NAPIER
CITY COUNCIL
Te Kaunihera o Ahuriri

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EXTRAORDINARY SUSTAINABLE NAPIER COMMITTEE

Open Agenda

Meeting Date:	Thursday 17 February 2022
Time:	3.00pm
Venue:	Via Zoom (Audiovisual Link) and livestreamed via Council's Facebook page

Committee Members	Councillor Price (In the Chair), Mayor Wise, Deputy Mayor Brosnan, Councillors Boag, Browne, Chrystal, Crown, Mawson, McGrath, Simpson, Tapine, Taylor and Wright
Officers Responsible	Director Infrastructure Services, Director City Strategy
Administration	Governance Team
	Next Sustainable Napier Committee Meeting **Thursday 24 March 2022**

ORDER OF BUSINESS

Karakia

Apologies

Nil

Conflicts of interest

Public forum

Nil

Announcements by the Mayor

Announcements by the Chairperson including notification of minor matters not on the agenda

Note: re minor matters only - refer LGOIMA s46A(7A) and Standing Orders s9.13

A meeting may discuss an item that is not on the agenda only if it is a minor matter relating to the general business of the meeting and the Chairperson explains at the beginning of the public part of the meeting that the item will be discussed. However, the meeting may not make a resolution, decision or recommendation about the item, except to refer it to a subsequent meeting for further discussion.

Announcements by the management

Agenda items

Minor matters not on the agenda – discussion (if any)

AGENDA ITEMS

1. NAPIER AQUATIC CENTRE CAPITAL REVIEW PROGRAMME

Type of Report:	Operational and Procedural
Legal Reference:	N/A
Document ID:	1431044
Reporting Officer/s & Unit:	Glenn Lucas, Manager Sport & Recreation

1.1 Purpose of Report

The purpose of this report is to recommend the approach to address the capital and operating investment required for the Napier Aquatic Centre.

Officer's Recommendation

The Sustainable Napier Committee:

a. Note the risks to ongoing service delivery at the Napier Aquatic Centre;
b. Note the interdependent relationship with the new aquatic development and the Napier Aquatic Centre capital expenditure requirements;
c. Endorse an additional $8,626,435 of capital funding over 2022/23 and 2023/24 to perform the recommended health and safety and service continuity capital improvements; and
d. Endorse an additional $80,000 of operational expenditure per year of the remaining life of the asset to enable repair and maintenance of end of life components.

1.2 Background Summary

Napier City Council (NCC) recognised that our city's current aquatic centre is not fit for purpose and has undertaken a programme of works, dating back to 2013, to investigate a new facility to address our community aquatic needs.

While the new aquatic facility was being investigated, investment into the existing facility was minimised due to the limited remaining life of the asset. These decisions were made prudently to minimise ratepayer costs and avoid over-investment in a facility with limited remaining life.

While significant progress was made towards a new aquatic facility, further information was sought by Council to allow for informed decision making on the design and location of the new facility. Much of this information is included in the second report (Aquatic Redevelopment: Options for Consultation) being presented to Sustainable Napier today.

Given the new project was paused, the design and build tender cancelled, and the construction funding removed from the Long Term Plan, Napier now has an aging and

poor condition asset, with many parts at end of life, that is required to operate for a number of years to come.

Should Council support a decision to progress with a new aquatic development as part of the LTP 2024-34 deliberations, depending on the option and the design selected, a new facility will not be completed for a number of years (i.e. until at least 2027/28), meaning that the existing centre is required for *at least* another five years.

This has implications for asset management to provide continuation of some levels of service and mitigate the risks of health and safety risks, breakdowns, service outages, degradation of service, and decreased customer satisfaction.

Current state and performance

1. ***A level of community dissatisfaction with Napier's aquatic facilities over the previous ten years.***
    a. Napier Residents Survey has over the last ten years shown a consistent level of dissatisfaction with aquatic facilities, with swimming pools in the poorest performing categories for NCC's results and comparing unfavourably to a New Zealand benchmark satisfaction result of 64%.
    b. Specific themes for this level of dissatisfaction are 'old, run-down, needs upgrading', 'too small, overcrowded, more and larger pools needed'. There have also been negative comments about cleanliness noting that at times this may have also related to wear and tear at the facilities.

2. ***Design limitations restricting use, impacting community benefits delivered and affecting financial and environmental sustainability***
    a. A lack of deep water, limited leisure and play features, a lack of FINA (Fédération Internationale de Natation Amateur or International Amateur Swimming Federation) compliance for competitive swimming, poor sight lines for lifeguards and multiple spaces that increase operating costs
    b. Older and inefficient systems, with multiple plant rooms and a lack of thermal efficiency (old pool has gas-fired heating and poor insulation);
    c. A small and poorly designed reception and very limited onsite retail and catering options;
    d. A facility that does not meet modern standards for universal accessibility; and
    e. A lack of ability to meet new or growing activity areas, including hydrotherapy, aqua programmes and group fitness.

3. ***Deteriorating facility condition, impacting visitation, performance and safety***
    a. The existing facility is aging, at end of life and requiring capital and operational funds to maintain an acceptable standard and continue to operate;
    b. Any investment required to extend the life of the existing facility for the plus years, will not provide any more space or additional facilities to meet the community demand;

c. Increasing service outages due to end of life components failing, impacting the ability to provide community programmes and services reliably;

d. Financial results and visitation levels may decline as the facility ages, meaning less benefits delivered to our community, increased unmet demand that Napier cannot meet, and increasing ratepayers costs of operation;

e. National benchmarks indicate a facility should achieve between 5 – 7 visits per annum per head of population. Napier is between 2.7 and 3.6 visits per head of population; and

f. Napier Aquatic Centre staff are restricted with the development of new programmes and services, and also have to decline requests from community groups for new programmes due to a lack of capacity.

4. There is a long standing community demand that is not being met

a. A Hawke's Bay regional shortage of aquatic space equivalent to three 25m pools was identified by National Facilities Strategy in 2013. NCC Napier Aquatics Strategy endorsed this shortage in 2015. This Strategy document is now dated however recent trends and developments continue to signal strong community demand:

i. Future requirements for Hawke's Bay in this document projected slow population growth for Napier to 2021, where it will peak and begin to decline. Actual population growth for Napier since 2015 outstripped these projections by 14% or the equivalent of 8,180 people;

ii. Since this information was compiled, the Mitre 10 Sports Park Aquatic facility due to be completed mid-2022. However it is expected that given its location and design there will continue to be community demand for Napier's community aquatic facilities.

iii. There is currently no public access available at Napier Aquatic Centre on weekdays from 3 pm to 7 pm as space is prioritised for club swim training and learn to swim. This is a peak time for users in other aquatic centres.

The Napier Aquatic Centre Capital Review Programme

To respond to these issues with the condition of the existing facility, Council commenced the Napier Aquatic Centre Capital Review Programme in 2021 to understand the current condition, and the work and investment required to extend its useful life by ten plus years. The scope of this piece of work includes:

- Providing a clear understanding of condition, scale and complexity
- Defining the desired level of service
- Providing expert recommendations and costings for the identified improvements
- Providing information for effective decision-making to manage 'acceptable' risk

As this work progressed and the understanding of the current state condition increased, the investment required started adding up to extremely significant amounts. Accordingly, officers in October 2021 conducted a workshop with Council to discuss results to date and seek direction to proceed.

Summary of workshop with Council

The information presented in the workshop included the following key points:

- The current state of the facility:
    - Increasing costs for maintenance and repair
    - Slowly declining revenue (noting the impact of Covid-19)
    - Visitors on slow downward trend (noting the impact of Covid-19)
    - NRB Engagement Survey at 49%
    - Missed opportunities to deliver more to our community due to lack of capacity
    - Over-crowding at weekend and the customer experience, staff and safety issues this creates
    - Increasing unplanned outages due to failure
- The future state is likely to feature:
    - Operations costing rate-payers more
    - Visitation continuing to decline
    - More frequent breakdowns
    - NRB results
    - Potential closure of facility
- Across the 12 categories of identified improvements, the total cost to perform all of the identified improvements works totalled close to $12 million dollars
- Within the improvements were replacements to critical plant components that are at high risk of failure. Failure of these parts will result in a significant outage as replacements are designed, sourced and implemented.
- Significant water damage to the internal walls of the Ivan Wilson complex, caused by a lack of concrete nibs in the original design to protect framing from water. The baseplates in large parts of the Ivan Wilson complex are rotten, have a significant mould presence and lack structural integrity
- Poor condition of the changing rooms, flooring, ceiling cladding across much of the facility.
- Weather tightness issues caused by failed membranes , missing or incorrect flashings, incorrect or failed fastenings, poor standards of workmanship with original install or subsequent repairs, undersized gutters, areas of corrosion, gutter failures and issues with debris in gutters and catchments causing egress of water into the facility from numerous points.
- A number of improvement projects to address operational issues, including customer flow and security, over-crowding during weekends, and enhancing the attractiveness and features of the outdoor area.

