Otago Therapeutic Pool Trust
Dunedin Physio Pool

Feldspar

Feasibility Study

By: Feldspar Associates

For: Otago Therapeutic Pool Trust

Date of this Report: August 2024

A. GENERAL

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C. DOCUMENT PURPOSE

In March 2023 Feldspar Associates were commissioned to research options for the provision of a hydrotherapy pool for Dunedin and to consult on the options identified.

D. CLIENT DETAILS

This feasibility study has been commissioned by the Otago Therapeutic Pool Trust and funded by the Lotteries Grants Board.

E. EXECUTIVE SUMMARY

The closure of the Physio Pool in May 2021 has deeply affected the community. The pool had been a vital provider of hydrotherapy services to Dunedin for almost 80 years. Although owned by Health NZ, the facility has been operated by the Otago Therapeutic Pool Trust, (the Trust), for nearly four decades. The pool was closed as the result of mechanical failure and reopening will require significant investment.

Over the past year, the Trust has collaborated with Health NZ, the DCC, and a professional consultant team on a feasibility project to explore options for either redeveloping the existing pool or considering a replacement facility. The feasibility work, funded by Lotteries, assessed two options for the existing pool and two replacement options, ranging from short-term compliance upgrades to a full redevelopment or replacement with enhanced facilities.

This report concludes that while the redevelopment of the existing pool is feasible, it is likely that the continued operation of the facility would result in significant financial deficits for the Trust. Even after redevelopment, there would also be severe limitations on site accessibility.

The report makes two key recommendations:

a. Firstly, that the Trust collaborates with the DCC to ensure hydrotherapy services are integrated into its aquatics strategic plan, suggesting either a standalone hydrotherapy centre or inclusion of a hydrotherapy pool in a new or existing facility.

b. Secondly, that the Trust seeks financial support from the DCC, Health NZ and other funders to re-open the existing pool for ten years to maintain hydrotherapy services for the city while the DCC's strategic plan and associated projects are completed.

F. BACKGROUND

1. ABOUT THE DUNEDIN PHYSIO POOL

This offer of service has been commissioned by the Otago Therapeutic Pool Trust, (the Trust).

The Physio Pool building dates from 1946, it was one of the first of its kind in New Zealand and is protected as a Category 2 Historic Place.

The building is owned by Health NZ/Te Whatu Ora and the pool has been operated under agreement by the Trust. The Trust has operated the pool as a public facility for over 40 years.

Owing to significant and long-term issues with the Physio Pool building and its plant, the facility was forced to close in May 2021.

For nearly 80 years, the Physio Pool has provided an essential community service, particularly for our older people, for people with disabilities and for those with long term health and mobility difficulties.

2. ABOUT THE OTAGO THERAPEUTIC POOL TRUST

The Trust was established in 1983 to maintain the use of the pool for therapeutic purposes by patients from hospitals in Otago and for the general public.

The Trust's main role has been to operate public sessions and provide qualified lifeguards, provisioning of facilities and cleaning.

Despite the pool's closure, the Trust remains committed to finding ways to maintain hydrotherapy services for the city.

3. PREVIOUS REPORTS AND INVESTIGATIONS

Numerous reports and investigations have taken place over the years regarding this facility. As landlords, Health NZ have recently completed asbestos removal work and a desk top evaluation of the building's seismic performance, along with fire compliance upgrades.

Over the years, the Trust has also received assistance from several mechanical engineering firms to assess heating and ventilation options to a) maintain the pool and b) improve efficiencies, which have been useful to this project's engineering team.

4. ABOUT THIS FEASIBILITY STUDY

Feldspar have been working with the Trust for the past year to complete feasibility work on the options for the Physio Pool.

Much of this time, (and most of the feasibility project's budget), has been spent on a full conditions assessment of the existing pool building and its mechanical plant.

Feldspar have been strongly supported throughout the duration of this project by our project development group which includes representation from the Trust, the Dunedin City Council, Health NZ, and Sport Otago.

The brief from the Trust was to explore options for the ongoing provision of hydrotherapy services for Dunedin City, rather than solely focusing on preserving the existing Physio Pool building.

As a result, the goal of this feasibility study has been twofold: first, to assess the feasibility of redeveloping the current building; and second, if redevelopment is deemed impractical, to investigate alternative replacement options.

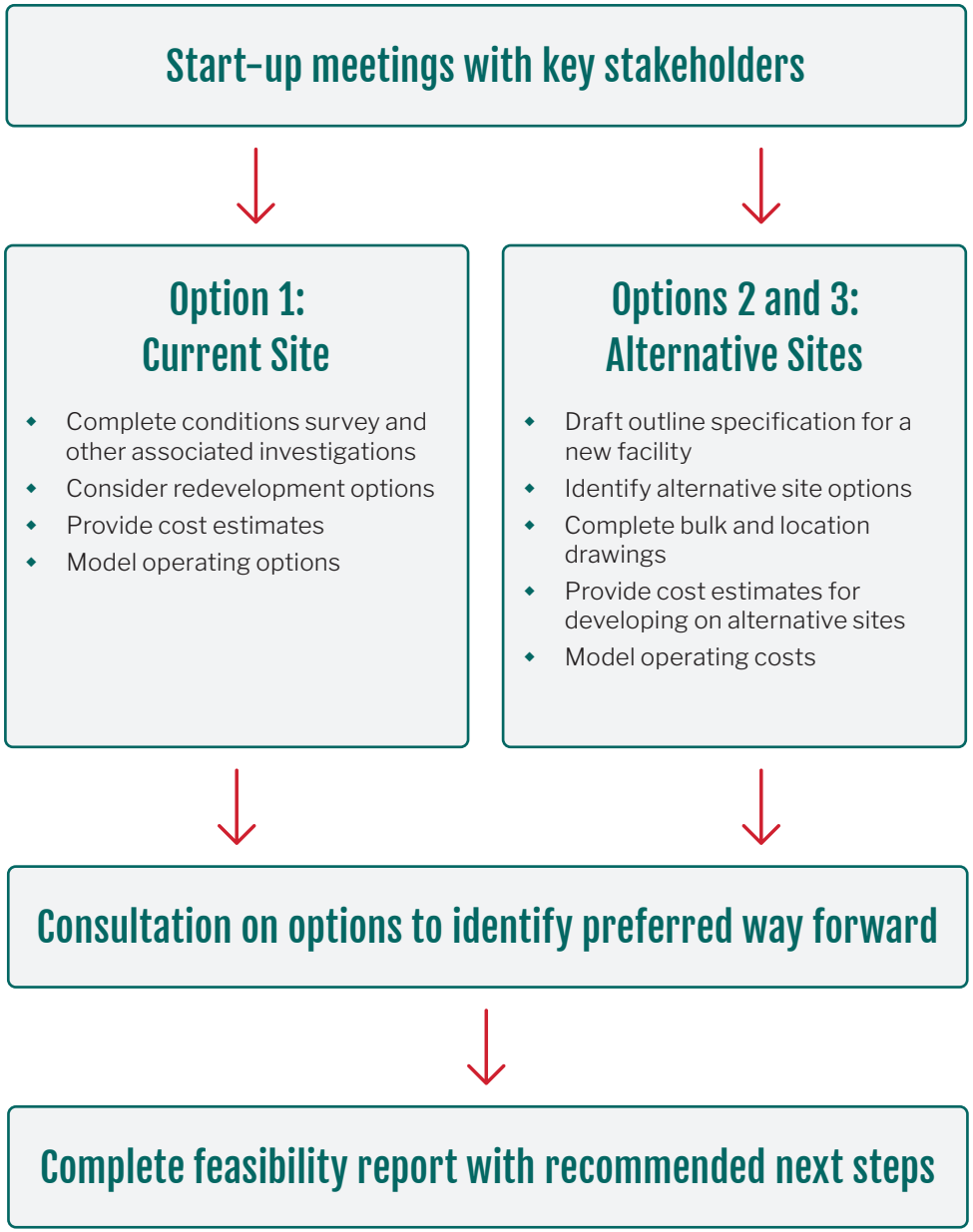
Feldspar engaged a specialist consultant team to assist in the delivery of this feasibility study, they include:

Discipline	Company
Specialist pool architects	Architecture HDT
Specialist pool mechanical engineers, (supported by fire and structural engineering disciplines)	Powell Fenwick
Heritage consultants	Origin
Planning due diligence	4Sight
Quantity Surveying	Chas E George and Sons
Operating model development and analysis	Feldspar with assistance from Deloitte

This feasibility study has included the following stages:

- Full conditions assessment of existing Physio Pool
- Options analysis work for existing pool
- Consideration of replacement options and potential sites
- Operating model analysis
- Public consultation work
- Option selection workshop

The diagram overleaf outlines the process undertaken, whereby two parallel processes have been underway to a) assess options for the existing facility against b) potential replacement options.



G. CONTEXT

1. WHY IS HYDROTHERAPY NEEDED?

Hydrotherapy plays a crucial role in promoting physical and mental well-being for a wide range of individuals, particularly older people, and those with disabilities. Its therapeutic benefits are particularly significant for those with musculoskeletal conditions, such as arthritis, as the warm water helps to reduce joint pain and stiffness while improving flexibility and muscle strength.

Additionally, hydrotherapy is beneficial for individuals recovering from injuries or surgery, as the buoyancy of water reduces the impact on joints and allows for gentle rehabilitation exercises.

Hydrotherapy can have positive effects on mental health, providing a calming and relaxing environment that can help reduce stress and anxiety. Hydrotherapy is also recommended for children with autism.

2. THE WELLBEING SECTOR

As the population ages, the importance of wellness in supporting health outcomes is becoming increasingly evident. Wellness practices, including hydrotherapy, play a crucial role in maintaining and improving the health and well-being of older adults. These practices help manage chronic conditions, improve mobility and flexibility, reduce pain, and enhance overall quality of life. Additionally, wellness activities promote social interaction and mental well-being, which are key factors in healthy aging. By incorporating wellness into their lifestyles, older adults experience improved health outcomes and greater independence as they age.

