochlorite from third party equipment.

The system operates satisfactory. All pool chemicals are stored safely.

5 HEATING AND VENTILATION

Pool Hall is ventilated and heated via roof mounted air handling unit (AHU) fitted with heating coil of capacity approximately 120-150KW. The heating is provided from bore water heat exchanger. Air is distributed at high level via flexible PVC ducts to mesh diffusers.

The system is intended to operate at full fresh air while the pool is in operation and partial recirculation when the pool is covered. There is also a high humidity extract fan fitted to ensure effective removal of moist air from the space, therefore reduction of fogging.

The pool current operating hours are from early morning to late, all year around.

The pools are fitted with insulated pool covers which are used after hours.

The problems indicted by the pool operates are:

- Heavy condensation of the pool enclosure fabric
- Heavy Fogging during cold and humid mornings in winter
- Feeling that the ventilation system does not operate correctly (cannot maintain temperature)

5.1 RECOMMENDATIONS

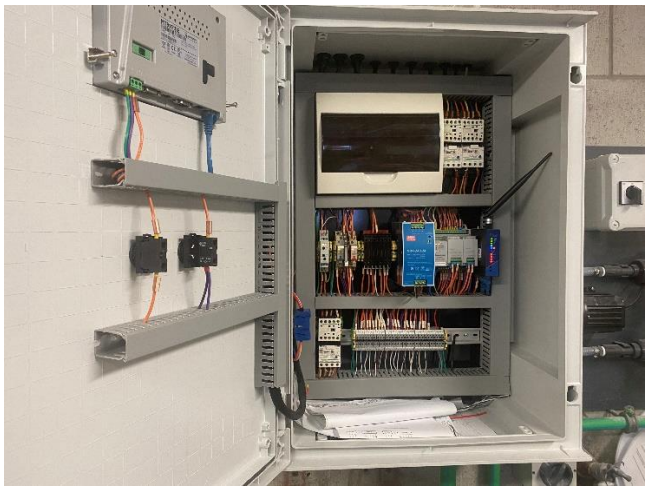
- Check operation of the AHU (filters, speed, coils) – monitor supply air temperature from the air outlet or a sample hole drilled into AHU. Adjust – repair, modify as required.
- Check controls.
- Introduce a manual operation mode for recirculation of re-used air damper, to ensure that the recirculation system only operates outside pool hours when pools are covered.
- Clean the air supply mesh on duct, if possible, during the next maintenance visit.

6 ELECTRICAL SERVICES

6.1 MAIN SWITCH BOARD

The main switchboard (bottom two left photos) was replaced in 2022. The switchboard is off a quality finish and quality installation.

The control panel (bottom three right photos) was replaced in 2022. There is an HMI (Human machine interface) panel allowing the client and contractors to view the system function/temperature at every necessary point.



Majority of the electrical equipment (Wiring, switchboards, switches, and the like) had been replaced as part of the upgrade works in 2022. There are clear labels and instructions posted on equipment allowing for safe and easy operation of plants.

The expected life of the upgraded electrical equipment above is 20-30yrs. That is if the electrical equipment is properly closed off after inspections, as chlorine deposits are evident on top of cabinets.

6.2 POOL LIGHTING

All pool general lighting is LED type. There are locations where the lighting are installed too close to the canvas roof panels. It is not a good design practise to have light fittings too close to such a surface.

6.3 EMERGENCY LIGHTING

There are illuminated exit signs above the doors and emergency lights around the pool areas. There are also emergency lights outside the office.

The emergency lighting system is tested by Fire Security Services Ltd on a regular basis and do not require any further upgrade.

7 SECURITY

There is an intruder alarm system installed close to the building entry area and outside changing rooms. Security alarm is monitored by Watchdog. Alarm panel is located inside the office with PIR sensor.

8 FIRE PROTECTION

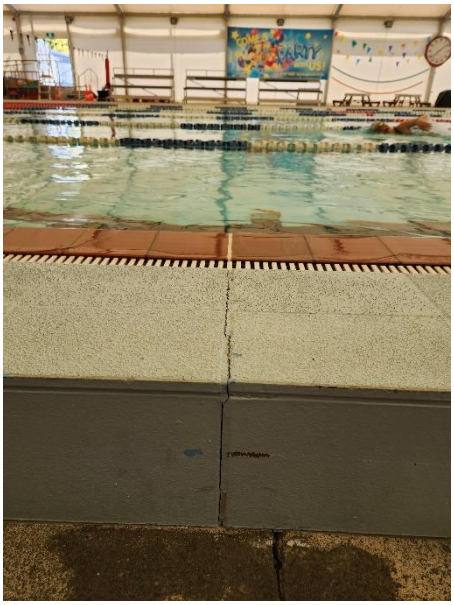
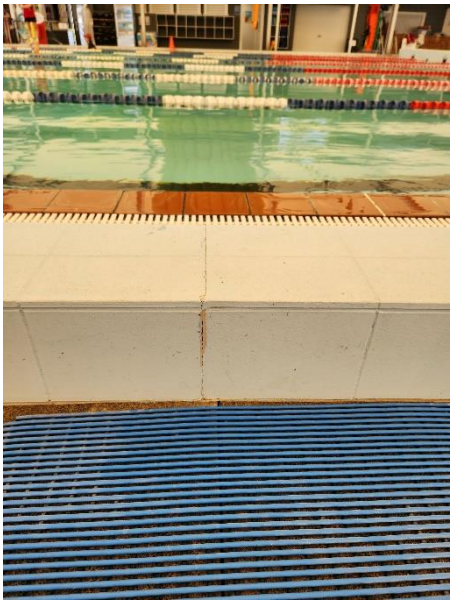
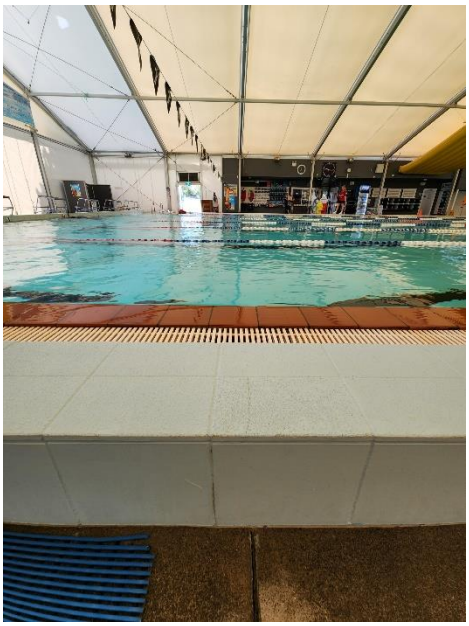
Manual fire alarm connected to Watchdog alarm system. Fire protection system maintained by Wormald.

9 SUMMARY OF RECOMMENDATIONS AND COSTS

9.1 STRUCTURAL

9.1.1 POOL TANK

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Tank	The pool tank comprises a concrete slab on grade floor and a concrete panelled wall.	Approximately 18 months prior to this visit a pipe running under the pool tank had severed likely due to settlement from the western (grandstand) to eastern end. Cracking along the width of the tank was observed. The pool was drained for the cracked section of tank to be cut out, and a flexible pipe was put in place before being backfilled and repaired. Cracking observed in the perimeter blocks could indicate settlement following the repair.	Settlement is monitored along the perimeter of the pool at corners, crack locations, and in between – a total of ten points. Standard settlement monitoring pins should be installed close to the scum channel and level surveyed on a monthly basis to determine if settlement is ongoing. Monitoring intervals can be reviewed after 4 months.	9.1.1.1 9.1.1.2 9.1.1.3 9.1.1.4	1 year	$TBC - for visual monitoring of slab crack /movement. (simple practical monitoring solution) This cost is not for engaging a specialist but can be monitored in house by Bay Venues.
Geotechnical investigation	Ground penetrometer test in a number of spots around the pool slab.	To be determined	Highly recommended for multiple spot tests for consistency of findings. This tests and lab results of the soil condition could provide information of stability of building structure and determination of	-	Next steps	$60, 000 - $100, 000. This cost will depend of the agreed scope between Bay Venues and Geotech Engineers.