- Recommendations to improve the accessibility standards to reduce barriers for use and enable more of the community to access the facility.
- The identified costs are far in excess of the capital budgets over the next ten years.
- To undertake wide-scale improvement projects will requiring master planning and project management
- With improvements as recommended, enhanced maintenance budgets will still be required to manage the asset to its new time horizon.
- Any investment to upgrade will not address unmet community need or provide additional community benefit

A summary of the information presented in this workshop is included as an attachment to this document.

Council direction from this workshop indicated:

- A focus on the recommendations that relate to the health and safety of customers and the Napier Aquatic Centre staff; and
- A desire to minimise investment to manage the identified service continuity risks or improve the level of service.

As befitting the age and condition of the centre, the more ‘rocks that were turned over’, the more issues were discovered and the more investment was required to address.

Accordingly, this report seeks to present the recommendations and subsequent work completed since October 2021 under three categories:

- Health and safety and legislative compliance
- Reliability and service continuity
- Levels of service

The impact of the new aquatic development

In parallel with the work to develop a new aquatic centre, officers have been working to progress the development of a new aquatic facility in Napier. Since the pausing of the project, work has been focussed on developing a greater understanding of the site constraints at Onekawa to inform the development of options to go to community for consultation.

If the new aquatic project proceeds to be incorporated to the next LTP, taking into consideration timeframes for consenting, site preparation, detailed design and construction, a new aquatic centre will not be completed for another 5 - 7 years.

Alternatively, if Council decide to fast-track this project, then a new facility could potentially be completed within 4 - 5 years.

These timeframes to completion for a new aquatic facility has a major impact on the investment required for the existing facility. The less the remaining life of the existing centre is, then the less investment is required to extend the life. Some certainty around the remaining life also enables a different ‘lens’ to be applied to specific improvement needs.

This ‘lens’ for many of the required areas of work will have a significant impact on the scope and costs.

The condition of the Napier Aquatic Centre is such that irrespective of the timeframes for completion of a new facility, investment is required to continue to provide a safe and functioning centre. Required investment cannot continue to be pushed out.

Caveats and limitations

There are important caveats and limitations to the information produced to date. These are:

- Age and condition of the facility will result in further 'discoveries' when actual work is undertaken.
- Costs reflect the best estimates with current knowledge and stage of review.
- All costs are subject to market forces including cost escalation, availability of product, and the constrained construction market.

These estimates are the result of the exploratory work undertaken by the Building Asset Management and Sport and Recreation teams. The work to date is not exhaustive, conclusive or reflects the sum total of all the work required to extend the life of the existing centre. Producing a complete picture of requirements is a significant undertaking requiring project management, external contractor master planning, and additional condition assessments.

Health and safety and legislative compliance

This group of identified improvements are related to the health and safety of customers and staff, and also compliance with relevant legislative standards

It is important to note that urgent health and safety issues are, and will continue to be dealt with, as they arise.

These improvements are:

- Switchboard and earthing recommendations (priority)
- Inspect brackets and ductwork above the 25m pool;
- Remediate outdoor air ventilation non-compliance;
- Implement automatic dosing control;
- Install hold-down bolts to splash-park tanks;
- Remedial work on primary steel structure;
- Remediating roof;
- Implement the Flanders Road entrance to Allan's Pool as an accessible entry point;
- Install a lowered area at reception in compliance with NZS4121;
- Install suitable hoists for access to pools and spa, and ensure proper training for staff;
- Seismic review - all plant;
- Remedial work on U Bolt in changing rooms;
- Review secondary fixings;
- Remedial work on Girt Brackets in Hydro Slide tower;
- Remedial work on column base in plant room;
- Acoustic ceiling panel replacement; and

- Remediation of internal walls.

By far the item with the largest cost attached is the remediation of the internal walls of the Ivan Wilson complex, at an estimated cost of $3.4 million. Mould was found present on the base plates and lower parts of the studs most of the areas that were surveyed. Subsequent testing revealed no presence of *Stachybotrys* (Black Mould), but high levels of an unidentified dematiaceous fungus. The presence of this unidentified dematiaceous fungus is the reason that the internal wall remediation is included within the health and safety and legislative compliance category.

The remediation option that has been designed and costed was scoped for an additional ten year life and uses good practice approach to addressing the significant issues. How this improvement is addressed is dependent on the remaining life of the asset however at this stage no alternative methods to address this have yet been investigated.

Reliability and service continuity

This group of identified improvements are related to ongoing reliability of the facility, and the ability to provide service continuity to our community without large outages from failure of building, plant and equipment.

These improvements are:

- Building Management System replacement;
- Remedial work on Old Pool (adjusted 2014 estimates);
- Complete (minor) remedial works to air handling systems;
- Develop Planned Preventative Maintenance (PPM) programme;
- Develop Operations and Maintenance (O&M) Manuals;
- Compile plant and mechanical as-built plans;
- Minor items including stock to be held of spares;
- Safety recommendations - Priority B and C;
- Switchboard and earthing recommendations - Priority B and C;
- Water quality analysis and assessment;
- Invasive inspection of Roof Cavity and Mezzanine area; and
- Heat pump remediation.

This category features the heat pump remediation and the replacement of the Building Management System. The main heat pump plant in the Ivan Wilson complex is assessed to be a critical failure risk that would result in an inability to heat the water should it fail and a long period of no service while a replacement system is designed, sourced and installed. Options for replacement and costings have been developed by Jackson’s Engineering, with the costs for the preferred option included in the total budget.

Similarly the Building Management System (a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment) is a legacy unit and requires replacement in the short term. Critical failure of this item will likely lead to extended closure of the Ivan Wilson facility.

The remedial work on the Old Pool is an item that is dependent on the remaining life of the building. As befitting its age and lack of significant upgrades, the building and

cladding is in poor condition. The shorter the remaining life of the asset, the less investment is required on the Old Pool structure.

Levels of service

This group of identified improvements are related to levels of service for our community. These items do not relate to health & safety or legislative compliance, nor do they necessarily impact the ability to provide a reliable service. Rather, they impact the quality of the service and experience to our customers and community.

These improvements are directly aimed at addressing ongoing community input around the condition of the pools, and improve the level of service through a reception redesign, an update of the outdoor play area and the construction of an outdoor eating area to help spread the congestion during busy weekends.

Given the condition of the facility, these improvements are important to be able to provide a facility in an acceptable condition, though the scale of investment required will reduce the less remaining life the existing facility has.

These improvements are:

- Ivan Wilson - Refurbishment of male, female and family changing rooms
- Ivan Wilson - Interior painting
- Old Pool - Refurbishment of male and female changing rooms
- Old Pool - Asbestos ceiling replacement or treatment
- Old Pool - Interior painting
- Old Pool - Flooring replacement
- Gym - Refurbishment of male, female and family changing rooms
- Allan's Pool - Refurbishment of male, female and staff changing rooms
- Allan's Pool - Ceiling and wall lining replacement
- Accessibility - Install new signage at reception and throughout facility
- Accessibility - Use colour contrasts and textured pathways for entry and navigation
- Accessibility - Door upgrades including width of frame, effort required to open, accessible door hardware and glazing panes and kick plates
- Accessibility - Amend existing and construct new accessible changing and toilet facilities
- Reception and office redevelopment
- Construct covered, all-weather outdoor eating area
- Outdoor area refresh including shade, BBQs and playground

The H1/AS2 Energy Efficiency requirements that will become mandatory from November 2022 should be a consideration for any work involving replacement of facility cladding.

The understanding of these new requirements is that if it is a like-for-like replacement of a building element, then it is permitted to remain as it is. So a simple replacement of profiled metal roofing with profiled metal roofing would not cause a requirement to upgrade insulation requirements.

However, if work was undertaken to change the building fabric, then the works will have to comply as if it were a new building. For example, if it was decided to replace the profiled metal roofing with an insulated panel system, or to insulate the outside of the block walls, these would have to comply with the requirements of the H1/AS2 energy efficiency standards if consented after November 2022. Ratings for the existing building are well short of the requirements of the standard.

Cost estimates for remedial work

	From	To
Health and safety and legislative compliance	5,289,603	5,405,303
Reliability and service continuity	3,498,076	3,811,616
Levels of service	2,020,472	2,422,972
TOTAL	**$10,808,151**	**$11,639,891**

For the purposes of this paper the higher cost estimates (i.e. far right column) will be used noting that Officers will continue to look for cost savings in project management.

Additionally, please note the above table reflects the estimated costs of the remedial work. The further tables will consider and subtract the existing LTP budgets.

Additional CAPEX requests

Given the time and complexity of the required works, the investment across the three categories has been spilt across the following three years of the LTP. However given the current contractor and supply chain constraints, Officer's will maintain flexibility in bringing forward or postponing work as appropriate within overall budgets.

As noted above, the existing LTP budget amounts have been subtracted to identify the differential amounts requested.