The wellness sector is becoming a significant growth sector in the economy. As more people seek out wellness services and products to support their health and well-being, the sector is experiencing increased demand and investment. This growth is creating new job opportunities and driving economic development in communities across the country. The wellness industry's economic importance extends beyond traditional healthcare, contributing to a more holistic approach to health that benefits individuals, communities, and the economy as a whole.

3. DUNEDIN AQUATICS SURVEY

The feasibility project's timely execution has enabled the consultant team to benefit from the insights of the recently concluded Dunedin Aquatic Facilities and Services review (2023) by Xyst consultants. This alignment has enabled the feasibility study to incorporate the report's findings and its demographic data.

3.1 POPULATION FORECASTS

The table below is taken from Xyst's report, it clearly shows that most of Dunedin's projected population growth in the next twenty years will be in the 65+ age group.

Forecast Dunedin population chnge 2018 to 2043 by age

Dunedin Residents	2018	2043	Change between 2018 and 2043
0-14	20,501	19,817	-684
15-24	28,558	27,774	-784
25-64	60,368	60,442	75
65+	21,093	34,637	13,545
Total	**130,520**	**142,671**	**12,151**

It is well-documented that demand for hydrotherapy services increases amongst older people. As we get older, we are more likely to experience mobility issues and chronic health complaints which can be alleviated through exercise in warm water.

In summary, Xyst's demographic research highlights that demand for hydrotherapy will increase sharply in Dunedin over the next 20 years.

3.2 PARITICIPATION

Alongside demographic information, the Xyst report investigates participation levels in Dunedin against national averages.

The table below shows that overall, participation levels in the city are comparable to those reported nationally for most age groups, but research completed by Active NZ clearly shows that participation rates for older people are well below national averages.

Xyst's report goes on to state that these low participation rates are directly linked to the lack of therapeutic water spaces in Dunedin.

This report was completed prior to the opening of Te Puna o Whakaehu (Mosgiel Pool).

Swimming participation percentage by Lifestyles

Lifestages	National	Dunedin
Old retirees	5.9	2.7
Young retirees	8.6	7.9
Older adults	9.3	7.1
Older families (parents)	10.8	**12.0**
Young families (parents)	12.5	**12.9**
Young adults	10.3	9.0
Tertiary	11.9	10.9
Secondary	24.1	23.6
Primary	48.2	45.3
Early years	No data	No data

The Active NZ survey responses for Dunedin demonstrate lower swimming activity rates than the national average. The most significant difference is for old retirees (75+ years old) which may be attributed to no current therapeutic water space currently available in Dunedin.

4. DUNEDIN AQUATIC FACILITIES

Apart from the recently completed Mosgiel Pool -Te Puna o Whakaehu - Dunedin's aquatic facilities fall well behind those of other major centres.

The DCC operates three other public pools in addition to Te Puna o Whakaehu. Moana Pool and Te Puna o Whakaehu operate all the year around. Port Chalmers Pool and the St Clair Hot Saltwater Pool are available across the warmer months, generally October-March.

Te Puna o Whakaehu is the only one of the city's aquatics facilities that has a hydrotherapy pool, this pool is heated to 34^{0}C and has a depth of 1.2-1.4m. The hydrotherapy pool is not as large or as deep as the Physio Pool, (which is approximately 1.2 - 3m deep).

Vulnerable people in Dunedin face significant challenges in accessing hydrotherapy services in Mosgiel due to various barriers. These individuals, often dealing with health issues or disabilities, may have limited mobility or rely on public transportation, which can be difficult and time-consuming.

The cost of travel to Mosgiel, including transportation and potential caregiver expenses, can also be prohibitive for many vulnerable individuals. Additionally, the need for regular hydrotherapy sessions further complicates travel logistics, especially for those with limited resources or support. As a result, the lack of local hydrotherapy services in Dunedin creates a significant barrier for vulnerable individuals seeking this essential form of therapy.

5. NATIONAL CONTEXT FOR HYDROTHERAPY

The 2024 National Aquatic Facilities Strategy emphasises the importance of hydrotherapy in aquatic facility planning. Hydrotherapy pools are considered crucial for their role in health and rehabilitation. They provide therapeutic benefits through water-based exercises and treatments, particularly for individuals with injuries, disabilities, or chronic conditions. Hydrotherapy pools typically maintain warmer water temperatures (around 29-32°C) to enhance therapeutic effects and comfort for users.

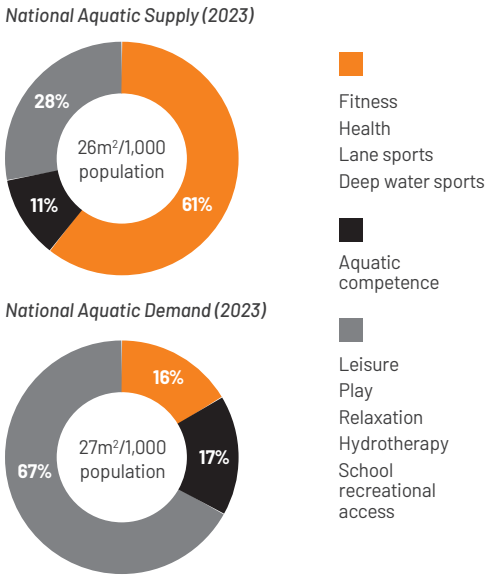
The strategy also highlights the need for accessibility and inclusivity in hydrotherapy facilities. It stresses the importance of designing pools that cater to a wide range of users, including older adults and people with disabilities. The aim is to create safe, welcoming environments that promote health and wellbeing through aquatic therapy.

Additionally, the strategy advocates for collaboration with healthcare providers to maximise the benefits of hydrotherapy and ensure that facilities meet community health needs.

In wider terms, the National Strategy has identified a 'critical shortfall' of community pool space, (a category that includes hydrotherapy), see infographic below.

2.9 Type of water shortfall

Nationally, evidence indicates the critical shortfall in supply is at the community level for **leisure, play, relaxation, hydrotherapy and school recreational access**. There is also a shortfall in aquatic competence pools.



Nationally, evidence indicates the critical shortfall in supply is at the community level for play, leisure space and hydrotherapy. In general, aquatic sports and lane swimming is adequately supplied. We do not have enough fit for purpose aquatic facilities to meet the demands of the play and recreation participant mpw and in the foreseeable future, particularly if we use a traditional view of what is a suitable pool.

5.1 OTHER COUNCIL OWNED AQUATICS FACILITIES

Hydrotherapy plays a vital role in New Zealand, with hydrotherapy pools found in every major city. These pools are usually part of aquatics facilities, and managed by local councils as part of their community facilities service.

Hydrotherapy pools operated by councils are typically smaller than the Physio Pool, ranging from 1.2 to 1.4 meters deep and heated to around 32-34 degrees Celsius. They are primarily used for exercise and swimming lessons. However, their shallow depth often limits their suitability for activities like aqua-jogging and lane swimming.

The table below gives some examples of other public hydrotherapy pools in New Zealand:

Pool	Link	Depth	Temp, (Celsius)
Auckland	West Wave Pool and Leisure Centre	–	34°
Hamilton	Waterworld	1m	32°
Tauranga	Greerton	0.8–1.2m	34°
Hawkes Bay	Hawkes Bay Aquatic Centre	2x endless hydrotherapy pools (water treadmills)	–
Wellington	Levin Aquatic Centre WRAC Huia	0.95–1.2m – –	34.5° 32-34° 33°
Nelson	Richmond Aquatic Centre	1.1–1.4m	33-35°
Kaikoura	Kaikoura Aquatic Centre	–	–
Christchurch	Taiora QEII Hornby	– –	35-36° 34-36°

5.2 COMMUNITY PARTNERSHIPS

In recent years, several hydrotherapy pools have been developed in partnership between local councils and community organisations. A good current example is the Matatiki Hornby Centre, where Rotary and other community groups are in the process of raising the $1.4m required to build a replacement hydrotherapy pool alongside the new council owned aquatics centre. Similarly, there is a hydrotherapy pool included as part of the Huia Aquatics facility in Wellington, which was built after the local hospital pool closed. Today patients are referred to the Huia facility by Health NZ.

A notable exception is the New Brighton hot pools facility, **He Puna Taimoana**, which is operated by Christchurch City council. This facility is designed to appeal to tourists and locals alike, with reduced admissions charges for ratepayers. This project is a great example of the economic benefits of hydrotherapy facilities.

More information can be found on the He Puna Taimoana website:

www.hepunataimoana.co.nz

5.3 HEALTH NZ OPERATED FACILITIES

Several hospitals in New Zealand include hydrotherapy facilities as part of their physiotherapy and rehabilitation provision, although the high cost of operating and maintaining such pools has put pressure on keeping them open in recent years.

Examples include:

Hospital	Current Status?	Open to Public?
Burwood Hospital, Canterbury	Open	No – community groups can book session times
Wairau Hospital, Marlborough	Open	No – single occupancy size
Southland Hospital, Invercargill	Closed	n/a
Taranaki Base Hospital, New Plymouth	Open	No – small pool
Waikato Hospital, Hamilton	Open	No
Thames Hospital, Thames	Open	Yes – 2.5 hours per week
Nelson Hospital, Nelson	Open	No

5.4 COMMERCIAL FACILITIES

Aside from public sector pools, there are many high-end commercial hot pool operators. Typically, these pools are naturally heated to 34-40 degrees and include complementary activities, like spa treatments, gyms and restaurants. These facilities are financially successful, major attractions and a great boon to local economic development, they represent a well-trodden path for many North Island towns, the best known being in Rotorua and Taupo.