Component	Description	Findings	Recommendation	Photo	Timing	Cost
			future plans for the site.			
						
9.1.1.1 Crack Along Middle of Pool on South End			9.1.1.2 Crack Along Middle of Pool on North End			
						
9.1.1.3 Crack between Middle and End of Pool on North End			9.1.1.4 Crack in Line with Joint on North End			

9.1.2 BALANCE TANK

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Concrete Box	The balance tank is cast-insitu concrete box.	We have not noted structural damage. The walls are discoloured, however, this has most likely been caused by corroding steel pipes leading from the pool into the balance tank. Grout repairs have been carried out on the construction joint and bay venues have verbally confirmed no water leakage or overflow has been observed following the repairs.	The balance tank should be monitored for leakage.	9.1.2.1 9.1.2.2	N/A	N/A

9.1.2.1

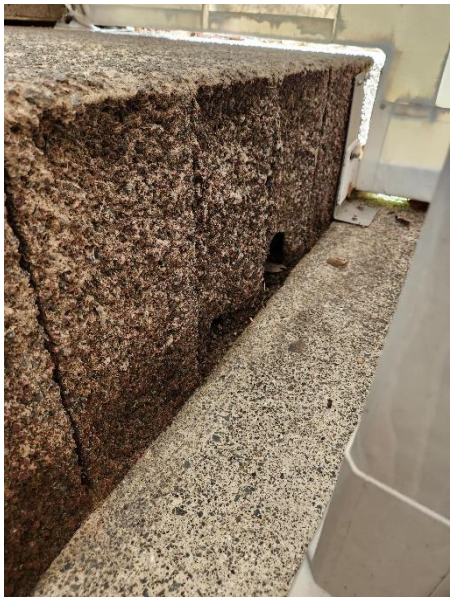
9.1.2.2

9.1.3 POOL CONCOURSE AND BLEACHERS

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Slab	The concourse slab is cast-insitu concrete on grade with joints at regular intervals.	The slab is significantly cracked and reinforcement bars are exposed. The condition is considered to promote an unhygienic environment.	Clean exposed reinforcement from rust, remove loose concrete particles. Seal exposed reinforcemen and cracks with epoxy based product. Apply an epoxy based product (Sikafloor264) over the whole floor area.	9.1.3.1 9.1.3.2 9.1.3.3	1 Year	$75k to $90k
		Movement joints are not sealed.	Reseal with suitable flexible sealant (e.g. Sika Seal Pool).	9.1.3.3	1 Year	$3k to $4k
Bleachers	The bleachers comprise concrete block walls and cast-insitu concrete slabs.	Broken face shell of a concrete block forming the bottom wall of the bleachers	Replace or fill the concrete block with cement grout.	9.1.3.4	1 Year	$1000
		Many gaps and crevices.	Seal with suitable epoxy based product (e.g. Sikafloor264).	9.1.3.4 9.1.3.5	1 Year	$15k to $20k

9.1.3.1 Severe Cracking

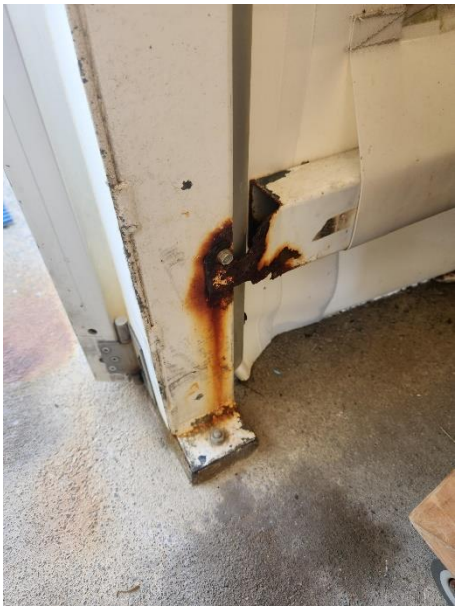
9.1.3.2 Exposed Reinforcement

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.3.3 Unsealed Joints			9.1.3.4 Broken Concrete Block			
						
9.1.3.5 Gaps and Crevices						

9.1.4 POOL SHADE STRUCTURE

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Cover	The cover is fabric of unknown material.	No signs of wear and tear or UV damage.	Retain	9.1.4.1	N/A	N/A

Component	Description	Findings	Recommendation	Photo	Timing	Cost
	Base fixings	One fixing into portal column has corroded	Associated rust should be cleaned and corrosion protection reinstated.	9.1.4.2	1 Year	$1k if tied into other works
Portal Frames	The portal frames are made of aluminium at regular intervals.	The frames appear in very good condition, no visible signs of corrosion.	Retain, wash regularly with clear water.	9.1.4.3	N/A	N/A
Bracing	The cables and fittings providing bracing are stainless steel.	Surface rust.	Wash regularly with clear water. Will require replacement in medium term.	9.1.4.4	10 years	$30k to $40k
	Some steel elements have been used for connection brackets.	The painted protection system appears to break down at some areas.	Reinstate. Will require replacement in medium term where reinstatement not possible.	9.1.4.5	1 Year	$20k to $30k
Base Plates	The base plates and connection cleats to the aluminium frames are made of “black” steel.	The protection system appears to break down at some areas with minor surface corrosion evident.	Reinstate corrosion protection system. Seal crevice between steel and concrete.	9.1.4.6	1 Year	$30k to $40k

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.4.1 Fabric in Good Condition			9.1.4.2 Base Fixing			
						
9.1.4.3 Painted Steel Bracket			9.1.4.4 Painted Steel Bracket			

Component	Description	Findings	Recommendation	Photo	Timing	Cost
						
9.1.4.5 Stainless Steel Bracing			9.1.4.6 Painted Frame Base Plates			

9.1.5 RAMP ACCESS

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Ramp Balustrade	Galvanised steel tube with plate fixings	Corrosion to post base plates and other areas of balustrade.	Clean baseplates, tubes, and welds where possible, and reinstate corrosion protection.	9.1.5.1 9.1.5.2 9.1.5.3	1 year	$2k if tied into other works
Ramp	In-situ concrete	Cracks along the sides of the landing internally	Injection grout crack with epoxy to fill and seal, preventing ingress of water and oxygen to arrest reinforcement corrosion.	9.1.5.4 9.1.5.5	1 year	$3k if tied into other works

9.1.5.1 Corrosion on baseplate

9.1.5.2 Corrosion on weld

9.1.5.3 Corrosion

9.1.5.4 Concrete discontinuity internally

9.1.5.5 Concrete discontinuity externally

9.1.6 POOL SERVICES

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Pool water circulation pump	New pump installed	OK	none		Annual service	$500
Pool water heat exchanger	Alfa Laval	Good working condition	Inspect and clean	9.1.6.1	Annual service	$1k
Balance tank levels, floats.	Floats and levels		Inspect condition and operation of floats and levels		N/A	$3k

9.1.6.1 Pool Water Heat Exchanger

9.1.7 HEATING, VENTILATION AND AIR CONDITIONING

Component	Description	Findings	Recommendation	Photo	Timing	Cost
Air Handling unit	Check operation in winter	Reported heavy condensation in winter	Inspect AHU and monitor air temperature		N/A	$5k
Dampers	Check operation	It appears than damper is set in fixed position	Modify damper system and controls for manual control operation		N/A	$3k
AHU	Check	Possibly corroded inside, checked filters and coils	Repair AHU if required		N/A	$10k

32 Harington Street,
PO Box 903, Tauranga,
3140, New Zealand
T: +64 7 578 0896 // **F:** +64 7 578 2968
E: info@beca.com // www.beca.com

25 March 2024

Bay Venues Ltd
81 Truman Lane, Mount Maunganui
Tauranga
3110

C/O Architecture HDT

Attention: Paul Dunphy

Dear Paul

Otumoetai Pool Investigations - Site Risks

Bay Venues Ltd (BVL) have requested high-level advice regarding potential site risks for the Otumoetai Pool located at 77 Windsor Road, Bellevue, Tauranga. We understand that the purpose of this advice is to help inform future planning.