The options for remedial works to address Health and Safety, Reliability/Service Continuity and Levels of Service are outlined and costed as follows:

Option 1: Health & Safety/Legislative Compliance only

	Y02	Y03	Y04	Total
Health & Safety/Legislative Compliance	2,702,652	2,702,652	-	
Existing LTP CAPEX	-348,121	-242,363	-	
TOTAL	**2,354,531**	**2,460,289**		**$4,814,819**

Option 2: Health & Safety/Legislative Compliance and Reliability/Service continuity (recommended)

	Y02	Y03	Y04	Total
Health & Safety/Legislative Compliance	2,702,652	2,702,652	-	
Reliability/Service continuity	1,905,808	1,905,808	-	
	4,608,460	**4,608,460**	**-**	
Existing LTP CAPEX	-348,121	-242,363	-	
TOTAL	**4,260,339**	**4,366,097**		**$8,626,435**

Option 3: Health & Safety/Legislative Compliance, Reliability/Service continuity and Level of Service

	Y02	Y03	Y04	Total
Health & Safety/Legislative Compliance	2,702,652	2,702,652		
Reliability/Service continuity	1,905,808	1,905,808		
Level of Service	807,657	807,657	807,657	
	5,416,117	**5,416,117**	**807,657**	
Existing LTP CAPEX	-348,121	-242,363	-116,459	
TOTAL	**5,067,996**	**5,173,754**	**691,198**	**$10,932,948**

It should be noted that depending on Council's decisions around new pool facility investment, parts of Option 3 may not be needed.

The economic value of investment into the current facility

BECA in conjunction with Architecture HDT completed a structural assessment of the Old Pool for inclusion in this scope of work. This report included the following statement in its conclusion:

> *'Significant investment will be required if the building is to continue to be operated beyond 10-15 years. A more detailed scope of work could be developed and a cost estimate be prepared to understand the feasibility and benefit of upgrade works when compared with a new building.* ***Given the age and condition of the building, it is unlikely that such an investment would be considered economical****.'*

Though the subject of the above statement was the structure of the Old Pool, the condition of the entire facility as evidenced by the review to date is poor, with more investment identified the more aspects are reviewed. The costs, complexity, risks of cost overruns due to 'ongoing discoveries' as befitting an asset of its age and condition indicate that there is a high risk of significant improvements being a project with large cost and time overruns.

Significant investment in the facility, while providing a safer, more reliable facility and improving the customer experience, will not provide any further aquatic space and features to meet community demand.

1.3 Issues

Dependence on the timeframes for the aquatic development: the Prebensen/Tamatea Drive option is considerably shorter in terms of project completion, and therefore will

reduce the capital and operational investment required to extend the life of the Napier Aquatic Centre.

1.4 Significance and Engagement

Additional investment will need to be included in the Annual Plan Consultation Document and consulted on as part of this process.

1.5 Implications

Financial

- Additional capital investment for recommended renewals and improvements
- Operational increases for enhanced maintenance and repair.

Social & Policy

- The contribution of the existing centre to the social wellbeing of its community. Despite the age, condition and capacity limitations, the facility is an integral contributor to the wellbeing of a large number of Napier's community, with an average of 180,000 visits per year.

Risk

- Project cost and timeframe overruns due to poor condition of facility and general cost escalations
- Master planning costs for a significant project (including level of service recommendations) have not been included in cost estimates.

1.6 Options

The options available to Council are as follows:

a. Endorse an additional **$4,814,819** capital in the Annual Plan to include the work required to address **health and safety and legislative compliance**, or
b. Endorse an additional **$8,626,435** capital in the Annual Plan to include the work required to address **health and safety and legislative compliance and service continuity/reliability**, or
c. Endorse an additional **$10,932,948** capital in the Annual Plan to include the work required to address **health and safety and legislative compliance and service continuity/reliability and level of service**, and
d. Endorse an additional $80,000 of operational expenditure per year of the remaining life of the asset to enable inspection, repair and maintenance of end of life components, or
e. Consider closure of the Napier Aquatic Centre.

1.7 Development of Preferred Option

The preference is for additional capital and operating expenditure as endorsed by Council to be incorporated within the current Annual Planning process. If this is not achievable given decisions or timeframes, then the additional investment will require inclusion is an out of cycle process or a future Annual Plan or LTP process.

1.8 Attachments

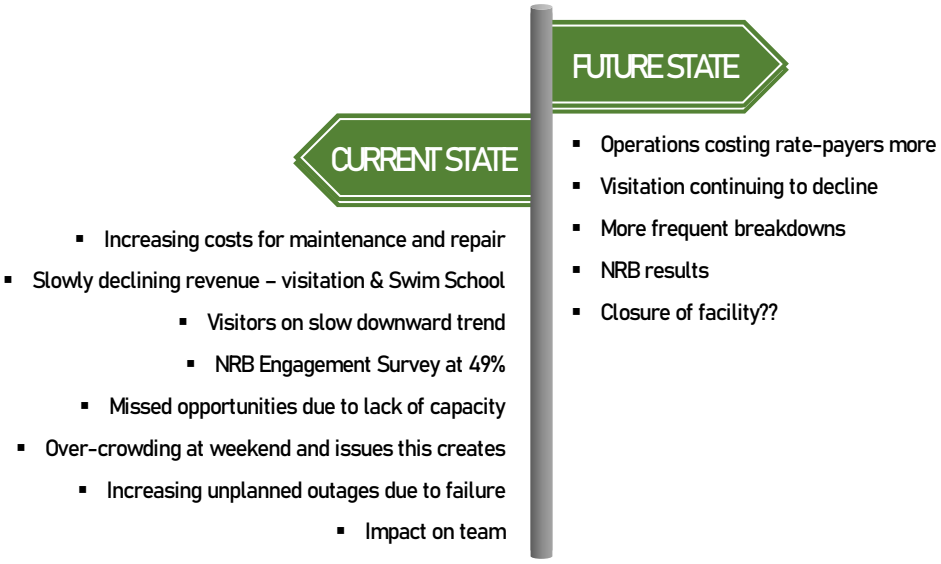
1 Attachment A: Summary of Workshop with council - 5 Oct 2021 ⇩
2 Attachment B: Summary of cost estimates by category ⇩
3 Attachment C: Napier Aquatic Centre LTP Capital Budget ⇩
4 Attachment D: BECA - Napier Aquatic Centre Updated Condition Report 2021 ⇩

Summary of Workshop with council – 5th October 2021

1. **Purpose of workshop**
   - To provide an understanding of condition, scale and complexity
   - To get a clear direction for addressing urgent priorities
   - To get a clear direction for next steps with the Capital Review Programme

2. **Agenda**
   - Virtual tour
   - Why do we provide aquatic facilities
   - Where are we at?
   - Our findings to date
   - Estimated costs of remediation
   - Where to from here

3. **Where are we at**



4. **Why was it commenced?**
   - Budget for a new aquatic facility removed from LTP
   - Renewals and improvement projects had been delayed to impending decommissioning
   - Adopt a 10+ year horizon with reliable and continuous service
   - At an ‘acceptable’ level of service – to be defined
   - Get ‘under the hood’ to develop picture of what is required
   - Provide expert recommendations and costings
   - Provide information for effective decision-making

5. **Caveats and limitations**
   - Age and condition will result in further ‘discoveries’ when actual work is undertaken
   - Best estimates at the level of detail we are at

- Hidden ‘surprises’ the more rocks we turn over
- Haven’t covered everything – but due to age and condition it is likely to be a consistent story
- Subject to market forces – cost escalation, availability of product, constrained construction market

6. Our findings to date

Findings were grouped into the following 12 categories

- Plant and mechanical
- Electrical
- Structural – Old Pool
- Roof assessment
- Internal walls
- Update Ivan Wilson
- Update Old Pool
- Update Gym
- Update Allan’s Pool
- SPM Asset Renewals
- Accessibility improvements
- Improvement projects

Plant and mechanical

Why is it required?	Ensuring reliable, efficient and sustainable operation of all plant and mechanical components 23k of repair this year
What are the recommendations?	Urgent recommendations: ▪Replace Building Management System ▪Remediate critical failure risk of the main Heat Pump plant Immediate recommendations (0-18 months) ▪Complete (minor) remedial works to air handling systems ▪Remediate immediate risk of electrocution from the electric immersion elements (underway) ▪Conduct water quality test to determine extent, if any, of internal corrosion in tank and pipework ▪Carry out inspection of brackets and ductwork above the 25m pool to understand risk of collapse ▪Remediate non-compliance with NZBC G4 in respect of outdoor air ventilation ▪Implement automatic dosing control for all bodies of water ▪Compile accurate and detailed as-built & O&M ▪Develop an enhanced Planned Preventative Maintenance programme
How much?	Urgent recommendations – 331,100 – 461,100 Intermediate recommendations 67,500 – 152,500

Risks	▪Critical failures of facility causing prolonged service outages ▪Health and safety risks to staff and customers ▪Insufficient budget to perform required maintenance ▪Reactive maintenance - conducting repairs when things break, inability to budget, and incurring ongoing service outages
Source documents	▪Napier Aquatic Centre Mechanical HVAC, Pool Heating and Filtration & Treatment Condition Survey: Jackson's Engineering (May 2021) ▪Heat pump options report – Jackson's Engineering (May 2021) ▪Napier Aquatic Centre - HVAC, Pool Water heating and F&T Plant - Dilapidation Risk Matrix (May 2021)