There have been several recent developments across the South Island which seek to emulate the success of North Island attractions, examples include:

- Opuke in Methven
- Tekapo Hot Springs
- Maruia Hot Springs

Entrance fees for these facilities are considerably higher than for public facilities, typically starting at around $30-35 for a two-hour session, although many offer discounts for local people, concessions for older and disabled people, and memberships for frequent visitors.

5.5 THE DUNEDIN PHYSIO POOL

Dunedin is unique, the city has a heritage hydrotherapy pool which was open to the public for forty years. The pool is very large compared with similar pools, (over 200m2), and up to 3m deep, it was heated to around 35 degrees.

Similar facilities have existed in the past, but have either pivoted to becoming more commercial operations, or shut down.

One key example is the **Queen Elizabeth hospital in Rotorua** which was built in 1942.

A contemporary of the Dunedin Physio Pool, it was also built to support the rehabilitation and recovery of soldiers coming back after WW2.

Recently, this facility has been transformed into a state-of-the-art commercial health and wellbeing complex, including hydrotherapy pools and many complementary services.

For further information, see

https://qehealth.co.nz/our-story

Other similar hydrotherapy facilities that were operated by charitable trusts did exist in New Zealand, most notably by disability organisations in Auckland and in Christchurch, but the last of them were forced to close following the Covid lockdowns.

H. EXISTING PHYSIO POOL

1. CONDITIONS ASSESSMENT

A full set conditions assessments has formed the backbone to this feasibility study. A specialist team has carried out the conditions assessment work, including:

- Architecture HDT – specialist pool architects
- Powell Fenwick – specialist aquatic engineering services, fire and structural
- Origin – heritage consultants

The conditions assessment work included the following investigations:

- Building conditions assessment
- Accessibility assessment
- Plant conditions assessment
- Heritage assessment
- Seismic assessment
- Fire assessment
- Planning due diligence report

An asbestos survey and associated removal work has already been undertaken by Health NZ.

Reports on each of the investigations are appended to this report, the key findings are outlined overleaf.

1.1 BUILDING CONDITIONS ASSESSMENT – HDT

The existing facility is part of the larger Dunedin Hospital Precinct. It was built in 1946 and designed by Mason and Wales and is a successful example of modernist and international style movements in architecture.

The existing facility is primarily constructed from concrete, and as such it has 'good bones' to deal with the humid and corrosive atmosphere within the pool hall.

There is little insulation to the exterior fabric of the building, and it is likely that condensation was prevalent on the interior on colder winter days as a result.

The windows are single glazed steel type. These have poor thermal performance and would also have been prone to condensation in colder outside conditions.

The changerooms are in poor condition. Sanitary fittings, bench seating and partitions are all in poor condition and require replacement. The heritage report notes that these fittings have heritage value, and consideration therefore needs to be given to any new work being in the same style as the existing.

The condition assessment considered a short-term replacement (expected building life 10 years), and a longer term full refurbishment option (expected life 50 years+) to bring the facility up to current building code standard. Where necessary, accessibility requirements are included within the condition assessment scope of work spreadsheet, (see Appendices).

1.2 ACCESSIBILITY ASSESSMENT – HDT

The accessibility review identified a number of key issues:

- The poolside accessible changeroom is not large enough for the incorporation of a bed. A larger accessible change would allow high needs use with a carer
- There is no accessible ramp to the existing pool. A drop in ramp could be provided, however the use of the existing track hoist is considered to allow accessibility 'as near as reasonably practicable' according to the Building Act
- Threshold conditions to group shower areas that are difficult to see and inhibit use.
- Various minor adjustments (clearer parking markings, signage, lighting and wheel-stops) required to improve accessibility and legibility for differently abled users to arrive and enter into the building safely.

1.3 MECHANICAL PLANT CONDITIONS ASSESSMENT – POWELL FENWICK

The condition assessment specifies the following items that must be addressed to re-open the pool:

- Pool Water Services
  - This is mainly reinstating a treatment system for safe operation of the pool. Additionally general maintenance to fix existing leaks to heat exchanger is required.
- Pool Hall Heating and Ventilation System
  - This is mainly cleaning existing ducts and grilles and ensuring all existing plant is operating.
- Energy Use
  - The existing pool was using approximately 4-6 times the expected energy for an equivalent facility.

The assessment goes on to suggest items which should be addressed if the pool was to operate in the longer term:

- Pool Water Services
  - If the pool is to remain as is, it is recommended to replace the seven domestic water filters with two 1800dia commercial filters, replace the associated pump, lint pot, heat exchanger and install an automatic dosing system for primary treatment to the pool.
  - Due to the depth of the existing pool the turnover rates are extremely low at ~4 hours which would require mitigation by limiting the number of bathers in the pool to approximately 40 at any given time.
  - If the pool was to be shallower the floor sparger would become redundant, and a new central sparger or floor inlet system would be required. This would also reduce the turnover time for the pool by reducing the volume.
- Pool Hall Heating and Ventilation System
  - The existing heating for the pool is provided by the central hospital LTHW system and this heating system will only be available in the short term.
  - It is strongly recommended to look at upgrading the central pool hall ventilation system in conjunction with building fabric works.
  - This would include heat recovery from the exhaust air and optimisation in the design to reduce the energy consumption as well as installing a modern controller and fans. This would reduce the long-term operational costs as well as de-risk the site for excessive maintenance and potential plant failure.

1.4 HERITAGE ASSESSMENT – ORIGIN

The following provides a summary of significant spaces, elements, and fabrics and should be read alongside the heritage inventory.

Please note that this is not an exhaustive list and is only intended to summarise notable features identified in the heritage inventory.

a) High Significance

- Cast in-situ concrete portal truss structure
- Cast in-situ concrete roof and walls
- All original steel framed windows, patterned pressed glass
- Steel ducting, including steel ducts cast in-situ concrete (interior and exterior)
- Rounded edge detail of the cast in-situ walls, floors, beams, columns and trusses
- Original pool tiles, including nosing tiles of pool perimeter and stairs
- Original pool surround tiles • Original tiles in the shower, footbath and changing areas/WC's
- Cast in-situ concrete form of the pool, including form of collection channels and stairs
- Chrome grip rails at pool ends and stairs
- Changing room partition walls with rounded trim

b) Some Significance

- '5 feet' and '9 feet' on wall

c) Non-Contributing/Intrusive Significance

- Modern aluminium framed windows
- Replacement glazing
- Infill walls at west and east porch
- Aluminium framed glazed office and wall at north end of pool hall
- Modern plumbing fixtures and pipes
- Textured non-slip floor finish to pool surround, footbaths and changing areas
- Later openings made to concrete walls for layout alterations
- Post-1990's entry ramp and deck to East porch
- Modern lighting fixtures

1.5 SEISMIC ASSESSMENT – POWELL FENWICK

Powell Fenwick completed a Detailed Seismic Assessment (DSA) of the Physio Pool Dunedin building located at 140 Hanover St, Central Dunedin.

The structure consists of a two-way concrete frame with a concrete roof. Powell Fenwick have summarised all elements that are below 67% NBS in the table below:

Table 1. Summary of elements below 67% NBS.

Element	% NBS (IL2)
Concrete Portal Frame Columns In-Plane (E-W)	50 %NBS
Foundations – Bearing Pads & Passive Pressure	60 %NBS

The results of the DSA are summarised below (Table 2.) in accordance with the guideline document The Seismic Assessment of Existing Buildings - Technical Guidelines for Engineering Assessments, dated July 2017.

The earthquake rating assumes that Importance Level 2 (IL2), in accordance with the Joint Australian/New Zealand Standard – Structural Design Actions Part 0, AS/NZS 1170.0:2002, is appropriate. Therefore, this is a Grade C building following the NZSEE grading scheme.

Grade C buildings represent a risk to occupants 5-10 times greater than that expected for a new building, indicating a medium risk exposure.

Table 2. Summary of building direction, %NBS and seismic grade.

Element	% NBS (IL2)	Seismic Grade
North – South	60 %NBS	C – Medium Risk
East – West	50%NBS	C – Medium Risk

1.6 FIRE ASSESSMENT – POWELL FENWICK

The proposed upgrade work for consentable alterations to the building is outlined below.

It is assumed that the building is to continue being used as a pool building for both patients and the public, with no in-patients or sleeping occupants assumed in the remainder of the Fraser building.

The design occupant loads for various spaces are indicated on the Fire Safety Features Drawings.

Regarding the fire alarm system, upgrades are needed for both the existing and new systems. The existing system includes a Type 3 heat detection system with no detection within the pool hall, and it needs to be networked into the Fraser building's existing fire alarm system.

Additionally, a new Type 3 heat detection and manual fire alarm system compliant with NZS 4512:2021 needs to be installed throughout the building, connected to FENZ, and networked into the existing system for cross-building alerts.

The installation of the new fire alarm panel, mimic panel, detectors, call points, sounders, and brigade connection must all comply with specified standards.

Other upgrades include

- The installation of new illuminated exit signs,
- Electronic emergency lighting compliant with AS 2293 and F6/AS1,
- A new secondary egress route, and fire rated walls, doors, floors, and ceilings.
- Fire stopping, surface finishes, flooring, and other materials must also comply with specified standards.
- The installation of any new electrical installations must adhere to NZBC Clause G9.

Overall, the proposed upgrades aim to enhance fire safety and ensure compliance with relevant standards and regulations for the building's continued use as a pool building.

1.7 PLANNING DUE DILIGENCE REPORT – SLR/4Sight

Any proposed redevelopment of the Physio Pool at 464 Cumberland Street will fall under the definition of a 'Hospital' activity and will be a permitted activity in the Dunedin Hospital Zone. There do not appear to be any notable concerns in relation to meeting the performance standards of the Proposed 2GP. In particular, there are no performance standards relating to the alteration or demolition of Scheduled Heritage Buildings in the Dunedin Hospital Zone (with the exception of earthquake strengthening requirements).