In June/July 2022, Beca provided engineering assistance to BVL when pool water loss was encountered, and concrete cracks were found in the pool slab. Visual inspections were undertaken by Beca structural and geotechnical engineers before the pool was emptied for repairs, and a further inspection on the pool slab was undertaken by a Beca structural engineer after the pool was emptied, before repairs were undertaken.

Beca provided concrete repair details where the slab was cut out to repair damage to the inlet pipe under the slab. Inlet pipe investigations and repairs were undertaken by others. Beca also provided repair details for concrete cracks crossing the pool slab, mid-way along the length of the pool. The slab cracks approximately aligned with the observed inlet pipe damage beneath the slab. Determining the cause of the damage was beyond the scope of this work.

The pool is located close to a slope on the eastern side of the building. The observed pool damage may be related to this slope and/or ground effects under the pool. Geotechnical investigations and assessment would be required to understand and advise further on this.

Figure 1 Google Earth view showing slope at the slope at the eastern end of Otumoetai Pool

Yours sincerely

Craig Lavin

Technical Director - Structural Engineering

on behalf of

Beca Limited

Phone Number: +647 577 3898
Email: Craig.Lavin@beca.com

Copy

Mark Bates, Architecture HDT

Otumoetai Renewals

Class	Job Code	Job	Sub Job	2017	2018	2019	2020	2021	2022	2023	Total
Renewal	OT2017 004	OT2017 Otumoetai Pool 2017 Jobs	004 Emergency Lighting	1,276	-	-	-	-	-	-	1,276
Renewal	OT2017 010	OT2017 Otumoetai Pool 2017 Jobs	010 Cctv	1,018	-	-	-	-	-	-	1,018
Renewal	OT2017 011	OT2017 Otumoetai Pool 2017 Jobs	011 Kitchen Equipment	985	-	-	-	-	-	-	985
Renewal	OT2017 013	OT2017 Otumoetai Pool 2017 Jobs	013 Anti-Slip Mat Changing Room	2,073	-	-	-	-	-	-	2,073
Renewal	OT2017 014	OT2017 Otumoetai Pool 2017 Jobs	014 General Renewal	9,751	-	-	-	-	-	-	9,751
Renewal	OT2017 019	OT2017 Otumoetai Pool 2017 Jobs	019 Ahu Replacement	1,469	-	-	-	-	-	-	1,469
Renewal	OT2017 020	OT2017 Otumoetai Pool 2017 Jobs	020 Picnic Tables	2,728	-	-	-	-	-	-	2,728
Renewal	OT2017 021	OT2017 Otumoetai Pool 2017 Jobs	021 Autovac	2,190	-	-	-	-	-	-	2,190
Renewal	OT2017 022	OT2017 Otumoetai Pool 2017 Jobs	022 Catchment Tank	3,486	-	-	-	-	-	-	3,486
Renewal	OT2018 001	OT2018 Otumoetai Aquatics 2018 Jobs	001 Pool Paint	-	9,516	-	-	-	-	-	9,516
Renewal	OT2018 004	OT2018 Otumoetai Aquatics 2018 Jobs	004 Heat Exchanger	-	13,000	-	-	-	-	-	13,000
Renewal	OT2018 005	OT2018 Otumoetai Aquatics 2018 Jobs	005 Main Switchboard	-	2,140	3,101	-	-	-	-	5,241
Renewal	OT2018 006	OT2018 Otumoetai Aquatics 2018 Jobs	006 Spare Parts Plant	-	1,831	-	-	-	-	-	1,831
Renewal	OT2018 007	OT2018 Otumoetai Aquatics 2018 Jobs	007 Fire Exit Doors	-	1,682	-	-	-	-	-	1,682
Renewal	OT2018 008	OT2018 Otumoetai Aquatics 2018 Jobs	008 Bore Pump	-	7,067	-	-	-	-	-	7,067
Renewal	OT2018 009	OT2018 Otumoetai Aquatics 2018 Jobs	009 Bore Motor	-	7,791	-	-	-	-	-	7,791
Renewal	OT2018 010	OT2018 Otumoetai Aquatics 2018 Jobs	010 Bore Piping	-	3,091	-	-	-	-	-	3,091
Renewal	OT2018 011	OT2018 Otumoetai Aquatics 2018 Jobs	011 Bearings And Seals	-	2,970	-	-	-	-	-	2,970
Renewal	OT2018 012	OT2018 Otumoetai Aquatics 2018 Jobs	012 General Renewals	-	30,250	-	-	-	-	-	30,250
Renewal	OT2018 013	OT2018 Otumoetai Aquatics 2018 Jobs	013 Ahu Filter Replacement	-	191	-	-	-	-	-	191
Renewal	OT2018 014	OT2018 Otumoetai Aquatics 2018 Jobs	014 First Aid Room	-	5,000	189	-	-	-	-	5,189
Renewal	OT2018 015	OT2018 Otumoetai Aquatics 2018 Jobs	015 Otumoetai Pool - Bore Supply Pipe	-	4,719	-	-	-	-	-	4,719
Renewal	OT2018 016	OT2018 Otumoetai Aquatics 2018 Jobs	016 Otumoetai Pool Polycarbonate Sheeting Delayed From 16/17 To Align With Closure	-	5,000	-	-	-	-	-	5,000
Renewal	OT2018 017	OT2018 Otumoetai Aquatics 2018 Jobs	017 Otumoetai Pool Floor Paint Delayed From 16/17 To Align With Closure	-	14,140	-	-	-	-	-	14,140
Renewal	OT2018 018	OT2018 Otumoetai Aquatics 2018 Jobs	018 Inflatable Obstacle Course	-	9,130	-	-	-	-	-	9,130
Renewal	OT2019 001	OT2019 Otumoetai 2019 Capital	001 Hvac	-	-	4,347	-	-	-	-	4,347
Renewal	OT2019 002	OT2019 Otumoetai 2019 Capital	002 General Renewals	-	-	16,512	517	-	-	-	17,028
Renewal	OT2019 003	OT2019 Otumoetai 2019 Capital	003 Opus Report Renewals	-	-	13,000	-	-	-	-	13,000
Renewal	OT2019 004	OT2019 Otumoetai 2019 Capital	004 Pool Filtration	-	-	4,650	-	-	-	-	4,650
Renewal	OT2019 006	OT2019 Otumoetai 2019 Capital	006 Distribution Board - Main Building	-	-	7,400	7,750	-	-	-	15,150
Renewal	OT2019 008	OT2019 Otumoetai 2019 Capital	008 Spinal Board	-	-	1,735	-	-	-	-	1,735
Renewal	OT2020 004	OT2020 Otumoetai 2020 Capital	004 Bore Pump	-	-	-	11,236	-	-	-	11,236
Renewal	OT2020 005	OT2020 Otumoetai 2020 Capital	005 Bore Pump	-	-	-	7,726	-	-	-	7,726
Renewal	OT2020 006	OT2020 Otumoetai 2020 Capital	006 Bore Pump	-	-	-	6,254	-	-	-	6,254
Renewal	OT2020 007	OT2020 Otumoetai 2020 Capital	007 Pool Manual Vacuum	-	-	-	5,045	-	-	-	5,045
Renewal	OT2020 009	OT2020 Otumoetai 2020 Capital	009 General Renewals	-	-	-	17,026	-	-	-	17,026
Renewal	OT2020 010	OT2020 Otumoetai 2020 Capital	010 Opus Renewals	-	-	-	6,713	-	-	-	6,713
Renewal	OT2020 011	OT2020 Otumoetai 2020 Capital	011 Ventilation Circulation	-	-	-	1,418	-	-	-	1,418
Renewal	OT2021 002	OT2021 Otumoetai 2021 Capital	002 Otumoetai General Renewals	-	-	-	-	7,371	-	-	7,371
Renewal	OT2022 002	OT2022 Otumoetai 2022 Capital	002 General Renewals	-	-	-	-	-	19,442	-	19,442
Renewal	OT2022 003	OT2022 Otumoetai 2022 Capital	003 Fire Exit Doors	-	-	-	-	-	1,317	-	1,317
Renewal	OT2022 005	OT2022 Otumoetai 2022 Capital	005 Balance Tank Ladder	-	-	-	-	-	5,009	-	5,009
Renewal	OT2022 007	OT2022 Otumoetai 2022 Capital	007 Non-Slip Flooring	-	-	-	-	-	35,891	-	35,891
Renewal	OT2022 009	OT2022 Otumoetai 2022 Capital	009 Hot Water Zip	-	-	-	-	-	1,750	-	1,750
Renewal	OT2022 013	OT2022 Otumoetai 2022 Capital	013 Pool Manual Vaccum	-	-	-	-	-	5,150	-	5,150
Renewal	OT2022 016	OT2022 Otumoetai 2022 Capital	016 Fire System	-	-	-	-	-	1,332	-	1,332
Renewal	OT2022 017	OT2022 Otumoetai 2022 Capital	017 Fitted Seating	-	-	-	-	-	25,135	-	25,135
Renewal	OT2022 023	OT2022 Otumoetai 2022 Capital	023 Heat Exchanges	-	-	-	-	-	5,288	-	5,288
Renewal	OT2022 024	OT2022 Otumoetai 2022 Capital	024 Pumps	-	-	-	-	-	10,000	-	10,000
Renewal	OT2022 028	OT2022 Otumoetai 2022 Capital	028 Heat Exchanger	-	-	-	-	-	5,958	-	5,958
Renewal	OT2022 029	OT2022 Otumoetai 2022 Capital	029 Bore Pump, Motor Piping	-	-	-	-	-	24,252	-	24,252
Renewal	OT2022 030	OT2022 Otumoetai 2022 Capital	030 Replacement External Wall Curtains	-	-	-	-	-	71,349	-	71,349
Renewal	OT2022 031	OT2022 Otumoetai 2022 Capital	031 Otumoetai Upgrade	-	-	-	-	-	264,957	-	264,957
Renewal	OT2023 001	OT2023 Otumoetai 2023 Capital	001 General Renewals	-	-	-	-	-	-	14,728	14,728
Renewal	OT2023 005	OT2023 Otumoetai 2023 Capital	005 Air Handler Unit	-	-	-	-	-	-	4,598	4,598
				24,975	**117,518**	**50,934**	**63,684**	**7,371**	**476,831**	**19,326**	**760,639**