Electrical

Why is it required?	Ensuring that the facility is safe, and reducing risk of unplanned electrical outages
What are the recommendations?	▪Safety review, and recommendations ▪Switchboard and earthing review and recommendations ▪Urgent repairs as identified during inspections ▪Issues found related to age of facility and corrosion caused by aquatic environment
How much?	Urgent recommendations – $25,000 – 50,000 Intermediate recommendations - $51,450
Risks	▪Electrocution ▪Fire ▪Unplanned outages
Source documents	Direct Earth reports: ▪Napier Aquatic Centre Earth Condition Report Aug 2021 ▪Napier Aquatic Centre Switchboard Report Aug 2021 ▪Safety Assessment Sheet Napier Aquatic Centre ▪Allan's Pool #4 Sub Board ▪Allan's Pool Main Switchboard ▪Boiler board ▪DB2 + Heating ▪DB2 ▪Electrical Safety Survey Report for Napier Aquatic Centre ▪Gym building

	▪Ivan Wilson Plant Room ▪Main Board ▪Main Switchboard Ivan Wilson ▪MS3 ▪Pavilion ▪Slides ▪Spa Plant Room ▪Switchboard and Sub Distribution Board matrix

Structural – Old Pool

Why is it required?	Ensuring Old Pool is structurally compliant and safe
What are the recommendations?	▪Pool cladding, structure and pool water services condition report 2014 ▪Recommended 1.3million of remedial works ▪A number of deficiencies relating to the lack of an adequate vapour barrier and insulation, double glazed windows and effective acoustics ▪Completed updated Detailed Seismic Assessment – 40% (Moderate risk) – is this sufficient for 10+ more years of use? ▪
How much?	Adjusted estimates from 2017 - $1.913,545 – 1,919,979
Risks	▪Steel degradation due to condensation and lack of insulation
Source documents	▪Napier Aquatic Centre: Review of Detailed Seismic Assessment (DSA) – Old Lap Pool Building - BECA (Aug 2021) ▪Napier Aquatic Centre: Pool cladding, structure & Pool Water Services – Outline Condition Report - BECA (FEB 2014) ▪Napier Aquatic Centre: Pool cladding, structure & Pool Water Services – Outline Condition Report – BECA (FEB 2011)

Roof assessment

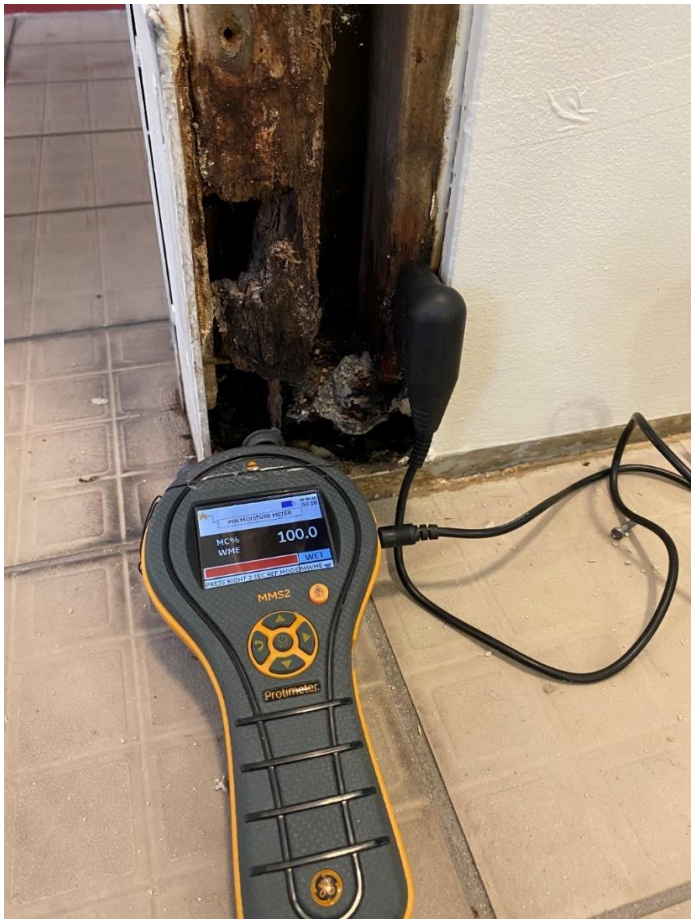
Why is it required?	Getting the ‘top layer’ weathertight to protect and prevent further damage to facility
What are the recommendations?	▪Inspection found numerous issues from failed membranes , missing or incorrect flashings, incorrect or failed fastenings, poor standards of workmanship with original install or subsequent repairs, undersized

	gutters, areas of corrosion, gutter failures and issues with debris in gutters and catchments ▪Scope of repairs ▪ Scaffolding and shrink wrap of building ▪ Remove asbestos soffits and fascia ▪ Remove existing roofing ▪ Carpentry to re-pitch roof ▪ Install new Coorsteel roofiing
How much?	Remidating roof 648,025
Risks	Continuing to have water ingress into facility at numerous points, damaging framing, cladding and equipment
Source documents	▪Napier Aquatic Centre: Visual Inspection of Roof - TURFREY (2 September 2021) ▪NCC NAC Refurbishment Options Elemental Cost Estimate – DEAN & QUANE (27 September 2021)

Internal walls

Why is it required?	Internal cladding and framing is seriously degraded due to 20 years of water ingress during cleaning
What are the recommendations?	▪Site Prep/Demolition/Protection of Services etc ▪Concrete Nibs ▪Construction of New Walls/Linings ▪External Aluminium Joinery ▪Internal Doors ▪Strip Drain to Exterior Wall facing Splash Pad - 300mm wide
How much?	Remediation of internal walls $3,417,742
Risks	▪Moisture in the bottom plates has eroded fixings in places, resulting in compromised structural integrity
Source documents	NCC - NAC Internal Wall Condition Assessment – Dean & Quane (June 2021)

	NCC – NAC Concrete Nib Walls Scope of Works and Costings (June 2021)


100.0
MC%
WME
WET
MMS2
Protimeter

Update Ivan Wilson

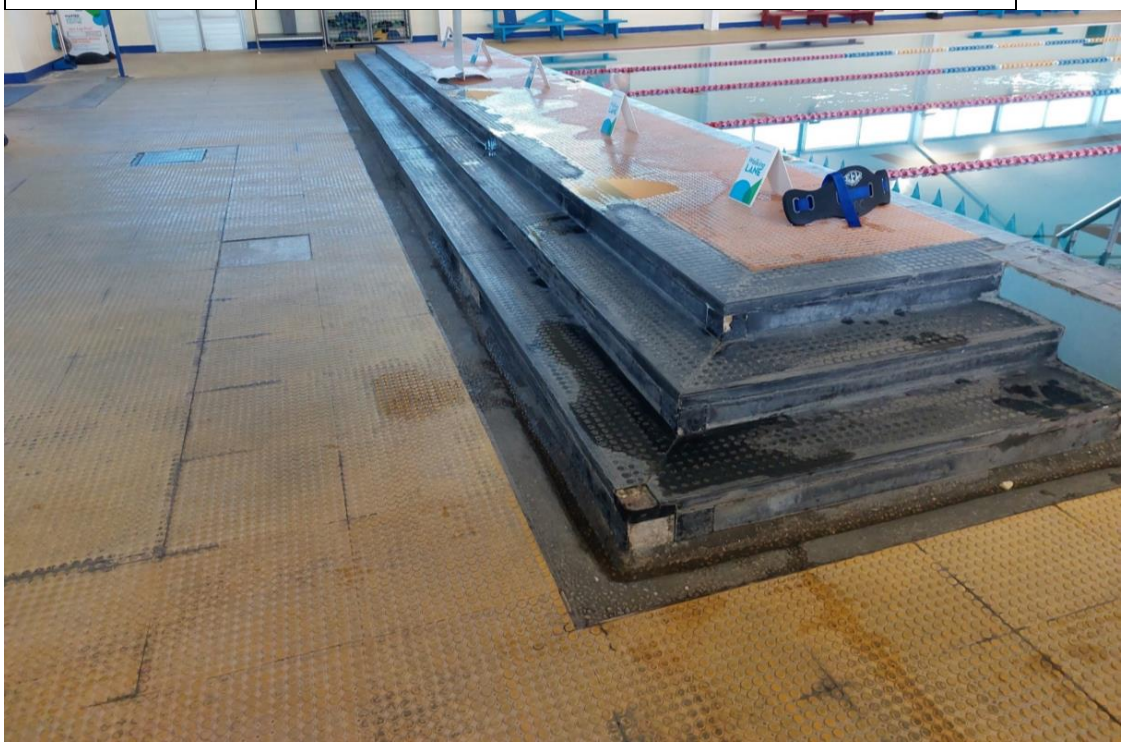
Why is it required?	▪23 year old facility in need of decent upgrade ▪Design issues impacting operations and asset condition	
What are the recommendations?	▪Refurbishment of male, female and family changing rooms – including flooring ▪Incorporation of accessibility improvements from Barrier Free assessment ▪Interior painting ▪Acoustic ceiling panel replacement	
How much?	Refurbishment of male, female and family changing rooms	236,515
	Interior painting	196,041
	Acoustic ceiling panel replacement	217,211
	TOTAL	**649,767**
Risks	▪Ceiling panels failing (again)	