It is noted that hospital activities do require six mobility car parks. If changes to car parking arrangements have been made since the closure of the pool, then it is recommended that these are reinstated upon reopening or provided elsewhere to avoid resource consent requirements.

Should any earthworks be required, an Archaeological Authority must be obtained from Heritage New Zealand Pouhere Taonga.

Overall, this site does not present any significant planning constraints and it is unlikely that resource consent would be required for any alterations or demolition undertaken to the existing Otago Therapeutic Pool building. SLR recommend that a detailed review of the property file/consent history for the site is undertaken, and the record of title or any interests that may be registered on the title, as these are excluded from the above analysis. SLR also recommend undertaking a review of other natural hazard information available for the site.

2. HEALTH NZ PERSPECTIVE AND REQUIREMENTS

As noted above, Health NZ owns the Physio Pool building and the plant room that supplies the pool. The pool hall itself is linked to the Fraser building and until recently the Trust have leased some space in this building to provide accessible change spaces.

The development of the new Dunedin Hospital building has brought the operation of the existing site into sharp focus for Health NZ and there are many changes underway that will influence the use of the Fraser building site in the years to come.

2.1 OWNERSHIP AND OPERATION

Health NZ has supported the work of the Otago Therapeutic Pool Trust since its inception, some 40 years ago. Health NZ has provided access, plant room space, maintenance support, and car parking for the Physio Pool throughout this time.

The Trust paid roughly a third of the heating and operating costs incurred by predecessors of Health NZ. The Trust also paid for the provision of lifeguards and cleaning; the arrangement was recorded in an MOU rather than a deed of lease.

The equipment failure that closed the pool brought this arrangement to an end.

Over the course of this feasibility study, Health NZ have indicated several changes that they would like to make to their relationship with the operation of the Physio Pool building. These are outlined below.

2.2 FUTURE ENERGY PROVISION

Currently, the Physio Pool is heated via the hospital's central heat and power plant. Health NZ will be shutting down the existing steam-based system in the next 4 years, owing to environmental concerns and for this reason, has told Feldspar that any future plans for the Physio Pool need to include for an alternative heat and power source.

2.3 FUTURE ON SITE CAR PARKING

Although it has been able to provide some car parking in the past, Health NZ have indicated that it will no longer be able to facilitate any parking for Physio Pool visitors on the existing hospital site.

The background to Health NZ's decision is:

- The car park is currently fully utilised by Health NZ staff
- The hospital's main oxygen supply is right outside the Physio Pool and the tank will stay in place at least until the new hospital is operational, probably longer. There are also other gas supply drop offs in this zone
- The medium/long term proposal for the car park site is to put a new property services/facilities building hard up against the Physio Pool by 2040.

2.4 FUNCTIONAL SEPERATION

Health NZ would like the pool to become a stand-alone facility, functionally separate from the hospital campus in every way, including the power supply and in the plant room.

The current plant room previously utilised for the pool would only be available to the Trust with the approval of Health NZ Southern. There is also no scope to increase the footprint of the existing building or continue to use the rooms in the Fraser building for accessible changing.

On this basis, the Trust would be responsible for:

- All maintenance of the building;
- Supply of appropriate plant and machinery and maintenance of those assets;
- Operational costs and any regulatory costs that are associated with the operation of a public pool;
- Fire separation, the Trust will need to remove the access into the Fraser building from the pool area, (and put in another fire egress);

3. REDEVELOPMENT OPTIONS

Given the information provided by Health NZ, these are the constraints that the team needed to take into account:

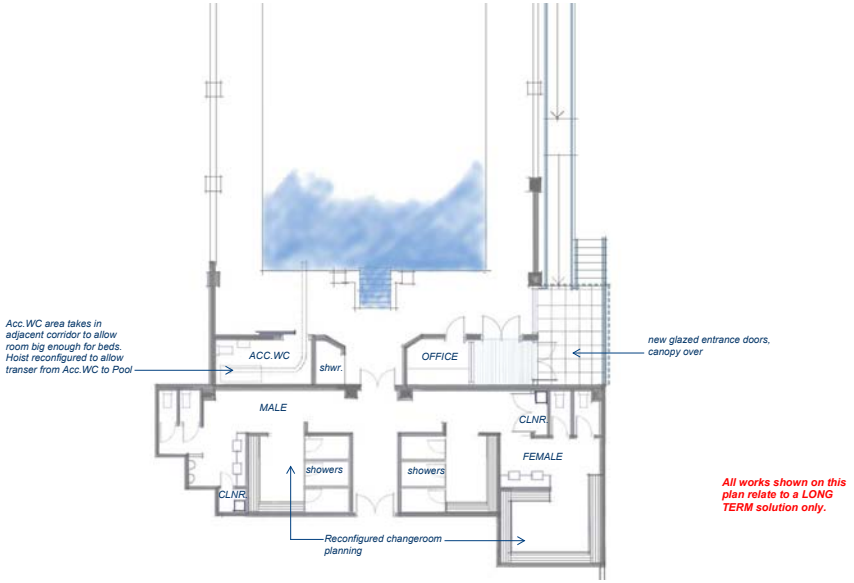
- No car parking on site
- Full separation from the hospital campus
- No access via the Fraser building
- New heat and power plant required
- Allowance to fire-separate plant equipment within Health NZ owned plant room
- No expansion permitted outside of existing building envelope
- No opportunity to expand into Fraser building or to continue to use space for accessible changing.

Alongside this, the consultant team used the information from the building conditions assessments to consider redevelopment options which:

- Bring the building in line with modern standards and expectations
- Improve accessibility
- Address building compliance requirements
- Upgrade building insulation to reduce operating costs
- Maintain key heritage features

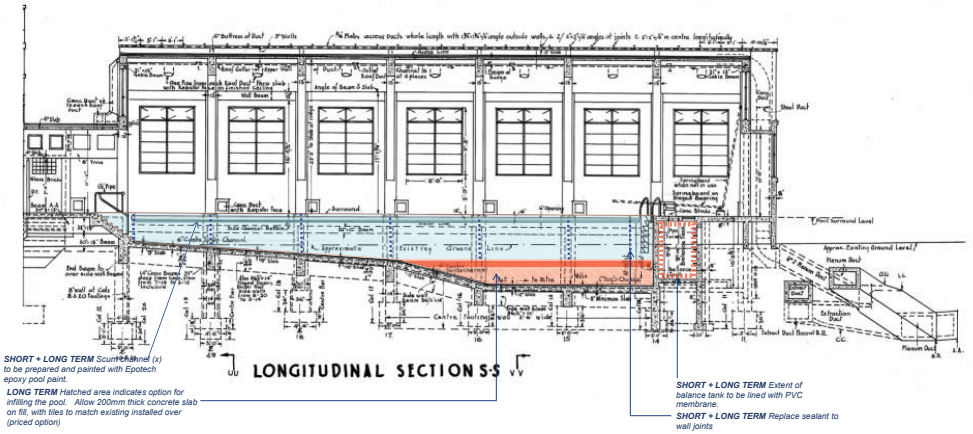
The outline sketch below from HDT demonstrates the potential to create improved changing spaces and entrance way, please see attached report for details.

HDT



In addition to re-configuring the entrance and change spaces, the recommended approach would also be to reduce the depth of the pool. This would have the combined effect of reducing the volume of water to be heated for the pool and also addressing issues with the condition of the pool tank itself.

HDT



costs.

Substantive plant replacement and improvement work would be required as part of this package of work.

Full details of the recommended redevelopment work are covered in the reports from HDT and from Powell Fenwick, which are appended to this report. Both consultants prepared a 'shopping list' of measures to upgrade the existing pool, they marked the key items 'should' and the good-to-have items 'could'.

4. COST TO REDEVELOP

Based on the information supplied by Health NZ and from the building conditions information provided by the specialist consultant team, the Project Development Group directed Feldspar are HDT to consider two redevelopment options for the existing Physio Pool building:

- A compliance only option to keep the pool operational while a replacement is designed and built
- A full redevelopment option

Based on all the information from the conditions assessments and from Health NZ, our quantity surveyors have prepared the following rough orders of cost.

1A Compliance Only – $1.225m, (plus an additional $505k for seismic strengthening if required)

This is a temporary, sticking plaster option, to buy time while fundraising takes place for a full redevelopment/replacement project.

The investment would last a maximum of 10 years and would only include the work necessary to make the facility operational and compliant. This estimated cost would not include cosmetic improvements or any change to the depth of the pool to reduce heating costs.

To include for some decorative upgrade work and reduce the depth of the pool based on HDT's recommendation, the consultant team believes that $1.8m would be an appropriate fundraising target.

1B Full Redevelopment – $3.675m, (this estimate includes seismic strengthening)

This is based on bringing the existing pool up to modern standards, the investment would last 30 years plus, (subject to the hospital's site masterplan).

This estimate includes the recommended change in depth to the Physio Pool to reduce heating costs.

Please see attached build-ups from the project quantity surveyor and associated summary table from Feldspar in the Appendices.

I. REPLACEMENT OPTIONS

1. BACKGROUND

As noted above, the brief for this feasibility study was to consider replacement options should there be doubts about the viability of the existing Physio Pool building.

Introducing the consideration of a replacement pool option was based on several factors:

- The condition of the existing pool
- The low potential for long-term support from Health NZ
- The projected operating model for the existing pool
- The lack of opportunity to access the Physio Pool via the Fraser Building entrance on Hanover Street
- The lack of car parking opportunities at the existing pool
- Health NZ's masterplan indicates a new Property Services building hard up against the Physio Pool building

The consultant team proposed a **like for like comparison**, a pool of a similar size but with modern specifications and accessibility measures.