Memorial Renewals

Class	Job Code	Job	Sub Job	2017	2018	2019	2020	2021	2022	2023	Total
Renewal	ME2016 001	ME2016 Memorial Pools 2016	001 Paint Pools With Epoxy Paint	45,220	2,314	-	-	-	-	-	47,534
Renewal	ME2017 001	ME2017 Memorial Pool 2017 Jobs	001 Interior Paint Finishes	2,864	-	-	-	-	-	-	2,864
Renewal	ME2017 002	ME2017 Memorial Pool 2017 Jobs	002 Cctv	900	-	-	-	-	-	-	900
Renewal	ME2017 004	ME2017 Memorial Pool 2017 Jobs	004 Mem Pool Development Investigation	11,365	-	-	-	-	-	-	11,365
Renewal	ME2017 010	ME2017 Memorial Pool 2017 Jobs	010 General Replacements	11,744	- 6,500	-	-	-	-	-	5,244
Renewal	ME2017 012	ME2017 Memorial Pool 2017 Jobs	012 Pump & Lint Strainer	11,912	-	-	-	-	-	-	11,912
Renewal	ME2018 006	ME2018 Memorial Aquatics Jobs 2018	006 Bore Pump	-	6,935	-	-	-	-	-	6,935
Renewal	ME2018 007	ME2018 Memorial Aquatics Jobs 2018	007 Bore Motor	-	5,000	-	-	-	-	-	5,000
Renewal	ME2018 008	ME2018 Memorial Aquatics Jobs 2018	008 Bore Piping	-	2,684	-	-	-	-	-	2,684
Renewal	ME2018 011	ME2018 Memorial Aquatics Jobs 2018	011 Picnic Table	-	1,434	-	-	-	-	-	1,434
Renewal	ME2018 013	ME2018 Memorial Aquatics Jobs 2018	013 General Renewals	-	28,816	-	-	-	-	-	28,816
Renewal	ME2018 014	ME2018 Memorial Aquatics Jobs 2018	014 Structural Remedial Work Including Seismic	-	8,750	-	-	-	-	-	8,750
Renewal	ME2019 001	ME2019 Memorial Aquatics 2019 Capital	001 Memorial Pool Bore Re-Drill	-	-	8,006	9,500	-	-	-	17,506
Renewal	ME2019 005	ME2019 Memorial Aquatics 2019 Capital	005 Filter Bag	-	-	6,845	-	-	-	-	6,845
Renewal	ME2019 010	ME2019 Memorial Aquatics 2019 Capital	010 Spinal Board	-	-	1,005	-	-	-	-	1,005
Renewal	ME2019 011	ME2019 Memorial Aquatics 2019 Capital	011 General Renewals	-	-	838	-	-	-	-	838
Renewal	ME2019 012	ME2019 Memorial Aquatics 2019 Capital	012 Ceremaic Tiles	-	-	5,220	-	-	-	-	5,220
Renewal	ME2020 002	ME2020 Memorial Pool 2020 Capital	002 General Renewals	-	-	-	4,593	-	-	-	4,593
Renewal	ME2020 006	ME2020 Memorial Pool 2020 Capital	006 Pool Tiles	-	-	-	5,800	-	-	-	5,800
Renewal	ME2020 011	ME2020 Memorial Pool 2020 Capital	011 Floor	-	-	-	4,480	-	-	-	4,480
Renewal	ME2020 012	ME2020 Memorial Pool 2020 Capital	012 Pool Auto Vacuum	-	-	-	2,150	-	-	-	2,150
Renewal	ME2020 013	ME2020 Memorial Pool 2020 Capital	013 Floor Scrubber	-	-	-	521	-	-	-	521
Renewal	ME2020 017	ME2020 Memorial Pool 2020 Capital	017 Bore Vsd Replacement	-	-	-	6,225	-	-	-	6,225
Renewal	ME2020 018	ME2020 Memorial Pool 2020 Capital	018 Filter Tank Rehabilitation	-	-	-	30,625	-	-	-	30,625
Renewal	ME2023 001	ME2023 Memorial Pool 2023 Capital	001 General Renewals	-	-	-	-	-	-	2,814	2,814
				84,006	**49,433**	**21,914**	**63,894**	**-**	**-**	**2,814**	**222,060**