	▪Condition of changing rooms and cladding continuing to impact customer satisfaction and lose customers
Source documents	NCC NAC Refurbishment Options: Elemental Cost Estimate – Dean & Quane (Aug 2021)

Update Old Pool

Why is it required?	▪Pool at end of life and in very poor condition ▪Safety concerns with asbestos cladding ▪Terrible acoustics making teaching environment difficult and impacting	
What are the recommendations ?	▪Refurbishment of male and female changing rooms ▪Asbestos ceiling replacement ▪Interior painting ▪Flooring replacement – pool concourse ▪Acoustic improvements	
How much?	Refurbishment of male and female changing rooms	149,976
	Asbestos ceiling replacement	311,983
	Interior painting	50,371
	Flooring replacement	85,503
	TOTAL	**597,833**

Risks	▪Asbestos condition deteriorating causing risk to customers and team ▪Poor condition of facility continuing to impact customer experience and visitation
Source documents	NCC NAC Refurbishment Options: Elemental Cost Estimate – Dean & Quane (Aug 2021)



Update Gym

Why is it required?	▪Utilisation of available space ▪Improving level of service for partners and customers ▪Increasing potential for additional users ▪One of a few options for growth in visitation and revenue
What are the recommendations?	▪Upgrade male, female and accessible changing rooms
How much?	Refurbishment of male, female and family changing rooms 175,153
Risks	▪Facility and product offering let down by tired and out of date changing rooms ▪Poor universal access – particularly with accessible bathroom ▪Changing rooms a barrier for potential new customers and community groups
Source documents	NCC NAC Refurbishment Options: Elemental Cost Estimate – Dean & Quane (Aug 2021)

Update Allan's Pool

Why is it required?	▪Key facility for learn to swim for smaller kids ▪Condition a barrier for potential customers ▪Enable revenue growth
What are the recommendations ?	▪Ceiling and wall lining replacement ▪Male, female and staff changing room refurbishment
How much?	Refurbishment of male, female and staff changing rooms 99,337 Ceiling and wall lining replacement 122,956 **TOTAL** **222,293**
Risks	▪Declining Swim School numbers ▪Deteriorating facility
Source documents	NCC NAC Refurbishment Options: Elemental Cost Estimate – Dean & Quane (Aug 2021)

SPM Asset Renewals

Why is it required?	Planning for renewal of components based on condition Evidence-based approach to budgeting for renewals	
What are the recommendations?	▪Visual assessment only ▪Inform asset renewals budgets ▪An indication of the condition of almost everything in the facility ▪Some overlap between other items in list	
How much?	Very poor Poor **TOTAL**	170,879 622,447 **793,326**

Risks	▪No planned asset maintenance and renewals ▪Insufficient budget to address components as they reach poor condition or end of life
Source documents	Summary Asset Management Plan: 400 – Onekawa Pool Complex – SPM (Aug 2020)

Accessibility improvements

Why is it required?	Addressing existing barriers to use so that everyone can benefit from our facility ▪Report focused on practically improving the accessibility and usage of the existing centre ▪Will not lead to a universally accessible complex
What are the recommendations ?	**Recommendations** ▪Implement the Flander's Road entrance to Allan's Pool as an accessible entry point ▪Install new signage at reception and throughout facility ▪Use colour contrasts and textured pathways for entry and navigation ▪Install a lowered area at reception in compliance with NZS4121 11 ▪Install suitable hoists for access to pools and spa, and ensure proper training for staff ▪Door upgrades including width of frame, effort required to open, accessible door hardware and glazing panes and kick plates ▪Amend existing and construct new accessible changing and toilet facilities
How much?	**TOTAL (ballpark) 10,000 150,000**
Risks	Continuing to have people within our community that cannot benefit from our facility
Source documents	Report on the Approachability, Accessibility and Usability of Aquatic Centre Maadi Road for Napier City Council: Nigel Mead Consulting (March 2021)

"As an incomplete tetraplegic there are no hoist facilities in the old pool I use for walking rehab , there is a total lack of proper disabled changing facilities , family change rooms are not adequate , we need a complete new complex"
"Spa more accessible e.g ramp or lift seat that works. Instructions on how to operate lift seat and who can do this i.e member of the public, support staff?"

"We need a facility that has modern amenities for disabled people (like AC Baths in Taupo has)"

Improvement projects

Why is it required?	Undertaking projects to improve customer experience and address specific customer and team input		
What are the recommendations ?	▪Outdoor area refresh including shade, BBQs and playground ▪Construct covered, all-weather outdoor eating area ▪Redesign of reception and office space to: ▪ improve customer flow ▪ improve security ▪ provide separation from aquatic environment, ▪ Increase retail ▪ increase and improve back office space		
How much?		**From**	**To**
	Reception and office redevelopment	70,000	120,000
	Construct covered, all-weather outdoor eating area (provisional sum)	80,000	120,000
	Outdoor area refresh including shade, BBQs and playground	200,000	300,000
	TOTAL	**350,000**	**540,000**
Risks	▪Increasing community dissatisfaction with Napier Aquatic Centre ▪Ongoing over-crowding issues at weekend's		
Source documents	▪Napier City Council SIL Research 2021 Aquatics Survey (Mar 2021) ▪Napier Aquatic Centre Activity Management Plan 2021-31		

Summary of costs to date

#	Item	Priority	From	To
1.	Plant and mechanical - urgent	Urgent	331,100	461,100
2.	Plant and mechanical - the rest	High	67,500	152,500
3.	Electrical – urgent & priority A	Urgent	56,110	81,110
4.	Electrical - other (not including safety review costs)	Medium	20,340	20,340
5.	Structural - Old Pool	High	2,066,629	2,073,577
6.	Roof Assessment	High	648,025	648,025
7.	Internal walls	High	3,417,742	3,417,742
8.	Update Ivan Wilson	High	649,767	649,767
9.	Update Old Pool	High	597,833	597,833
10.	Update gym	Medium	175,152	175,152
11.	Update Allan's Pool	High	222,293	222,293
12	SPM Asset Renewals	High		793,326
13	Accessibility improvements (provisional estimate)	High	10,000	150,000
14.	Improvement projects	High	350,000	540,000
15.	Contingency (20%)	High - required	1,722,498	1,996,552
			10,334,988	**11,979,318**

How did we get here?

Summary

Condition of facility not great
A large price tag already – with a lot more to discover
Urgent risks to service continuity
Large and complex project requiring master planning, project management
Enhanced maintenance required to manage asset to new horizon
Investment to upgrade will not address unmet community need or provide additional community benefit

Attachment A: Summary of cost estimates to date by category

Health & Safety/Legislative Compliance

Category	Description	Comment	Status	From	To
P&M	Inspect brackets and ductwork above the 25m pool			2,000	4,000
P&M	Remediate outdoor air ventilation non-compliance			3,000	6,000
P&M	Implement automatic dosing control			10,000	20,000
P&M	Install hold-down bolts to splash-park tanks			500	1,500
Electrical	Switchboard and earthing recommendations - Urgent and Priority A		Underway	31,110	31,110
Old Pool structure	Remedial work on primary steel structure	Provisional sum		5,000	15,000
Roof	Remediating roof			648,025	648,025
Accessibility	Implement the Flanders Road entrance to Allan's Pool as an accessible entry point	Provisional sum		5,000	10,000
Accessibility	Install a lowered area at reception in compliance with NZS4121 11	Provisional sum		5,000	10,000
Accessibility	Install suitable hoists for access to pools and spa, and ensure proper training for staff	Provisional sum		40,000	50,000
P&M	Seismic review - all plant			3,000	6,000
Old Pool structure	Remedial work on U Bolt in changing rooms	Provisional sum		10,000	20,000
Old Pool structure	Review secondary fixings	Provisional sum		10,000	20,000
IW	Remedial work on Girt Brackets in Hydro Slide tower	Provisional sum		5,000	15,000
IW	Remedial work on column base in plant room	Provisional sum		5,000	15,000
Walls	Remediation of internal walls			3,417,742	3,417,742
	Internal project management costs (at 25% of project value)			1,050,094	1,072,344
	Contingency (5%)			39,132	43,582
				$5,289,603	**$5,405,303**

Reliability/Service continuity

Category	Description	Comment	Status	From	To
P&M	Heat pump remediation			245,600	345,600
P&M	BMS replacement			85,500	115,500
P&M	Complete (minor) remedial works to air handling systems			25,000	50,000
P&M	Develop PPM programme			3,500	3,500
P&M	Compile as-built & O&M			3,500	3,500
P&M	Minor items including stock to be held of spares			10,000	50,000
Electrical	Safety recommendations - Priority B and C	Provisional sum		15,000	40,000
Electrical	Switchboard and earthing recommendations - Priority B and C			20,340	20,340
P&M	Water quality analysis and assessment			6,000	6,000
Old Pool structure	Remedial work on Old Pool (adjusted 2014 estimates)			2,066,629	2,073,577
Old Pool structure	Invasive inspection of Roof Cavity and Mezzanine area	Provisional sum		5,000	15,000
	Internal project management costs (at 25% of project value)			621,517	680,754
	Contingency (5%)			390,490	407,845
				$3,498,076	**$3,811,616**