As an exercise to help the team understand viability, the team also considered an **enhanced replacement**, an option with additional features that:

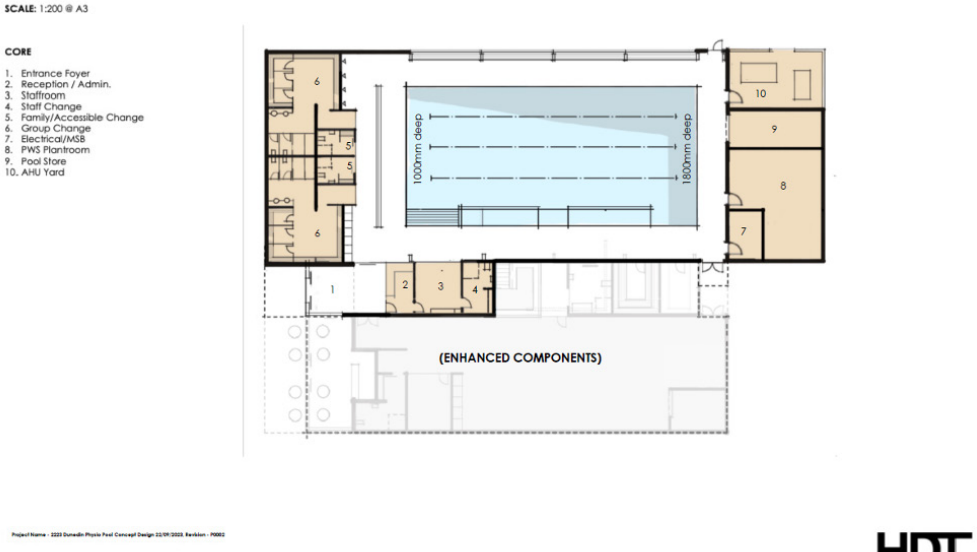
- Would help the pool to appeal to a wider audience
- Add second spend opportunities

The drawings below are sketch plans rather than designs, to facilitate bulk and location work and help the consultant team understand potential project costs. Please refer to HDT's report in Appendices for further information.

2. LIKE FOR LIKE REPLACEMENT

The sketch plan below represents a modern interpretation of the existing pool, it is based on similar dimensions, and with a variable depth of 1-1.8m, (although balancing the depth requirements of users with heating costs would require further investigation as part of any future design phases).

DUNEDIN PHYSIOTHERAPY POOL - BASE OPTION
FLOOR PLAN



HDT

3. ENHANCED REPLACEMENT

This option builds on the like-for-like replacement option outlined above and adds complementary, income generating features with a view to improving long-term viability.

The sketch plan below outlines several key additional features, which would not only diversify revenue streams but also widen the market, as a guide these might include:

- Spa pool/hydrotherapy jets
- Sauna/steam room
- Rehab gym space
- Physiotherapy services/treatment rooms

There is also a space allocation for a small café or vending machines, although this has not been included in any operating modelling.

DUNEDIN PHYSIOTHERAPY POOL - ENHANCED REPLACEMENT OPTION
FLOOR PLAN

SCALE: 1:200 @ A3

CORE

1. Entrance Foyer
2. Reception / Admin.
3. Staffroom
4. Staff Change
5. Family/Accessible Change
6. Group Change
7. Electrical/MSB
8. PWS Plantroom
9. Pool Store
10. AHU Yard

ENHANCED COMPONENTS

11. Spa
12. Accessible (special care) WC/Shower
13. Sauna
14. Steam Room
15. Fitness WC
16. Assessment Room
17. Fitness Studio
18. Fitness Store

HDT

J. SITE SELECTION FOR POTENTIAL REPLACEMENT OPTIONS

1. SITE SELECTION CRITERIA

The Project Development Group identified the following key selection criteria for site selection:

- Around 2,000m^{2+} to include car parking/yard space/etc.
- Close to users
- Good access
- Resilient location
- Easy to develop, (not too many site constraints)

It is worth noting that, most major funders, like DIA, will not fund the purchase of bare land and will not fund building projects through purchasing land on the open market, as there is too much risk associated with this approach.

So, the consultant team focused on finding suitable land that might be made available through a potential project partner.

The two project partners considered were the DCC and the University of Otago. DCC Recreation Services provided support and assistance in finding potential site options.

2. SITE SELECTION LONG LIST

Based on conversations with key stakeholders, landlords and estate agents, Feldspar investigated nearly thirty sites, using the agreed selection criteria, the following long list of sites was created:

- Logan Park
- University Plaza
- Kensington Oval
- Market reserve
- Opoho Park
- St Clair Car Park reserve
- Steamer basin
- Sara Cohen School site
- Thomas Burns car park
- Leviathan car park

3. SITE SHORTLISTING WORKSHOP

Feldspar met with the project development team for a workshop in July 2023.

The team agreed the following criteria upon which to assess the long list of sites:

- Day to day accessibility for local people/Proximity to community
- Culturally appropriate
- Accessibility during a flood event – can people get to the site in a flood?
- Flood resilient location – is the site flood prone?
- Cost to Develop
- Time to Develop
- Synergies – proximity to similar key services

Each site was scored out of ten by the team, the results were then totalled so that the group could rank them in order of preference. The full results of the assessment process can be found in the Appendices.

By assessing potential sites against the key attributes noted above, the project team were able to shortlist three sites for further consideration:

- Logan Park
- University Plaza
- Kensington Oval

4. ANALYSING THE SHORT-LISTED SITES

With the shortlisting process complete, Feldspar moved to examine the shortlisted sites in more detail, working with key representatives from the organisations that own and manage each site shortlisted. Each site is considered below in turn.

4.1. LOGAN PARK

Owned and operated by the DCC, Logan Park is home to much of Dunedin's outdoor sports provision.

The site is located within Dunedin's tertiary education precinct and on the edge of the town centre, it has a good profile and reasonable access. The site is approximately 23ha in total.

Logan Park		
Activity	**Status**	**Comment**
Site ownership		The site is owned by the DCC
Site constraints		There are no major constraints for this site. There is level topography, and the site is accessible from several major roads
Timeframes		There are no known constraints on leasing the land from the DCC
Planning, Heritage, Archaeology and Hazards		Contaminated land, flood overlay, non-complying resource consent required
Transportation and Accessibility		This site has good access for cycles, cars, and pedestrians. It is well-served by buses. Parking in the area can be very difficult and if a dedicated car park was built, there would be a high chance of it being used by third parties. A remote site within the park might also be problematic for people with mobility issues.
Proximity to other services/amenities		This site has good access for cycles, cars, and pedestrians. It is well-served by buses.
Car Parking		Parking in the area can be very difficult and if a dedicated car park was built, there would be a high chance of it being used by third parties.
Services		A remote site within the park might also be problematic for people with mobility issues.

The advantages and disadvantages of this site are listed below:

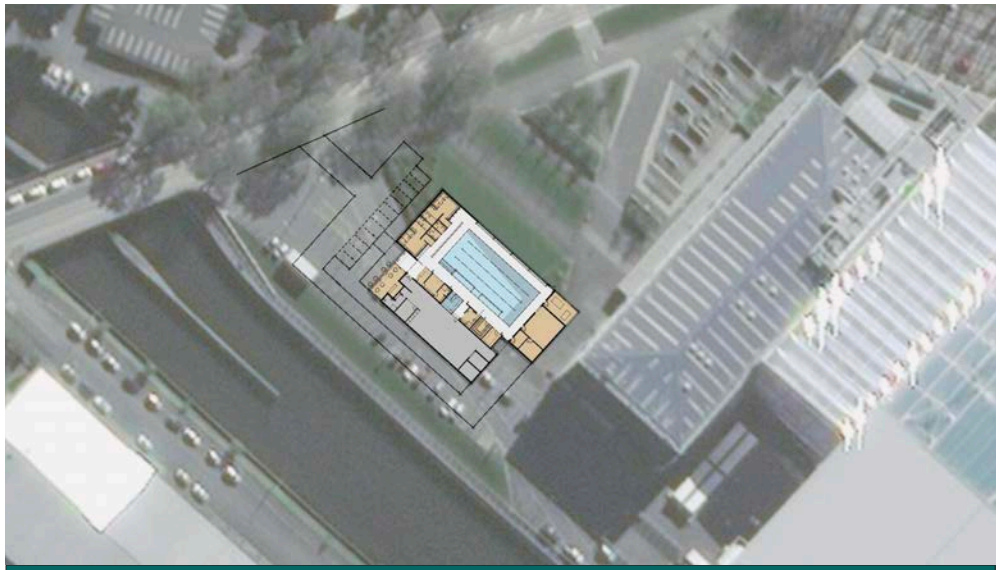
Advantages	Disadvantages
• Large flat site • Proximity to tertiary/stadium precinct • Adjacent to complementary activities • Accessible, bus routes, easy to find	• Away from town centre • Remote site within park landscape • Less accessible • Congestion along Union Street • Reclaimed site • Some flood risk

4.2 UNIVERSITY PLAZA

The University Plaza site is located towards the western facing side of the stadium site. Unipol currently occupies one side of the site, but there a vacant plot of land immediately to the south-west to form an 'L' shape, which is also owned by the University of Otago.

Like Logan Park, the site is located within Dunedin's tertiary education precinct and on the edge of the town centre, it has a great profile and good access.

Although the site is approximately 3,000m^2 in total, there is only sufficient for the development of a like-for-like replacement pool.



University Plaza		
Activity	**Status**	**Comment**
Site ownership		The site is owned by the University of Otago, who have indicated a willingness to sell or lease the land to the Trust.
Site constraints		There are no major constraints for this site. There is level topography, and the site is accessible from several major roads

University Plaza		
Timeframes		It would be very difficult for the Trust to raise the capital needed to secure the site for development.
Planning, Heritage, Archaeology and Hazards		Contaminated land, flood overlay, resource consent required, (soil disturbance and change of use)
Transportation and Accessibility		This site has good access for cycles, cars, and pedestrians. It is well-served by buses. If this site was selected there would not be space to develop additional on site car parking and the existing car park is already over-subscribed.
Proximity to other services/amenities		The site is located near other recreational/ leisure facilities
Car Parking		See note above
Services		The site is well serviced by major utilities.