Greerton Renewals

Class	Job Code	Job	Sub Job	2017	2018	2019	2020	2021	2022	2023	Total
Renewal	GR2016 011	GR2016 Greerton Aquatic & Leisure Cen	011 Kitchen Equipment	495	-	-	-	-	-	-	495
Renewal	GR2016 026	GR2016 Greerton Aquatic & Leisure Cen	026 Waterproof Tablets For Sip	359	-	-	-	-	-	-	359
Renewal	GR2016 034	GR2016 Greerton Aquatic & Leisure Cen	034 Group Fitness Room Per Aquatics Strategy. Priced Increased	32,126	-	-	-	-	-	-	32,126
Renewal	GR2017 001	GR2017 Greerton 2017 Projects	001 Pool Painting	62,280	-	-	-	-	-	-	62,280
Renewal	GR2017 002	GR2017 Greerton 2017 Projects	002 Pool Edge Tiles	2,351	-	-	-	-	-	-	2,351
Renewal	GR2017 003	GR2017 Greerton 2017 Projects	003 Paint Finish - External Walls & Ceilings	3,818	-	-	-	-	-	-	3,818
Renewal	GR2017 004	GR2017 Greerton 2017 Projects	004 Paint Finish - Interior Walls	4,333	-	-	-	-	-	-	4,333
Renewal	GR2017 005	GR2017 Greerton 2017 Projects	005 Handrail - Stainless	843	-	-	-	-	-	-	843
Renewal	GR2017 006	GR2017 Greerton 2017 Projects	006 Change Room Floors	25,680	-	-	-	-	-	-	25,680
Renewal	GR2017 008	GR2017 Greerton 2017 Projects	008 Replacement Lights	3,643	-	-	-	-	-	-	3,643
Renewal	GR2017 009	GR2017 Greerton 2017 Projects	009 Vacuum De Filter 18m Pool	7,813	-	-	-	-	-	-	7,813
Renewal	GR2017 010	GR2017 Greerton 2017 Projects	010 Vacuum De Filter 25m Pool	7,609	-	-	-	-	-	-	7,609
Renewal	GR2017 011	GR2017 Greerton 2017 Projects	011 Filter Pump And Lint Strainer	10,001	-	-	-	-	-	-	10,001
Renewal	GR2017 014	GR2017 Greerton 2017 Projects	014 Lift Pump And Strainer	6,813	-	-	-	-	-	-	6,813
Renewal	GR2017 016	GR2017 Greerton 2017 Projects	016 Heat Exchanger	6,234	-	-	-	-	-	-	6,234
Renewal	GR2017 017	GR2017 Greerton 2017 Projects	017 Heat Exchanger	6,240	-	-	-	-	-	-	6,240
Renewal	GR2017 018	GR2017 Greerton 2017 Projects	018 Heat Exchenger	10,533	-	-	-	-	-	-	10,533
Renewal	GR2017 019	GR2017 Greerton 2017 Projects	019 Heat Exchanger	10,234	-	-	-	-	-	-	10,234
Renewal	GR2017 021	GR2017 Greerton 2017 Projects	021 Air Handling Unit	50,223	-	-	-	-	-	-	50,223
Renewal	GR2017 022	GR2017 Greerton 2017 Projects	022 Main Air Handler	16,090	-	-	-	-	-	-	16,090
Renewal	GR2017 023	GR2017 Greerton 2017 Projects	023 Security Access System	1,781	-	-	-	-	-	-	1,781
Renewal	GR2017 026	GR2017 Greerton 2017 Projects	026 Cctv	1,000	-	-	-	-	-	-	1,000
Renewal	GR2017 027	GR2017 Greerton 2017 Projects	027 Autovac	5,796	-	-	-	-	-	-	5,796
Renewal	GR2017 029	GR2017 Greerton 2017 Projects	029 Pool Toys	581	-	-	-	-	-	-	581
Renewal	GR2017 031	GR2017 Greerton 2017 Projects	031 Change Room Anti Slip Matting	4,666	-	-	-	-	-	-	4,666
Renewal	GR2017 032	GR2017 Greerton 2017 Projects	032 Change Room Seating	9,800	-	-	-	-	-	-	9,800
Renewal	GR2017 033	GR2017 Greerton 2017 Projects	033 General Renewals	40,109	273	-	-	-	-	-	40,382
Renewal	GR2017 034	GR2017 Greerton 2017 Projects	034 Air Conditioning Unit	683	-	-	-	-	-	-	683
Renewal	GR2017 039	GR2017 Greerton 2017 Projects	039 Repaint Exterior Pool Surround Tiles	4,000	-	-	-	-	-	-	4,000
Renewal	GR2017 041	GR2017 Greerton 2017 Projects	041 25m Pool Balance Tank & Pipes	5,566	-	-	-	-	-	-	5,566
Renewal	GR2017 042	GR2017 Greerton 2017 Projects	042 25m Pool Filter Tank Pipework	3,808	-	-	-	-	-	-	3,808
Renewal	GR2017 043	GR2017 Greerton 2017 Projects	043 18m Pool Equalising Line Valve	3,036	-	-	-	-	-	-	3,036
Renewal	GR2017 044	GR2017 Greerton 2017 Projects	044 Main Entry Door Motor And Drive	7,767	-	-	-	-	-	-	7,767
Renewal	GR2017 047	GR2017 Greerton 2017 Projects	047 Regrout Pool Tiles	11,123	-	-	-	-	-	-	11,123
Renewal	GR2017 048	GR2017 Greerton 2017 Projects	048 Changeroom Seating	17,516	-	-	-	-	-	-	17,516
Renewal	GR2017 049	GR2017 Greerton 2017 Projects	049 18m Pool Balance Tank Lids	1,160	-	-	-	-	-	-	1,160
Renewal	GR2017 050	GR2017 Greerton 2017 Projects	050 Family Bbq Area And Shade Sails	3,665	-	-	-	-	-	-	3,665
Renewal	GR2017 052	GR2017 Greerton 2017 Projects	052 Pool Slide	13,917	-	-	-	-	-	-	13,917
Renewal	GR2017 053	GR2017 Greerton 2017 Projects	053 Leaners Pool Plant And Heating System	214,992	-	-	-	-	-	-	214,992
Renewal	GR2017 054	GR2017 Greerton 2017 Projects	054 Enclose Poolside Open Drains	5,000	-	-	-	-	-	-	5,000
Renewal	GR2017 055	GR2017 Greerton 2017 Projects	055 Drinking Fountain	2,554	-	-	-	-	-	-	2,554
Renewal	GR2017 056	GR2017 Greerton 2017 Projects	056 Front Entrance Upgrade	1,143	-	-	-	-	-	-	1,143
Renewal	GR2018 003	GR2018 Greerton 2018 Jobs	003 Butynol Roofing	-	13,000	-	-	-	-	-	13,000
Renewal	GR2018 004	GR2018 Greerton 2018 Jobs	004 Metal Roofing	-	28,643	-	-	-	-	-	28,643
Renewal	GR2018 006	GR2018 Greerton 2018 Jobs	006 Vacuum De Filters (18 &25m)	-	7,358	-	-	-	-	-	7,358
Renewal	GR2018 007	GR2018 Greerton 2018 Jobs	007 Spare Parts Plant	-	926	-	-	-	-	-	926
Renewal	GR2018 009	GR2018 Greerton 2018 Jobs	009 Pump Bearings And Seals	-	2,987	-	-	-	-	-	2,987
Renewal	GR2018 010	GR2018 Greerton 2018 Jobs	010 General Renewals	-	22,392	1,074	22	-	-	-	23,487
Renewal	GR2018 019	GR2018 Greerton 2018 Jobs	019 Cladding And Floor Replacement	-	5,115	-	-	-	-	-	5,115
Renewal	GR2019 001	GR2019 Greerton 2019 Capital	001 General Renewals	-	-	25,598	-	-	-	-	25,598
Renewal	GR2019 004	GR2019 Greerton 2019 Capital	004 Lap Clock	-	-	2,165	-	-	-	-	2,165
Renewal	GR2019 007	GR2019 Greerton 2019 Capital	007 Life Jackets X 70	-	-	3,853	-	-	-	-	3,853
Renewal	GR2019 010	GR2019 Greerton 2019 Capital	010 Filter Room Hvac	-	-	31,267	-	-	-	-	31,267
Renewal	GR2020 001	GR2020 Greerton 2020 Capital	001 General Renewals	-	-	-	22,602	-	-	-	22,602
Renewal	GR2021 002	GR2021 Greeton 2021 Capital	002 Greerton - General Renewals	-	-	-	-	11,264	-	-	11,264
Renewal	GR2021 036	GR2021 Greeton 2021 Capital	036 Seismic Strengthening	-	-	-	-	90,132	-	-	90,132
Renewal	GR2022 002	GR2022 Greerton 2022 Capital	002 Led Lighting	-	-	-	-	-	1,667	-	1,667
Renewal	GR2022 006	GR2022 Greerton 2022 Capital	006 Vaccum Cleaner Back Pack	-	-	-	-	-	998	-	998
Renewal	GR2022 008	GR2022 Greerton 2022 Capital	008 Bore Pump, Motor And Piping	-	-	-	-	-	35,149	-	35,149
Renewal	GR2022 009	GR2022 Greerton 2022 Capital	009 Distribution Boards	-	-	-	-	-	38,208	-	38,208
Renewal	GR2022 020	GR2022 Greerton 2022 Capital	020 General Renewals	-	-	-	-	-	70,082	12,642	82,724
Renewal	GR2022 021	GR2022 Greerton 2022 Capital	021 Hvac	-	-	-	-	-	2,595	-	2,595
Renewal	GR2022 022	GR2022 Greerton 2022 Capital	022 Pool Channel Grating	-	-	-	-	-	4,387	-	4,387
Renewal	GR2022 028	GR2022 Greerton 2022 Capital	028 Signage	-	-	-	-	-	19,460	-	19,461
Renewal	GR2022 029	GR2022 Greerton 2022 Capital	029 Pa System	-	-	-	-	-	9,135	-	9,135
Renewal	GR2022 037	GR2022 Greerton 2022 Capital	037 Retractable Seating	-	-	-	-	-	99,168	-	99,168
Renewal	GR2022 038	GR2022 Greerton 2022 Capital	038 Hydro Pool Hand Rail	-	-	-	-	-	10,000	-	10,000
Renewal	GR2022 043	GR2022 Greerton 2022 Capital	043 Non-Slip Floor Replacement	-	-	-	-	-	181,925	-	181,925
Renewal	GR2022 045	GR2022 Greerton 2022 Capital	045 Portion Of Upgrade Work As Renewals	-	-	-	-	-	955,153	145,449	1,001,871
Renewal	GR2023 001	GR2023 Greerton 2023 Capital	001 General Renewals	-	-	-	-	-	-	34,410	34,410
Renewal	GR2023 003	GR2023 Greerton 2023 Capital	003 Pool Auto Vacuum X2	-	-	-	-	-	-	12,860	12,860
Renewal	GR2023 010	GR2023 Greerton 2023 Capital	010 Upgrade And Seismic (cf)	-	-	-	-	-	-	1,917,215	1,917,215
Renewal	GR2023 011	GR2023 Greerton 2023 Capital	011 Reinjection Bore	-	-	-	-	-	-	149,921	149,921
				627,383	**80,693**	**63,956**	**22,623**	**101,396**	**1,427,927**	**2,272,497**	**4,497,745**