Level of service

Category	Description	Comment	Status	From	To
IW	Refurbishment of male, female and family changing rooms			236,515	236,515
IW	Interior painting			196,041	196,041
IW	Acoustic ceiling panel replacement			217,211	217,211
Old Pool	Refurbishment of male and female changing rooms			149,976	149,976
Old Pool	Asbestos ceiling replacement or treatment			311,983	311,983
Old Pool	Interior painting			50,371	50,371
Old Pool	Flooring replacement			85,503	85,503
Gym	Refurbishment of male, female and family changing rooms			175,153	175,153
Allan's Pool	Refurbishment of male, female and staff changing rooms			99,337	99,337
Allan's Pool	Ceiling and wall lining replacement			122,956	122,956
Accessibility	Install new signage at reception and throughout facility	Provisional sum		25,000	40,000
Accessibility	Use colour contrasts and textured pathways for entry and navigation	Provisional sum		5,000	15,000
Accessibility	Door upgrades including width of frame, effort required to open, accessible door hardware and glazing panes and kick plates	Provisional sum		50,000	70,000
Accessibility	Amend existing and construct new accessible changing and toilet facilities	Provisional sum		80,000	130,000
Imp	Reception and office redevelopment	Provisional sum		70,000	120,000
Imp	Construct covered, all-weather outdoor eating area (provisional sum)	Provisional sum		80,000	120,000

Imp	Outdoor area refresh including shade, BBQs and playground	Provisional sum		200,000	300,000
	Contingency (20%)			391,009	428,009
	Internal project management costs (at 25% of project value)			636,514	717,014
				$ 2,020,472	**$ 2,422,972**

Attachment B: Napier Aquatic Centre Capital Budgets and Additional Requests

LTP Budget: Napier Aquatic Centre

NAC Capital	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	TOTAL LTP
Minor Capital	125,000	0	0	0	0	0	0	0	0	0	125,000
Napier Aquatic Centre Renewals	194,417	327,521	242,363	116,459	599,635	488,314	380,868	647,931	525,431	444,003	3,966,943
Reception and Office Redevelopment	50,000	20,600	0	0	0	0	0	0	0	0	70,600
Roof Weather-Tightening Repair	70,000	0	0	0	0	0	0	0	0	0	70,000
400 - Napier Aquatic Centre	**439,417**	**348,121**	**242,363**	**116,459**	**599,635**	**488,314**	**380,868**	**647,931**	**525,431**	**444,003**	**4,754,243**
Redevelopment project											
Napier Aquatic Centre expansion (V2)	0	257,500	264,200	0	0	0	0	0	0	0	521,700
Carry forward from 20/21	565,670										

NAPIER AQUATIC CENTRE

UPDATED OUTLINE CONDITION REPORT

December 2021

Architecture HDT Ltd.

CONTENTS

APPENDICES

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1. PREAMBLE

Architecture HDT has been engaged by Napier City Council to reinspect the existing 25m pool building (Old Lap Pool), and update the condition assessment reports undertaken in February 2011 and 2014.

The primary purpose of the investigation is to determine critical maintenance items and the safety of the existing building This condition assessment considers the building fabric and structure, and does not include for building services. BECA input on structural items is based on photographs provided by AHDT.

Specific items inspected as follows:

Architecture HDT

- Cladding, vapour barrier & respective conditions of these & other key building elements forming the cladding system.
- Pool tank and concourse areas.

Engineering (Beca)

- Structural condition.

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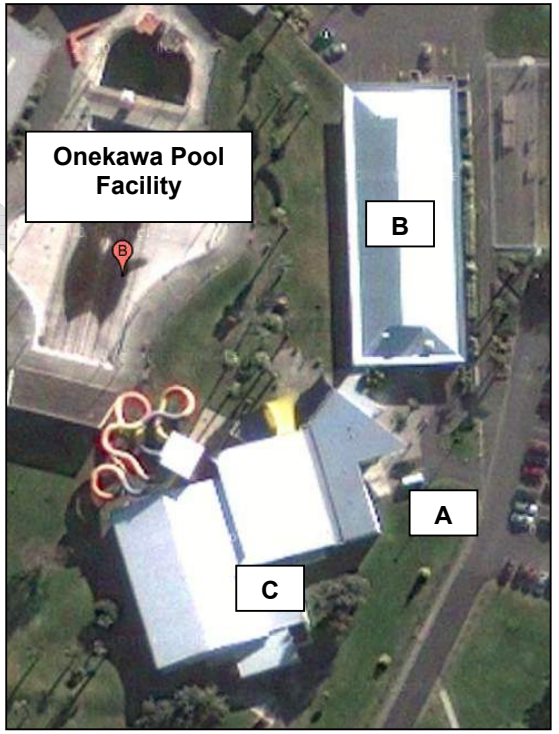
2. AREAS INSPECTED

The current Napier Aquatic Centre pool facility is shown in the aerial photo. **A** denotes the building entry & **B** denotes the building that is the subject of the report. Isolated areas of the 'new' pool **C** were also investigated at the request of NCC (Glenn Lucas).



3. DOCUMENTATION

In preparing this report we have referred to the following documentation.

- **AHDT/BECA Outline Condition Report dated April 2014**
- **AHDT /BECA Outline Condition Report dated February 2011**
- **NCC City Engineer Original Drawings:**

- numbers C.493.5, 6 & 17.

- **BR Tufrey Roof Assessment Report dated 2nd September 2021** (as appended)
- **Roof photos provided by Napier City Council**
- **BECA Review of the Detailed Seismic Assessment dated 6th August 2021** (as appended)

4. BACKGROUND

Constructed in the early 1970's the existing building comprises a concrete 25M swimming pool with steel portal frame structure supporting a timber framed light weight roof. Walls are constructed of concrete block.

This report constitutes a high level assessment of the condition of elements of the building as they could be observed from a non-invasive inspection, and updates the earlier inspection and report undertaken in 2014.

5. INSPECTION

On 15th December 2021, Mark Bates (AHDT) visited the site and met with Napier City Council (Glenn Lucas). The inspection entailed visual examination of the pool hall interior, inspection of exterior surfaces of walls.

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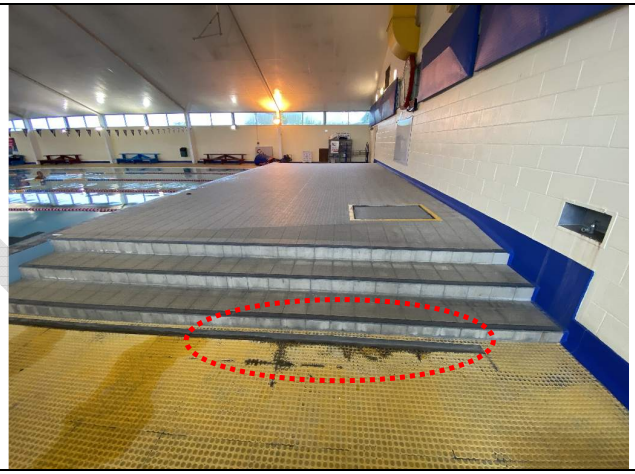
The weather was overcast and cool following recent heavy rain.

6. BUILDING CONDITION

The following table compares findings from the 2014 with the inspection undertaken in 2021.

Item	2014 Report	2021 Inspection Findings	
A	**POOL HALL INTERIOR**		
1	**Floor**		
	The main concourse floor consists of Pirelli type rubber flooring tiles. These are in poor condition. The edges of the tiles are lifting in places, and are unsightly in appearance.	Largely unchanged. • There are small areas where Pirelli tile edges are uplifted, notably at pool ends. • Pirelli tiles are still in poor, but serviceable condition. • Slip resistant ceramic tiles to pool ends are in a worn but serviceable condition. • Note that there is a hazard in the change of level at the balance tank hatch lid. We recommend that the lid be packed to make the hatch flush with the adjacent tiles. • Open drains to pool edges still as existing, with an exposed aggregate finish.	
2	**Walls**		
	Concrete block walls were in good condition.	Largely unchanged; • Paint finishes in good condition, and there is no sign of cracking or wall movement. • As noted in previous reports, there is no insulation to the concrete walls. The walls felt damp in places, due to the cooler outside temperatures and condensation forming on the walls. This is unlikely to be a long term durability issue.	