The advantages and disadvantages of this site are listed below:

Advantages	Disadvantages
• Large flat site • Proximity to tertiary/stadium precinct • Adjacent to complementary activities • Accessible, bus routes, easy to find	• University would expect land lease/ purchase • Small site, no space for second spend opportunities • Less accessible • Car parking can be difficult, no space to build additional parks • Reclaimed site

4.3 KENSINGTON OVAL

Located towards the south of the city, the Oval site has a very similar to Logan Park in terms of use and aspect.

The site is located at the geographical centre of Dunedin city, providing excellent access not just for local residents, but from people travelling from out of town along the motorway. The site also has a great profile, it is approximately 8ha in total.

Kensington Oval		
Activity	**Status**	**Comment**
Site ownership		The site is owned by the DCC
Site constraints		There are no major constraints for this site. There is level topography, and the site is accessible from several major roads
Timeframes		There are no known constraints on leasing the land from the DCC

Kensington Oval		
Planning, Heritage, Archaeology and Hazards		Contaminated land, flood overlay, non-complying resource consent required
Transportation and Accessibility		This site has good access for cycles, cars, and pedestrians. It is well-served by buses.
Proximity to other services/amenities		The site is located near other recreational/ leisure facilities
Car Parking		See note above
Services		The site is well serviced by major utilities.

The advantages and disadvantages of this site are listed below:

Advantages	Disadvantages
◆ Large flat site ◆ Edge of town location ◆ Great profile ◆ Accessible, bus routes, easy to find	◆ Adjacent to railway line, potentially contaminated site ◆ Non-complying resource consent required – flood overlay

4.4 PREFERRED SITE SELECTION EXERCISE

The project development group carried out a multi-criteria analysis on the three shortlisted options, based on an agreed set of criteria.

- Proximity to users
- Good access
- Resilient location
- Easy to develop/not too many constraints

The clear option for a preferred site was the Kensington Oval, owing to its central location, accessibility, ease of development and ownership by a key project partner, the DCC.

DCC staff are aware of this outcome, although any decision on the future of the preferred site will need to be made by Dunedin City Council.

4.5 INDICATIVE COST ESTIMATES

The project's quantity surveyor has advised that the cost of developing the replacement options would be roughly the same for the Logan Park site and the Kensington Oval site:

2a Like for like replacement - $12.800m, (plus fixtures, furniture and equipment)

This estimate is based on building a similarly sized facility on the preferred site, the pool would be a similar size as the current facility with similarly sized changing facilities.

Further discussion would be needed with regards to appropriate depth.

2b Hydrotherapy Centre/Enhanced option - $17.350m, (plus fixtures, furniture and equipment)

This estimate is based on the like for like replacement plus the inclusion of additional features as described above. The uplift is $4.55m but the intention is that these additional spaces will enable the facility to break-even.

These estimates are based on a September 2026 start date.
Please see attached build-ups from the project quantity surveyor and associated summary table from Feldspar in the Appendices for further detailed information.

K. OPERATIONAL MODEL

Detailed in the following section is financial analysis of the options considered in this report. Please refer to this document for site details and information about the preferred option.

Section Purpose

The purpose of this section is to review the existing operating model for the Dunedin Physio Pool and look financial viability of the potential options for:

- Undertaking must do compliance and reusing the existing pool
- Building a new pool with gym, medical rooms and small café
- Building a new pool replicating the existing pool only

This model will seek to provide a realistic and somewhat conservative financial forecast of revenue, expenses and the overall net viability of the various options

Feldspar have developed this model using information from a number of sources including:

- Benchmarking against other community pools through shared financial information
- Feedback from working groups' experience
- Consultation with accounting advisors
- Feldspar's experience of developing models for similar projects

This report outlines the assumptions made to arrive at the revenue, expense and overall projected financial position of the hub moving forward.

L. SUMMARY OF FINDINGS

Three options have been assessed as part of the operational model analysis. We have discounted the compliance only redevelopment option as this would be very similar to the option of fully redeveloping the existing pool.

- **Option 1B** - Redevelop existing pool
- **Option 2A** - Like for like replacement
- **Option 2B** - Enhanced replacement pool option.

Option Summary

Item	Option 1B Redevelop existing pool	Option 2A Like for like replacement	Option 2B Enhanced replacement
Total Revenue	$323,760	$423,760	$544,760
Operating Expenses	$667,812	$545,812	$549,812
Net Position (Annual)	($344,052)	(122,052)	($5,052)
Position after 5 Years Operations	($2,044,020)	($1,034,020)	($570,020)

The table above summarises the annual Net Position after projected expenses. This assumes the following:

- It takes 5 years for revenue to build up to projected, Net position (Annual) is after 5 years
- Position after 5 years Operations is the accumulated losses after 5 years
- The numbers don't allow for depreciation or any interest costs.

M. PREVIOUS OPERATING MODEL

The Physio Pool ceased operating in 2021. Running up to the closure, the business was operating at a loss of $32,442 in 2021 and $73,332 in 2020. These losses were a result of increasing operating costs and inconsistent revenue streams. This clearly flagged the ongoing challenges around operating the pool at a loss going forward.

Accounts 2020/2021

	2021	2020
Revenue	$323,760	$423,760
Expenses	226,380	153,111
(Deficit)/Surplus	($344,052)	(122,052)

The above revenue included donations of $52,090 in 2021 and $2,266 in 2020.

Pool attendance in for the 2021 year, prior to closing, was approximately 35,000 visits.

N. STAFFING MODEL

The following table summarises the staffing costs with assumptions detailed below. This staffing model is used in all 3 options.

Staffing	Annual Cost
Reception/Office:	
Trust General Manager	$100,000
Reception/Administration	$100,000
Swimming Pool Supervision:	
Lifeguards x 2 including supervisor role	$177,408
Pool Operations Maintenance Staff	$35,200
Total	**$401,312**

Assumptions in the salary costings are:

- Sick leave and annual leave are included in the permanent salaries
- Pool is open 44 weeks a year
- Pool is open 72 hours per week
- There is a receptionist/front of house person onsite 72 hours per week
- Pool maintenance is a part time job at 10 hours per week.
- 2 lifeguards are on duty at all times.

O. OTHER REVENUE

It is anticipated that there will be other potential sources of revenue including:

- Government grants
- Charitable trust grants
- Donations

Although we believe there is a strong probability of other revenue sources, this has not been built into the model at this stage.

P. OPTION 1B – REDEVELOP EXISTING POOL

1. SUMMARY OF OPTION

This Option looked at keeping the existing pool and undertake some “must do” compliance upgrades to the building and pool heating system.

2. REVENUE ASSUMPTIONS

The following assumption were made in this model

- 40,000 admissions per annum within 5 years
- Average rate of $7.50 per annum
- Swim school income of $23,760 per annum
- Assumed lack of car parking would limit access as was with the original site

3. OPERATING EXPENSES

This option looks to retain the existing building and with that some of the more significant overheads being:

- Heating/energy - $112,000
- Building maintenance - $30,000

4. REVENUE MODEL SUMMARY – 5 YEAR PROJECTION

See summary of revenue model below. This model is based on achieving the projected revenues over a 5-year period.

Facility Revenue	Total
Projected Revenue	
Casual Users	$300,000
Swim School	$23, 760
Total Revenue	**$323,760**
Operating Expenses	
Pool Expenses including wages, pool chemicals, power, training, energy costs	$582,312
General Building Expenses: insurance, maintenance, rates, water charges	$72,000
Other costs including accounting, legal	$13,000
Total Operating Expenses	**$667,812**
Net Position	**($344,052)**

5. REVENUE MODEL OVER 5 YEAR PERIOD

As part of the analysis, Feldspar have assumed that the projected income will take 5 years to achieve from the re-opening of the improved pool facility. The table below shows the projected losses over the 5-year period:

Existing Pool Only	Year 1	Year 2	Year 3	Year 4	Year 5
	60%	70%	80%	90%	100%
Total Projected Income	$194,256	$226,632	$259,008	$291,384	$323,760
Expenses	$667,812	$667,812	$667,812	$667,812	$667,812
Net Surplus	($473,556)	($441,180)	($408,804)	($376,428)	($344,052)
Total Expected Loss after 5 years					($2,044,020)

Exclusions

Depreciation has not been allowed for in the model above.

Q. OPTION 2A – LIKE FOR LIKE REPLACEMENT

1. SUMMARY OF OPTION

This option considers constructing a new pool of a similar size to the existing pool but in a new location. This new location would be more accessible with improved parking opportunities.

2. REVENUE ASSUMPTIONS

The following assumption were made in this model

- 50,000 admissions per year
- Allowed for mix of full price rate of $10 per user and reduced rate of $7.50 per user based on data from existing pool
- Swim school income of $23,760 per annum
- Assumed built on new site with good access and parking
- This option did not include any of the following income producing facilities i.e. gym, physio, spa, sauna or café rental

3. OPERATING EXPENSES

This option looks to construct a new building on a different site. The model anticipates significantly lower energy costs to heat the pool and building and lower building maintenance requirements than running the existing pool.

4. REVENUE MODEL SUMMARY – 5 YEAR PROJECTION

See summary of revenue model below. This model is based on achieving the projected revenues over a 5 year period so is the financial view at the end of the first 5 years.

Facility Revenue	Total
Projected Revenue	
Casual Users	$400,000
Swim School	$23,760
Total Revenue	**$423,760**
Operating Expenses	
Pool Expenses including wages, pool chemicals, power, training, energy costs	$479,312
General Building Expenses: insurance, maintenance, rates, water charges	$53,500
Other costs including accounting, legal	$13,000
Total Operating Expenses	**$545,812**
Net Position	**($122, 052)**

5. REVENUE MODEL OVER 5 YEAR PERIOD

As part of the analysis, Feldspar have assumed that the projected income will take 5 years to achieve from reopening of the improved pool facility. The table below shows the projected loses over the 5 year period:

New Pool Only					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
	60%	70%	80%	90%	100%
Total Projected Income	$254,256	$296,632	$339,008	$381,384	$423,760
Expenses	$545,812	$545,812	$545,812	$545,812	$545,812
Net Surplus	($291,556)	($249,180)	($206,804)	($164,428)	($122,052)
Total Expected Loss after 5 years					($1,034,020)

Exclusions

Depreciation has not been allowed for in the model above.