Baywave Renewals

Class	Job Code	Job	Sub Job	2017	2018	2019	2020	2021	2022	2023	Total
Renewal	BW2016 040	BW2016 Baywave Capital Jobs	040 Upgrade Staff Room	17,750	600	-	-	-	-	-	18,350
Renewal	BW2016 067	BW2016 Baywave Capital Jobs	067 Safe Landing Frame Childcare	134	-	-	-	-	-	-	134
Renewal	BW2016 081	BW2016 Baywave Capital Jobs	081 Bw Structural Beam	15,089	-	-	-	-	-	-	15,089
Renewal	BW2017 001	BW2017 Baywave 2017 Jobs	001 Bw Inflatable	15,586	-	-	-	-	-	-	15,586
Renewal	BW2017 002	BW2017 Baywave 2017 Jobs	002 Paint Finishes	3,862	-	-	-	-	-	-	3,862
Renewal	BW2017 003	BW2017 Baywave 2017 Jobs	003 Emergency Lighting	2,712	-	-	-	-	-	-	2,712
Renewal	BW2017 004	BW2017 Baywave 2017 Jobs	004 Cctv Cameras	16,221	-	-	-	-	-	-	16,221
Renewal	BW2017 005	BW2017 Baywave 2017 Jobs	005 Sound System	11,055	-	-	-	-	-	-	11,055
Renewal	BW2017 006	BW2017 Baywave 2017 Jobs	006 Security Cameras	1,000	-	-	-	-	-	-	1,000
Renewal	BW2017 008	BW2017 Baywave 2017 Jobs	008 Spare Parts - Plant	10,144	-	-	-	-	-	-	10,144
Renewal	BW2017 009	BW2017 Baywave 2017 Jobs	009 Filters For Domestic Water	4,538	-	-	-	-	-	-	4,538
Renewal	BW2017 011	BW2017 Baywave 2017 Jobs	011 Bms Computer	222	-	-	-	-	-	-	222
Renewal	BW2017 012	BW2017 Baywave 2017 Jobs	012 Pool Toys	916	-	-	-	-	-	-	916
Renewal	BW2017 013	BW2017 Baywave 2017 Jobs	013 Pump Bearing And Seals	11,206	-	-	-	-	-	-	11,206
Renewal	BW2017 014	BW2017 Baywave 2017 Jobs	014 Aquarobics Equipment	294	-	-	-	-	-	-	294
Renewal	BW2017 015	BW2017 Baywave 2017 Jobs	015 General Renewals	24,862	-	-	-	-	-	-	24,862
Renewal	BW2017 016	BW2017 Baywave 2017 Jobs	016 Ahu 1 Replace Filter Bag X 3	3,721	-	-	-	-	-	-	3,721
Renewal	BW2017 017	BW2017 Baywave 2017 Jobs	017 Ahu 2 Replace Filter Media	1,500	-	-	-	-	-	-	1,500
Renewal	BW2017 018	BW2017 Baywave 2017 Jobs	018 Ahu 3, 6, 7, 8, 9 Replace Filters	1,160	-	-	-	-	-	-	1,160
Renewal	BW2017 019	BW2017 Baywave 2017 Jobs	019 Replace Chiller Pump	2,000	-	-	-	-	-	-	2,000
Renewal	BW2017 020	BW2017 Baywave 2017 Jobs	020 Replace Bms Temp And Humiditor Sensors	500	-	-	-	-	-	-	500
Renewal	BW2017 022	BW2017 Baywave 2017 Jobs	022 Pressure Filter Socks	7,201	-	-	-	-	-	-	7,201
Renewal	BW2017 023	BW2017 Baywave 2017 Jobs	023 Pool Vacuum Septums	2,825	-	-	-	-	-	-	2,825
Renewal	BW2017 024	BW2017 Baywave 2017 Jobs	024 Replacement Uv Lamps	4,000	-	-	-	-	-	-	4,000
Renewal	BW2017 026	BW2017 Baywave 2017 Jobs	026 Life Jackets (bw And Gr) X 40	1,815	-	-	-	-	-	-	1,815
Renewal	BW2017 027	BW2017 Baywave 2017 Jobs	027 Window Replacement	4,239	-	-	-	-	-	-	4,239
Renewal	BW2017 034	BW2017 Baywave 2017 Jobs	034 Childcare Upgrade	4,653	-	-	-	-	-	-	4,653
Renewal	BW2017 037	BW2017 Baywave 2017 Jobs	037 Bayswim Laptop	3,665	-	-	-	-	-	-	3,665
Renewal	BW2017 039	BW2017 Baywave 2017 Jobs	039 Hydroslide Structure	62,417	-	-	-	-	-	-	78,895
Renewal	BW2017 040	BW2017 Baywave 2017 Jobs	040 Autodoor Control Unit	595	-	-	-	-	-	-	595
Renewal	BW2017 041	BW2017 Baywave 2017 Jobs	041 Baykids Website	11,000	-	-	-	-	-	-	11,000
Renewal	BW2017 042	BW2017 Baywave 2017 Jobs	042 Bw Projector	1,740	-	-	-	-	-	-	1,740
Renewal	BW2017 043	BW2017 Baywave 2017 Jobs	043 Bay Swim Website	4,000	4,000	-	-	-	-	-	8,000
Renewal	BW2017 044	BW2017 Baywave 2017 Jobs	044 Bay Swim Mgr Laptop	1,600	-	-	-	-	-	-	1,600
Renewal	BW2018 002	BW2018 Baywave 2018 Jobs	002 Dishwasher Domestic	-	679	-	-	-	-	-	679
Renewal	BW2018 004	BW2018 Baywave 2018 Jobs	004 Zip Heater	-	1,403	-	-	-	-	-	1,403
Renewal	BW2018 007	BW2018 Baywave 2018 Jobs	007 De Slurry Mixer	-	1,374	-	-	-	-	-	1,374
Renewal	BW2018 008	BW2018 Baywave 2018 Jobs	008 Security Cameras	-	1,297	-	-	-	-	-	1,297
Renewal	BW2018 009	BW2018 Baywave 2018 Jobs	009 Spare Parts Plant	-	51,120	-	-	-	-	-	51,120
Renewal	BW2018 010	BW2018 Baywave 2018 Jobs	010 Filters For Domestic Water	-	2,804	-	-	-	-	-	2,804
Renewal	BW2018 011	BW2018 Baywave 2018 Jobs	011 Bms Computer	-	1,505	-	-	-	-	-	1,505
Renewal	BW2018 013	BW2018 Baywave 2018 Jobs	013 General Renewals	-	33,524	-	-	-	-	-	33,524
Renewal	BW2018 014	BW2018 Baywave 2018 Jobs	014 Tools	-	887	-	-	-	-	-	887
Renewal	BW2018 015	BW2018 Baywave 2018 Jobs	015 Ahu Filters	-	3,275	-	-	-	-	-	3,275
Renewal	BW2018 016	BW2018 Baywave 2018 Jobs	016 Temp And Humidity Sensor	-	398	-	-	-	-	-	398
Renewal	BW2018 018	BW2018 Baywave 2018 Jobs	018 Leisure Filter Bags	-	15,938	-	-	-	-	-	15,938
Renewal	BW2018 019	BW2018 Baywave 2018 Jobs	019 Replacement Uv Lamps	-	5,580	-	-	-	-	-	5,580
Renewal	BW2018 020	BW2018 Baywave 2018 Jobs	020 Sauna Heater	-	2,549	-	-	-	-	-	2,549
Renewal	BW2018 021	BW2018 Baywave 2018 Jobs	021 Autovac	-	4,300	-	-	-	-	-	4,300
Renewal	BW2018 022	BW2018 Baywave 2018 Jobs	022 Life Jackets (bw & Gr)	-	1,826	-	-	-	-	-	1,826
Renewal	BW2018 023	BW2018 Baywave 2018 Jobs	023 Autodoor Controller	-	8,848	-	-	-	-	-	8,848
Renewal	BW2018 024	BW2018 Baywave 2018 Jobs	024 Baywave - Cafe Refurbishment	-	35,953	-	-	-	-	-	35,953
Renewal	BW2018 025	BW2018 Baywave 2018 Jobs	025 Structural Remedial Work Including Seismic	-	248,874		-	-	-	-	132,872
Renewal	BW2019 001	BW2019 Baywave 2019 Capital	001 General Renewals	-	-	73,920	859	-	-	-	74,778
Renewal	BW2019 003	BW2019 Baywave 2019 Capital	003 Autovac	-	-	4,300	-	-	-	-	4,300
Renewal	BW2019 005	BW2019 Baywave 2019 Capital	005 Heat And Smoke Detectors	-	-	10,831	-	-	-	-	10,831
Renewal	BW2019 006	BW2019 Baywave 2019 Capital	006 Spinal Boards X 2	-	-	2,060	-	-	-	-	2,060
Renewal	BW2019 008	BW2019 Baywave 2019 Capital	008 Hvac	-	-	146,521	3,618	-	-	-	150,139
Renewal	BW2019 009	BW2019 Baywave 2019 Capital	009 Floating Play Mats	-	-	828	-	-	-	-	828