Item	2014 Report	2021 Inspection Findings	
3.	**Windows and Doors**		
	Windows comprise a non-thermally broken, single glazed commercial suite more suited to shop front purposes. As noted previously, they are unsuitable for use in a modern pool facility.	Condensation was noted on the inside of windows, due to the cooler exterior conditions and the warm humid indoor conditions. While unsightly, this is not a long term durability issue. Refer general comments below on building envelope and energy efficiency.	
4	**Ceilings**		
	The painted Hardiflex ceiling within the pool hall was in generally good condition. There were no signs of staining as a result of water (leaks and/or condensation) The pool hall was noted as having poor acoustics, and the HVAC plant was particularly noisy. It was noted that the hardiflex sheets were sealed with silicone sealant to the portal frames and that this junction had subsequently been painted over. This has led to unsightly peeling of the paint at this junction. (refer photo above)	The Hardiflex ceiling was in generally good condition, with some flaking noted to paint coatings. The silicone sealant to the portal frame has paint peeling as was noted in the previous report. In the absence of an impervious vapour barrier and minimal insulation, the ceiling and how it is sealed to adjacent structure takes on added importance as a first line if defence for chloramine laden air getting into the ceiling cavity. If this pool air is able to enter the ceiling cavity, it can be expected that condensation will form on the underside of the roofing and affect the durability of building fabric within this space. Refer to comments below on the roof and supporting structure.	

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Item	2014 Report	2021 Inspection Findings	
5.	**Primary Steel Structure**		
	The steel portals extend to concourse level, and as these are subject to frequent wetting are prone to corrosion. It is clear that a real effort is being made to control the corrosion, however there is corrosion apparent around some of the baseplates, and also visible to the back face of the portal columns.	As previous, some effort has been made to treat corrosion as it has appeared. It is not clear whether column bases have been repainted since the previous report in 2014. Ongoing treatment of rust is required given that columns are concourse mounted, or alternatively, a waterproof concrete plinth be installed around the column bases for added protection. Rust treatment and repainting behind the columns is required where accessible. *BECA (Murray Chalmers comment as follows;* *On the evidence of the photos provided, it does not appear that the extent of corrosion has reached a point where it would result in a significant reduction in the structural capacity of the columns. However remedial work is required , which should include the following:* *i. Breakout and remove mortar packing under base plates back to sound mortar. Provide temporary shims to support columns if required.* *ii. Remove loose rust to base plates and hold down bolts back to bright metal or original galvanised coating if present.* *iii. Treat base plates and hold down bolts with rust neutralizer, prime with zinc rich paint, and paint repairs to match existing.* *iv. Repack mortar beneath base plates.* *v. If severe corrosion is found during the remedial work, indicating a substantial loss in steel area of any component, Beca should be* advised.	 

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6.	Roof Cavity & Mezzanine Area		
	The original report dated February 2011 recorded that there was no vapour barrier. There is no vapour barrier shown on the original drawings, however we did observe a polythene vapour barrier (of sorts) in place in the area of the mezzanine (refer below) This polythene layer was also noted in the first structural bay at the northern end of the pool hall, and is assumed to run the full length of the pool. This was most likely not noticed in the earlier inspection as the roofing mesh would not have allowed access below the polystyrene insulation when the metal roof was lifted for inspection. ***Note: This vapour barrier is largely ineffective, as polythene sheet joints are not taped.*** *As noted in the previous report, the 25mm thick insulation installed above the polythene is largely ineffective as a thermal barrier. It is loose laid with numerous gaps, and has minimal insulation value as a product. As a guide, the insulation currently present in the roof has an R (resistance to heat transfer) value of approx 0.58. A fully sealed XPS vapour barrier 40mm thick can expect an R value of around 1.32, and an insulated Kingspan panel system 50mm thick has an R value in excess of 3.5, ie provides 6 times the heat resistance than the currently installed polystyrene sheet.*	A non-intrusive investigation of the ceiling cavity was undertaken, with this space being viewed from the mezzanine area. Conditions in the roof cavity are unchanged from earlier reports; • Timber framing is heavily stained, indicating that pool moisture is able to access this space and condensate in cooler outdoor temperatures. A moisture reading was undertaken (refer photo) revealing elevated moisture levels. (Timber moisture levels are typically in the range of 12-14%). It was not possible to determine what level of timber treatment was used. The timber appeared sound, however if there is no protective treatment it can be expected that this timber will decay over time. • As noted in previous reports, the building paper and netting is in poor condition. The building paper has disintegrated in places and lacks integrity, and the wire netting is rusting in places. • Some rust was noted on the structural steel members. This was noted in previous reports also. • The polythene vapour barrier and polystyrene insulation are unchanged, and form in ineffective barrier to pool moisture. • Given the likelihood that there has been no invasive work undertaken within the cavity, it is reasonable to assume that the condition of building fabric has deteriorated. We recommend that an invasive inspection be undertaken in the next 1-2 years, and an ongoing inspection regime established.	

7.	**Changerooms**		
	Change rooms are of simple robust construction with painted concrete block walls, painted fibre cement ceilings in pvc jointers and concrete floor finished with what appears to be an acrylic plaster coating. *There were no signs of physical degradation of a significant nature. However, we did note that plaster floor coatings are failing at gutters near the whb and in the showers. There were a number of locations on the changeroom ceiling where paint was peeling in patches.*	Unchanged from previous inspection; • Ceiling paint finish flaking. • Block walls are in good condition and appear to have been painted recently. • Noted that the space between the column and the block wall (as pictured) is unfilled, and there is degradation noted to the ties between the column and the wall. Refer BECA Comment below.	
		BECA (Murray Chalmers) Comment; • *The corrosion to the U-Bolt connections between the columns and change room block walls was identified as an issue in Section 2.2 of the initial April 2015 DSA. It was again highlighted in Notes following the Summary of Findings the August 2021 update as follows:* *Notes:* • *The portal leg/masonry wall connection was assessed at 55% being governed by the shear capacity of the U-bolt ties. However, there was one connection that was badly corroded and was assessed at 20%. The score of the portal/masonry wall connection was scaled down from 55% to 40% to compensate for the corroded connection. If this corroded connection is replaced, the score for the portal/masonry wall will be 55%.* • *The capacity of the U-Bolts is the governing factor limiting the overall score for the Old Lap Pool Building to 40%NBS.* • *Consequently, remedial work is required and these U-Bolt connections should be upgraded or replaced.*	

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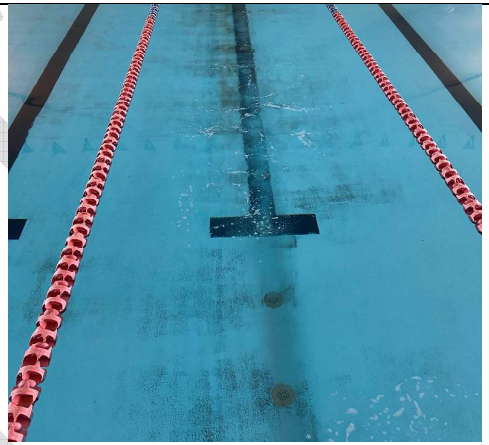
Item	2014 Report	2021 Inspection Findings	
8.	**Pool Tank**		
	The lanes are approx. 2.15M wide and the pool depth is nominally 1.05M to 1.1M. Pool paint finishes are in worn condition. We understand that the pool was painted approx.. 3 years ago, and repainting is required in the next year, along with the replacement of construction joint sealant. A stainless steel nosing has been installed to the long sides of the pool. This nosing is slightly out of level and has little slip resistance. The level discrepancy is not considered a major issue, but equally could be readily corrected by packing the stainless steel channel in order that even flow is experienced into the roll out channels. Tiles to the top of the balance tank, nibs and steps are well worn and in generally unsightly in appearance.	The condition of the pool tank appears to be unchanged from the previous inspection. The previous inspection noted that the pool was to be repainted in 2015. • Pool paint finishes are significantly worn, and the pool requires repainting. The long term durability of the concrete may be affected if left unpainted. • It is not clear whether the stainless steel pool edge level has been corrected, however there was no noticeable level difference. • The pool tank appears to be a single large tank, with no movement control joints visible.	
9.	**Secondary Fixings (lights, HVAC ducts etc)**		
	Not inspected in 2014.	In recent years, there has been an increasing awareness the risk of secondary fixings supporting elements such as lights, speakers and HVAC ducts pose. A limited inspection (where possible) of light fighting fixings was undertaken, and these appeared sound. It is worth noting that as these are mounted on the column face they are not directly above circulation routes and therefore represent a reduced risk to patrons. Access was not possible to HVAC duct supports. We recommend that these supports and fixings be inspected on a 5-7 year basis.	