R. OPTION 2B – ENHANCED REPLACEMENT POOL OPTION

1. SUMMARY OF OPTION

This option considers constructing a new pool of a similar size to the existing pool but in a new location. Included with the new pool in this option are the following additional facilities:

- Spa and sauna facilities
- Gym
- Medical rooms for hire for physio, podiatrist etc
- Small Café area

The additional facilities above will produce increase user and rental income to improve the facility revenue. This new location would be more accessible with improved parking opportunities.

2. REVENUE ASSUMPTIONS

The following assumption were made in this model

- 50,000 admissions per year
- Allowed for mix of full price rate of $10 per user and reduced rate of $7.50 per user based on data from existing pool
- Swim school income of $23,760 per annum
- Annual rental income from gym, medical rooms, small café
- Additional use income from spa and sauna use
- Assumed built on new site with good access and parking

3. OPERATING EXPENSES

This option looks to construct a new building on a different site. The model anticipates significantly lower energy costs to heat the pool and building and lower building maintenance requirements than running the existing pool.

4. REVENUE MODEL SUMMARY – 5 YEAR PROJECTION

See summary of revenue model below. This model is based on achieving the projected revenues over a 5-year period so is the financial view at the end of the first 5 years.

Facility Revenue	Total
Projected Revenue	
Casual Users	$400,000
Additional Spa Users	$26,000
Swim School	$23,760
Gym Rent	$75,000
Medical Rooms: Physio, Podiatrist	$10,000
Café Rent	$10,000
Total Revenue	**$544,760**
Operating Expenses	
Pool Expenses including wages, pool chemicals, power, training, energy costs	$479,312
General Building Expenses: insurance, maintenance, rates, water charges	$57,500
Other costs including accounting, legal	$13,000
Total Operating Expenses	**$549,812**
Net Position	**($5,052)**

5. REVENUE MODEL OVER 5 YEAR PERIOD

As part of the analysis, Feldspar have assumed that the projected income will take 5 years to achieve from reopening of the improved pool facility. The table below shows the projected loses over the 5 year period:

Pool and Gym	Year 1	Year 2	Year 3	Year 4	Year 5
	60%	70%	80%	90%	100%
Total Projected Income	$326,856	$381,332	$435,808	$490,284	$544,760
Expenses	$549,812	$549,812	$549,812	$549,812	$549,812
Net Surplus	($222,956)	($168,480)	($114,004)	($59,528)	($5,052)
Total Expected Loss after 5 years					($570,020)

Exclusions

Depreciation has not been allowed for in the model above.

S. OPERATIONAL RISKS

See outlined below the key risks associated with the operational plan.

Risk	Mitigation	Status
Risk that income projections are not met	The short-term income projections have been excessively conservative and are based on a 5-year timeframe to achieve. We believe these projections are appropriately conservative.	Probability – Low Impact - High
Risk that expenses are higher than first thought	Expenses have been benchmarked against other community pools and reviewed by experienced professionals, but timescales for development are unknown.	Probability - Medium Impact - High
Risk that income takes longer to reach financial break-even levels	There will be a significant task required as the build nears completion to market and promote the new offering.	Probability – Low Impact - High
Inflation	There is a risk that inflation continues to stay higher than average and operating costs increase.	Probability – Low Impact - Low
Phased approach to construction	There is a risk that a phased approach to construction is undertaken this may affect the delivery of core requirements and overall cost to build.	Probability – Unknown Impact - Medium
Capital funding delays	There is a risk that it takes a long time to secure capital funding for the build.	Probability – Medium Impact - High
Delays in appointing staff/Other staffing issues	There is a risk that there are challenges securing key staff to operate the complex.	Probability – Low Impact - Medium

T. PUBLIC CONSULTATION ON OPTIONS

1. BACKGROUND

1.1 ACKNOWLEDGEMENTS

Feldspar and the Trust would like to thank DCC Recreation Services and Cre8ive Marketing for all their help and voluntary support of this exercise, from distributing flyers to website updates and social media posts, thank you.

1.2 CONSULTATION PROCESS

The Project Development Group elected to pursue an online public consultation approach, owing to limited time and funding availability.

The online survey process began with the creation of a survey instrument designed to gather specific information from participants. The Project Development Group decided to keep the survey as brief as possible but with space for written submissions should respondents wish to provide more detailed feedback.

Local advertising efforts were then employed to promote the survey, targeting the intended audience through channels such as local newspapers, radio stations, and community websites.

Simultaneously, social media platforms were utilised to reach a wider audience, with targeted prompts and sponsored posts directing users to the survey link.

As participants access the survey, they were guided through a series of questions, with the option to provide feedback or additional comments. Once the survey period concluded, the data was compiled and analysed to extract meaningful insights and inform decision-making processes.

1.3 PUBLIC SURVEY EXCLUSIONS

The project development group elected to withhold some information from the public survey, including:

- Cost information for each option – the group did not want the public to be influenced by the cost of the option that they selected, only weigh up each option based on its merits. The group were also concerned about the risk of publicly sharing such high-level cost information when the scope of any fully developed option is not yet known.
- Potential site information for any replacement option – the preferred site is owned by the DCC, and they have not yet made a formal decision on leasing it to the Trust
- Operating model information – the group felt that this information was too complex to inform a short online survey

2. RESPONSE

The survey was well-received locally, with just under 1,900 responses. The publication of the survey also produced some very supportive commentary on social media. There was, however, some criticism that the survey focused too much on replacement options rather than redeveloping the existing Physio Pool.

3. HEADLINE RESULTS

- 99.3% support the need for a hydrotherapy pool in Dunedin
- In terms of options:
  - 13% wanted the existing pool to be redeveloped
  - 22% wanted a like for like replacement pool
  - 65% wanted the hydrotherapy centre option
- 75% would be willing to pay $10 for a one-off non-concessionary ticket
- 49% want to be kept up to date about the project, (extremely high project interest)
- Majority of written responses identified car parking as key issue for users, many also said that they would like to see any of the options developed, just make it happen as soon as possible
- Demographics: 22% of respondents identify as disabled, 77% of respondents were women, approx. 4% were Māori, more than half of respondents were physio pool users

Please see Appendices for a full analysis of survey responses.

93%

support the need for a hydrotherapy pool in Dunedin

75%

willing to pay $10 for a one-off concession

13%

want the existing pool to be redeveloped

49%

want to be kept up to date about the project

4. WRITTEN RESPONSES/TESTIMONIALS

The survey provided opportunity for respondents to give more detailed feedback both on the options under consideration and the impact that access to hydrotherapy has had on their lives.

There were over a thousand written responses, Feldspar have used AI to analyse them, and these were the key messages, (in no particular order):

- The pool has been essential, particularly for disabled individuals, providing a comfortable and necessary environment for therapy and exercise.
- The pool's closure has had a significant impact on individuals' physical abilities and rehabilitation efforts, highlighting the importance of its services.
- Accessibility, affordability, and parking are key concerns for users, particularly for those with mobility issues or disabilities.
- Many individuals with sensory impairments find Moana Pool challenging due to the noise level, indicating a need for a quiet space for rehabilitation. There were also concerns raised about autistic children facing difficulties swimming in public pools due to sensory issues.
- Access to the pool is seen as crucial for recovery from injuries, surgeries, and disabilities, with the pool's proximity to the hospital considered beneficial.
- Many people are expressing a strong desire for the Physio Pool to be reopened or rebuilt, emphasising its importance for rehabilitation and recreation in Dunedin
- There are differing opinions on whether to redevelop the existing pool or build a new one, with some preferring to keep the current pool and others open to the idea of a new facility.
- Some suggest incorporating features like a cafe, spa, sauna, or women's only swim times, while others prefer a focus on the pool itself without additional amenities.
- Location suggestions include near the hospital, Logan Park, or other sports facilities, with parking and accessibility being critical considerations.
- Accessibility, affordability, and a focus on therapeutic benefits are key factors highlighted by community members advocating for the pool's return.
- There is general support for the pool, with many sharing personal stories of its importance in their lives or the lives of others they know.

A full set of responses is included in the Appendices, below are some examples:

"Such a pool is essential for many people's rehabilitation. Also, for many people with disabilities find it a source of relaxation, exercise & pleasure. All in all, the pool is of great benefit to the well-being of many."

"Without the physio pool being active for the past 3 years, people as far north as Oamaru, and far south as Bluff and as far west as Queenstown have lost access to pain relief and/or therapy."

"As a clinician, the impact of not having a facility like this has been devastating. Mosgiel pool barely scratches the surface of the communities' needs. The impact this will have on the community of anyone dealing with chronic injury/pain simply cannot be measured."

"As a clinician, without a facility like this, there are VAST numbers of people who we cannot support through their rehab effectively, because we do not have the facilities to do it. I cannot stress how important and URGENT rebuilding and expanding this facility is for literally thousands of people."

"This pool is essential, especially for disabled people like me. I went 2 x per week with a carer and my physical ability to walk now has become worse over the years since it shutting. My peripheral neuropathy (damage to the nerve endings in all parts of my body) and the heated pool maintained my mobility. Moana was too cold, a pool like this is essential to people with disabilities."

"I used this pool years and it was for my rehab. After my heart attack it was perfect."

"The Physio Pool was amazing and helped me so much after my brain injury and it will be lovely if it's brought back to how it was."