Renewal	BW2019 010	BW2019 Baywave 2019 Capital	010 Lighting	-	-	619	-	-	-	-	619
Renewal	BW2019 011	BW2019 Baywave 2019 Capital	011 Chlorine Pump	-	-	3,012	-	-	-	-	3,012
Renewal	BW2019 013	BW2019 Baywave 2019 Capital	013 Wall And Wall Finishes	-	-	-	7,735	-	7,735	-	15,470
Renewal	BW2020 001	BW2020 Baywave 2020 Capital	001 Baywave Remedial Work	-	-	214,769	1,336,758	-	-	-	1,667,529
Renewal	BW2020 002	BW2020 Baywave 2020 Capital	002 Pool Filtration Systems	-	-	-	47,645	-	892	-	48,537
Renewal	BW2020 003	BW2020 Baywave 2020 Capital	003 Lap Pool Grout	-	-	-	144,165	-	-	-	144,165
Renewal	BW2020 006	BW2020 Baywave 2020 Capital	006 General Renewals	-	-	-	164,919	-	-	-	164,919
Renewal	BW2020 011	BW2020 Baywave 2020 Capital	011 Locker Units X 4	-	-	-	12,934	-	-	-	12,934
Renewal	BW2020 014	BW2020 Baywave 2020 Capital	014 Floor Finish Tiles	-	-	-	33,480	-	-	-	33,480
Renewal	BW2020 022	BW2020 Baywave 2020 Capital	022 Tempering Valves	-	-	-	2,356	-	-	-	2,356
Renewal	BW2020 028	BW2020 Baywave 2020 Capital	028 Av System	-	-	-	881	-	-	-	881
Renewal	BW2020 035	BW2020 Baywave 2020 Capital	035 Replace Beach Tiles	-	-	-	49,345	-	-	-	49,345
Renewal	BW2020 036	BW2020 Baywave 2020 Capital	036 Aquatics Entry Gates	-	-	-	25,773	-	-	-	25,773
Renewal	BW2020 037	BW2020 Baywave 2020 Capital	037 Re-Clad Internal Timber In Sauna	-	-	-	10,454	-	-	-	10,454
Renewal	BW2020 038	BW2020 Baywave 2020 Capital	038 New Bilingual Signage	-	-	-	25,607	-	-	-	25,607
Renewal	BW2020 039	BW2020 Baywave 2020 Capital	039 Hydroslide Wall	-	-	-	8,987	-	-	-	8,987
Renewal	BW2020 040	BW2020 Baywave 2020 Capital	040 Bw Early Childhood Centre Outdoor Revamp	-	-	-	4,858	-	-	-	4,858
Renewal	BW2020 041	BW2020 Baywave 2020 Capital	041 Hot Water Cylinders	-	-	-	30,850	-	-	-	30,850
Renewal	BW2020 044	BW2020 Baywave 2020 Capital	044 Cafe Ramp Wall	-	-	-	10,919	-	-	-	10,919
Renewal	BW2020 048	BW2020 Baywave 2020 Capital	048 Plc Replacement	-	-	-	2,508	-	-	-	2,508
Renewal	BW2020 049	BW2020 Baywave 2020 Capital	049 Leisure Transfer Pump Vsd	-	-	-	2,521	-	-	-	2,521
Renewal	BW2020 050	BW2020 Baywave 2020 Capital	050 Pool Supervision Signage	-	-	-	4,656	-	-	-	4,656
Renewal	BW2021 003	BW2021 Baywave 2021 Capital	003 Baywave Play Mats X 4	-	-	-	-	694	-	-	694
Renewal	BW2021 004	BW2021 Baywave 2021 Capital	004 Baywave Uv Lamps X 4	-	-	-	-	4,847	-	-	4,847
Renewal	BW2021 005	BW2021 Baywave 2021 Capital	005 Baywave Filtration Systems	-	-	-	-	14,827	-	-	14,827
Renewal	BW2021 008	BW2021 Baywave 2021 Capital	008 Baywave General Renewals	-	-	-	-	81,910	-	-	81,910
Renewal	BW2021 018	BW2021 Baywave 2021 Capital	018 Pool Supervision Rules Signage - All Aquatic Venues	-	-	-	-	1,092	-	-	1,092
Renewal	BW2021 019	BW2021 Baywave 2021 Capital	019 Baywave 5x Tvs	-	-	-	-	3,383	-	-	3,383
Renewal	BW2021 020	BW2021 Baywave 2021 Capital	020 Baywave Autovac	-	-	-	-	2,500	-	-	2,500
Renewal	BW2021 021	BW2021 Baywave 2021 Capital	021 Baywave Chlorine Tanks X2 5000l	-	-	-	-	8,936	-	-	8,936
Renewal	BW2021 022	BW2021 Baywave 2021 Capital	022 Bw Aquatic Pool Variable Speed Drives	-	-	-	-	7,945	-	-	7,945
Renewal	BW2021 023	BW2021 Baywave 2021 Capital	023 Aquatics Audio System	-	-	-	-	8,081	-	-	8,081
Renewal	BW2021 024	BW2021 Baywave 2021 Capital	024 Aquatic Cctv Upgrade - Renewals	-	-	-	-	13,063	-	-	13,063
Renewal	BW2021 025	BW2021 Baywave 2021 Capital	025 Baywave Solenoid Relay	-	-	-	-	2,570	-	-	2,570
Renewal	BW2021 026	BW2021 Baywave 2021 Capital	026 Baywave Aquatics Aqua Play Uv	-	-	-	-	1,377	-	-	1,377
Renewal	BW2022 002	BW2022 Baywave 2022 Capital	002 Aquatic General Renewals	-	-	-	-	-	86,454	5,775	92,229
Renewal	BW2022 006	BW2022 Baywave 2022 Capital	006 Sauna Heater	-	-	-	-	-	4,638	-	4,638
Renewal	BW2022 008	BW2022 Baywave 2022 Capital	008 Floor Scrubber	-	-	-	-	-	6,332	-	6,332
Renewal	BW2022 009	BW2022 Baywave 2022 Capital	009 Pool Manual Vaccum	-	-	-	-	-	6,296	-	6,296
Renewal	BW2022 017	BW2022 Baywave 2022 Capital	017 Lane Rope	-	-	-	-	-	8,726	-	8,726
Renewal	BW2022 018	BW2022 Baywave 2022 Capital	018 Island	-	-	-	-	-	1,432	-	1,432
Renewal	BW2022 020	BW2022 Baywave 2022 Capital	020 Uv Lamps	-	-	-	-	-	16,597	-	16,597
Renewal	BW2022 024	BW2022 Baywave 2022 Capital	024 Lights	-	-	-	-	-	32,950	-	32,950
Renewal	BW2022 030	BW2022 Baywave 2022 Capital	030 Baywave Hvac Pipe Replacements	-	-	-	-	-	33,662	-	33,663
Renewal	BW2023 014	BW2023 Baywave 2023 Capital	014 Hvac	-	-	-	-	-	-	151,127	151,127
Renewal	BW2023 015	BW2023 Baywave 2023 Capital	015 General Renewals	-	-	-	-	-	-	95,240	95,240
Renewal	BW2023 017	BW2023 Baywave 2023 Capital	017 Chiller Pipe Work And Valves	-	-	-	-	-	-	33,662	33,662
Renewal	BW2023 020	BW2023 Baywave 2023 Capital	020 Pool Auto Vacuum	-	-	-	-	-	-	6,435	6,435
Renewal	BW2023 021	BW2023 Baywave 2023 Capital	021 Electrical Services	-	-	-	-	-	-	30,667	30,667
Renewal	BW2023 025	BW2023 Baywave 2023 Capital	025 Pool Components	-	-	-	-	-	-	32,762	32,762
Renewal	BW2023 028	BW2023 Baywave 2023 Capital	028 Pool Heating System	-	-	-	-	-	-	128,633	128,633
Renewal	BW2023 029	BW2023 Baywave 2023 Capital	029 Pumps	-	-	-	-	-	-	74,030	74,030
Renewal	BW2023 030	BW2023 Baywave 2023 Capital	030 Bore Pump	-	-	-	-	-	-	12,800	12,800
Renewal	BW2023 031	BW2023 Baywave 2023 Capital	031 Bore Motor	-	-	-	-	-	-	13,450	13,450
Renewal	BW2023 034	BW2023 Baywave 2023 Capital	034 Bw Upgrade	-	-	-	-	-	-	2,690,672	2,690,672
Renewal	BW2023 037	BW2023 Baywave 2023 Capital	037 Hardware For Audio Equipment	-	-	-	-	-	-	34,704	34,704
				254,222	**426,733**	**456,859**	**1,931,827**	**151,225**	**205,713**	**3,309,957**	**6,753,014**