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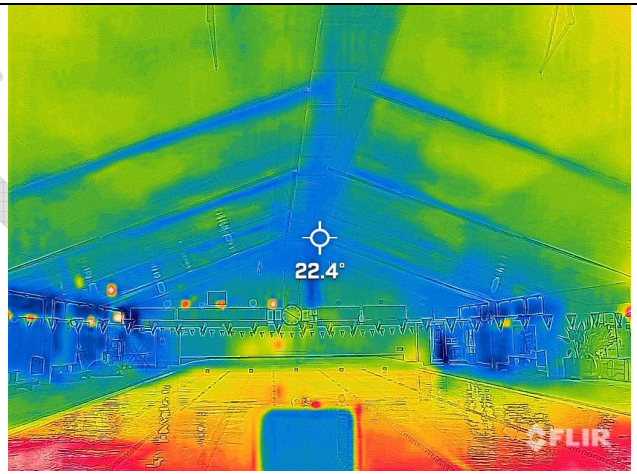
10.	**Generally** A FLIR infrared camera was used to assess the thermal performance of the building fabric. Refer adjacent photo. The blue (colder) areas indicate where condensation is likely to form first. The entire pool hall has minimal insulation, with only 25mm thick of EPS sheet in the ceiling/roof cavity. The lack of insulation has two consequences; • The building fabric is highly inefficient, and is likely to use significantly more energy to heat than a modern building of the same type. • The lack of insulation and an effective vapour barrier promotes condensation during colder outside conditions. This chloramine laden condensation is corrosive and contributes to deterioration of the building fabric. It is worth noting that the new H1/AS2 Energy Efficiency requirements will become mandatory from November 2022. If these requirements were to be applied to the current building, a minimum R value (thermal resistance) of 4.0 for the roof would be required (compared with approximately R0.60 in the current construction). An R value of 2.4 would be required in the walls, compared with approximately 0.18 currently. These increased thermal requirements mean that the only effective method of achieving these values would be the use of insulated panels such as Kingspan high humidity panels.	

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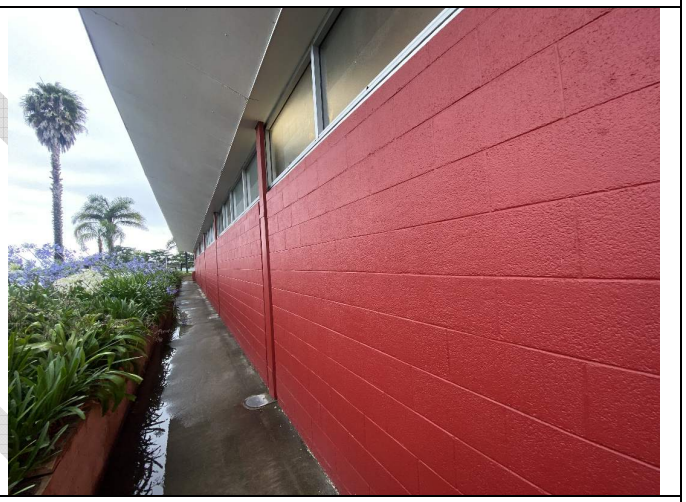
Item	2014 Report	2021 Inspection Findings	
B	**POOL HALL EXTERIOR**		
1	**Masonry Walls**		
	Some fading of the paint has occurred, but generally masonry walls are in good condition. It is recommended that when these walls get repainted, they be painted in a lighter colour to reduce the thermal stress on the paint finish.	Masonry walls are in good condition, and appear to be have been recently repainted. As noted in the 2014 report, a lighter colour may have greater durability and reduced maintenance requirements.	
2.	**Fibre Cement Walls**		
	Fibre cement cladding appears to be direct fixed to the framing, and is painted to match the adjacent masonry walls. Sheet fixings are clearly broadcast on the exterior of the sheet. The condition of the paint is as for the masonry walls, and when next painted this cladding would be best painted in a textured, light coloured waterproofing product such as Resene Thixalon.	No change to the 2014 report, noting that it appears that the fibre cement cladding has been repainted.	

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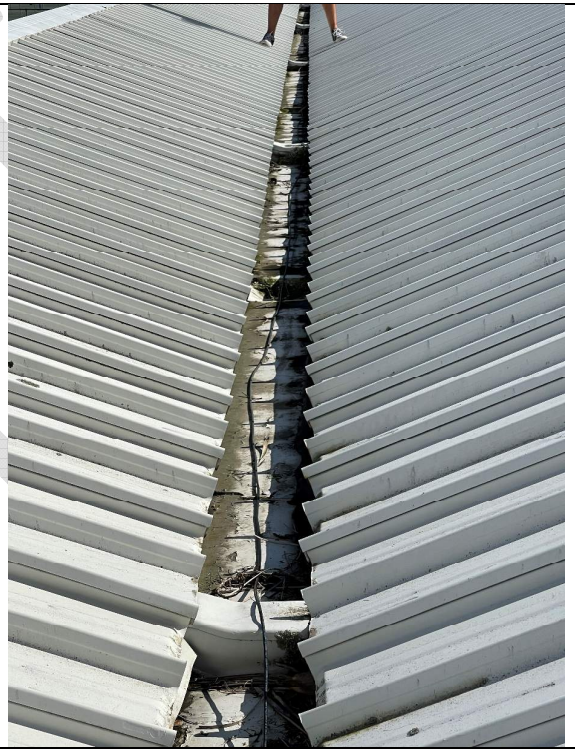
Item	2014 Report	2021 Inspection Findings	
3.	**Roof**		
	The profiled metal roofing and associated roof fixings are in good condition. *The membrane gutters are in poor condition. Sides of the membrane gutter have come loose in places, seriously affecting the integrity of the gutter. There is no sign on the interior of the building of it having leaked to date. New leafguards are required to protect downpipe positions from blocking due to accumulated leaves.*	The roof was not inspected. The Tufrey Report dated 2nd September 2021 was reviewed. It is not known whether any of the work identified in the Tufrey report has been undertaken. The report identifies a number of issues identified in earlier reports that require attention; • Membrane gutters in poor condition, with poor membrane adhesion to substrate and membrane material failure. • Significantly, it is noted that gutter capacity is undersized. • Membranes gutters are full of debris and require cleaning. • It was noted during the visit that there were two locations were leaking had occurred following heavy rain from the previous evening. One of these locations corresponds with the location identified in the Tufrey report. • Some corrosion to roof sheets.	

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Item	2014 Report	2021 Inspection Findings	
4.	**Soffits & Fascia**		
	A small amount of paint bubbling was noted on the fascia.	The dark blue fascia has a number of bubbles in it, as noted previously. Soffit lining has a textured finish and expressed fixings. The soffit is in generally good condition, with a few minor cracks which will not significantly affect the weathertightness or durability of the building.	

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C	IVAN WILSON BUILDING	
1.	**Hydroslide Area Bracket** Advise from BECA (Murray Chalmers) as follows; *Girt Bracket to Hydro Slide* - *Similar to the column bases, on the evidence of the photos provided, it does not appear that the extent of corrosion has reached a point where it would result in a significant reduction in the structural capacity of the bracket.* - *Remedial work is required , which should include the following :* *i. Remove loose rust to base plates and hold down bolts back to bright metal or original galvanised coating if present.* *ii. Treat brackets and bolts with rust neutralizer, prime with zinc rich paint, and paint repairs to match existing. Replace bolts if easier option.* *iii. If severe corrosion is found during the remedial work, indicating a substantial loss in steel area of any component, Beca should be advised.*	
2.	**Plant Room Column Base** Advise from BECA (Murray Chalmers) as follows; *From the photos , it would appear similar remedial work to that outlined above for the Old Lap Pool is required.* *i. Breakout and remove mortar packing under base plates back to sound mortar. Provide temporary shims to support columns if required.* *ii. Remove loose rust to base plates and hold down bolts back to bright metal or original galvanised coating if present.* *iii. Treat base plates and hold down bolts with rust neutralizer, prime with zinc rich paint, and paint repairs to match existing.* *iv. Repack mortar beneath base plates.* *v. If severe corrosion is found during the remedial work, indicating a substantial loss in steel area of any component, Beca should be advised.*	

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7. SUMMARY

There are a number of maintenance items that require attention if the building is to continue to operate for the next 5-10 years;

- Ongoing maintenance of structural steel coatings. This relates to the portal column bases, in addition to rectification of the U-bolt connection to the block walls within the changerooms.
- The roof is in generally poor condition. The internal gutters are noted as being undersized and in poor condition, requiring more urgent attention.
- The pool tank requires repainting.
- As identified previously, the building has very little in the way of insulation and functioning vapour barrier. This affects the energy efficiency of the building, and over time affects the durability of the building fabric. This is particularly the case with steel members within the ceiling cavity, which as they are not seen, can be forgotten. Intrusive inspections were undertaken in the ceiling cavity in 2011 and 2014 and there was little additional change noted in the condition of the steel members. While it is therefore unlikely that the fabric within the cavity has deteriorated to the point where it affects the safety or use of the building, some 7 years has passed since the last intrusive inspection. We therefore recommend that roof sheets be removed in select locations in the next 1-2 years to allow this, and an ongoing inspection regime implemented. This could be coordinated with work to the internal gutters noted above.
- In addition to the work described above for the old pool building, two important maintenance work items are identified for the Ivan Wilson building;
    - Rectification of the column base within the plant room.
    - Rectification of a badly corroded bracket in the hydroslide area.

Significant investment will be required if the building is to continue to be operated beyond 10-15 years. A more detailed scope of work could be developed and a cost estimate be prepared to understand the feasibility and benefit of upgrade works when compared with a new building. Given the age and condition of the building, it is unlikely that such an investment would be considered economical.

Mark Bates

signed for **ARCHITECTURE HDT LTD.**

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