Memorial Aquatics – Alternative Sites

Option	Overall View	Approach	Quality of Experience	Site configuration	Location	Ownership / Tenure	Ground conditions	Cost	Delivery Timescale
Memorial Park	Proceed with delivery of cost-optimised project	Proceed with proposed facility	Premier facility in ideal park, good catchment access and Te Papa catalyst location	Fits well in proposed space, particularly without courts; heat source opportunities	Excellent for multi-modal access from wide catchment	TCC owned Rec Reserve	Poor		
Moreland Fox Park	Significantly less optimal experience and location + unknown costs + deliverability; loss of fields	Extend or replace Greerton pools, minimising loss of fields/greenspace	Site is more suited to its current local community sports and rec uses	Complex shape unless fields are significantly compromised	Not ideal for major facility; suits local catchment only; poor public transport access	Land and building tenant issues; consenting issues around scale of facility	TBD; expected to be easier	Dependent on ground conditions and whether existing pools can be retained	Rescope, design and consenting would create delays
Maraawaewae	A potential longer-term option to serve Western Corridor; loss of new court facility	Build aquatics centre instead of indoor courts	Site as currently configured and used is not ideal for a premier aquatics facility	Achievable, but would compromise existing activities more than indoor courts project	Good location as a long-term option in anticipation of growth; poor for Otumoetai and Welcome Bay catchments	Higher cost/higher risk project in terms of Racecourse lease + hospital unknowns	Not yet known	Potentially cheaper if better ground conditions; site topography may influence earthworks costs	Rescope, design and consenting would create delays
	Constrained site and accessibility, plus purchase costs		Site configuration, size and access expected to lead to poor experience	Cramped site for facility of this scale	Hard to access site	Tenancies will need to be negotiated out	Unknown	$9 -10m + potential costs of buying out tenancies	Purchase, tenancies and rescope
Tauranga Domains	Negates stadium opportunity	Either build on Wharapei or instead of stadium or across cricket /rugby field	Potentially good on stadium site	Stadium site and sportsfield site achievable, Wharapei is tight	Good though less accessible site than Memorial	TCC owned Reserve	Poor to back of site, better to front	Cost difference unknown	
	Poor outcome for citywide facility; no cost saving due to purchase price	Purchase (with Transport) and develop	Poor location in terms of access and vicinity	Good (2ha site)	Poor, potential long-term site if Keenan Rd etc happens	Requires purchase (for sale now)	TBD, expected to be superior	Site provisionally valued at circa $20m	Concept could be relocated; potential zoning issue