U. OPTIONS ANALYSIS

1. SUMMARY TABLE

The summary table below outlines the findings of the consultant team's investigations into the options considered as part of this feasibility study. There is a balance to be struck between capital outlay and long-term sustainability.

Option	Financial Viability (Based on Profit/Loss at Year 5)	Cost (Prices escalated to September 2026)	Demand (From Public Consultation, Nov 2023)	Advantages	Disadvantages
0 Do nothing	n/a	Disposal costs	n/a	• Easy option • No need for fundraising	• High likelihood of public outcry • Loss of hydrotherapy services for the region
1A Existing Pool -Compliance only	≥(320,292.00)	$1.255m, (plus $505k for seismic strengthening)	n/a	• Would get the pool open asap, (with Health NZ approval) • Would buy time to develop replacement	• Short term investment may not be attractive to funders • Would require support from Health NZ • No car parking on site • Potential development immediately adjacent
1B Full redevelopment of existing pool	(320,292.00)	$3.545m, (including seismic strengthening)	13%	• Potential to enable 30+ years of use • Existing pool retained	• No car parking on site • Plans to build immediately adjacent to the pool • Would require support from Health NZ
2A Like for like replacement in Kensington Oval	(122,052.00)	$12.800m, (plus Fixtures, Fittings and Equipment)	22%	• More affordable, long-term solution • Car parking • Ability to include cultural narrative	• Less demand • Potentially less operational sustainability
2B Hydrotherapy Centre in Kensington Oval	(5,052.00)	$17.350m, (plus Fixtures, Fittings and Equipment)	65%	• High local demand • Car parking • Operationally sustainable • Ability to include cultural narrative • Potential for MBIE funding, and other economic development/ tourism funding	• Expensive compared with other options

2. OPTION SELECTION WORKSHOP

Feldspar organised a stakeholder meeting in February 2024 to identify a preferred long-term option for the hydrotherapy services for the city.

The workshop was attended by trustees of the Trust, DCC, Health NZ along with representatives from local iwi, disability organisations and people who have historically been involved in the organisation and operation of the Physio Pool.

The group analysed the options based on a weighted set of criteria as recommended by the consultant team to give a total score out of 100. The criteria and weightings were as follows:

Criteria	Context	Score
Accessibility	Can people reach and use the site easily? Will people be able to park on site?	/ 15
Financial Viability	Can the option work without financial subsidy?	/ 25
Demand	Which option is most appealing to users?	/ 10
Attractiveness to funders	Which option is the most fundable?	/ 15
Cost to Develop	Higher cost = low score/ Lower cost = higher score	/ 10
Time to Develop	Long = low score/ short = high score	/ 15
Long Term Site Viability	Will the site still be viable in the next 30 years?	/ 10

With prior agreement from the project development group, options were scored on a consensus basis.

The overall scores for each option were as follows:

- 1b Full redevelopment of the existing pool 27/100
- 2a Like for like replacement of the existing pool 44/100
- 2b Enhanced replacement/Hydrotherapy centre 50/100

The hydrotherapy centre was selected as the preferred option owing to its ability to breakeven on a new site with car parking and wrap around complementary services.

A copy of the workshop minutes and the full scoring sheet is attached in the Appendices.

V. PATHWAYS TO SECURING THE PREFERRED OPTION

Following the workshop, Feldspar and the Trust met with DCC staff, who communicated the Council's intention to develop a city-wide strategic plan for aquatic facilities in the coming years.

Consequently, DCC staff consider it unlikely that the council will entertain proposals for new aquatics facilities until this strategy is finalised.

Given this new information, there are three main approaches open to the Trust:

a) Do nothing

It is very probable that the DCC's strategy will include hydrotherapy services and that hydrotherapy will form part of the Council's wider response to demand for aquatic services in the city.

The Trust may choose to not to act until this strategy is complete. The disadvantage of this response is that there will continue to be no hydrotherapy pool operating in the city for some time.

b) Pursue hydrotherapy centre option

Given the DCC's plan to complete an aquatics strategy, it is unlikely that Council would support a substantial capital contribution towards the design and construction of a new facility at this time.

It is however possible that the DCC, (and other funders), may consider a financial contribution to continue development work on this option with a view to this informing the city-wide aquatics strategy.

In this scenario, it would still be a long time before hydrotherapy services are restored to the city, but there would be the prospect of a sustainable solution in the long term.

c) Pursue the temporary/compliance option for the Physio Pool

This option would ensure continuity of services while a replacement option is developed/ delivered, which might either take the form of a standalone hydrotherapy centre or as part of a wider solution.

Given the DCC's strategic planning exercise, this approach may appear the most attractive. However, it would require the DCC, (or another partner) not only to provide a capital contribution towards upgrade costs but also cover the projected operating deficit for up to ten years.

Given this context, Feldspar do not believe that it would be beneficial for the Trust to begin fundraising for a replacement facility at this time, which leaves option c) above as the preferred way forward.

W. RECOMMENDATIONS AND NEXT STEPS

1. CONCLUSION

From a building only perspective, redeveloping the existing Physio Pool to offer either short-term or longer-term hydrotherapy services to the city is feasible.

However, from an operational standpoint, investing in the redevelopment of the current Physio Pool is sub-optimal. Feldspar's research indicates that the existing facility would likely operate at a significant deficit, and that site accessibility would be severely limited.

There are two major strategic factors influencing the future of both the Physio Pool and hydrotherapy services for the city, one is from Health NZ, and the other is from the DCC:

1.1 HEALTH NZ POSITION

- From Feldspar's understanding of Health NZ Southern's position, we are aware that the existing pool cannot be a long-term option.
- Why?
  - The constrained nature of the site and plant room
  - The low potential for long-term support from Health NZ
  - The projected financial operating model for the existing pool, (i.e. a substantial deficit per annum)
  - The lack of car parking opportunities at the existing pool
  - Health NZ's masterplan indicates a new Property Services building immediately adjacent to the Physio Pool building, which will heavily restrict access
- In addition, public hydrotherapy services are not part of Health NZ's core remit
- Nationally public hydrotherapy facilities are generally provided by councils, and higher-end facilities are available commercially. Some hospitals have hydrotherapy pools, but these are much smaller facilities than the Physio Pool and public access is usually arranged via community groups, (like Arthritis NZ).

1.2 DCC POSITION

- Feldspar are aware that the DCC will not commit to any larger scale replacement options for the Physio Pool until it has undertaken its city-wide aquatics strategy.
- Why?
  - Council will not be able to make any decisions on funding priorities until they have a clear picture of future services across the city
  - Council need to ensure that they have gone through the process of ensuring they have thoroughly considered all realistic options before deciding on where will be best to invest ratepayers money
- The timeframe for this strategy is not yet known.

2. RECOMMENDATIONS

Based on these overriding factors, Feldspar have two recommendations to suggest to the Trust:

2.1 That the Trust continue to work with the DCC to ensure that hydrotherapy services are factored into its aquatics strategic plan, this may result in either:

I. A stand-alone hydrotherapy centre – the preferred option from this feasibility study, OR

II. A hydrotherapy pool being included as part of a new or existing facility.

Feldspar would strongly recommend that the Trust becomes a key stakeholder in the development of the DCC's aquatics strategy.

2.2 That the Trust works with the DCC, Health NZ and funders to re-open the existing pool based on the compliance only option, given the critical nature of hydrotherapy services and the fact that the above will take a long time to come to fruition.

This strategy would allow hydrotherapy services to continue at the existing site for up to ten years, by which time the DCC should have completed its aquatics strategy and associated project work, which should include hydrotherapy provision.

It is anticipated that the capital needed for the build element of this option would require a contribution of seed funding from the DCC, and that other capital funders, (such as DIA/Lotteries and Otago Community Trust), would be able to approve grants on the proviso that this option is being pursued as part of a longer-term strategic process.

The issue of funding the expected annual operating deficits would have to be resolved before this option was pursued and any fundraising for capital works commenced.

Pursuit of this option would require significant buy-in from the DCC and Health NZ, with a shared vision and commitment to addressing operating costs, potentially through a funding allocation from DCC and/or the commissioning arm of Health NZ.

3. NEXT STEPS

Feldspar would recommend that the Trust pursue the following next steps to realise the recommendations described above:

3.1 COLLABORATION WITH DCC

The Trust should continue working closely with the DCC to ensure that hydrotherapy services are integrated into the city's strategic plan for aquatic services.

This collaboration may result in either a standalone hydrotherapy centre, (the preferred option) or the inclusion of a hydrotherapy pool within a new or existing facility.

Give the dependency that hydrotherapy services will have on the outcome of the DCC's strategic report, the Trust will need a commitment from the DCC to:

- Include the Trust as a key stakeholder in the development of the aquatics strategy,
- Include a new hydrotherapy pool in the scope of the DCC's aquatics strategy.

3.2 RE-OPENING THE EXISTING PHYSIO POOL

In the interim, while awaiting the completion of the DCC's aquatics strategy, the Trust should explore the option of re-opening the existing pool based on a compliance-only approach.

In order to re-open the existing pool, the Trust will need:

- Capital funding to complete the necessary building compliance work, (and potentially some funding to cover cosmetic upgrades to the building) - $1.8m.
- Funding to cover the projected operating deficit for a period of ten years - $4.2m, ($420k for ten years).
- A commitment from Health NZ to:
  - Lease the building to the OTPT for ten years.
  - Facilitate public access by providing:
    - A written statement that Health NZ will not develop a building against the Physio Pool for the duration of the lease.
    - Disability parking and drop off parking
- A discussion with DCC around the benefits of the Council operating the facility

3.3 IMMEDIATE ACTIONS

Feldspar recommends that the Trust carries out the actions below to explore the option of re-opening the existing Physio Pool outlined in 3.2 above.

We envisage that the critical path will be as follows:

a. Obtain a lease from Health NZ of the Physio Pool, including the plant room, infrastructure and adequate carparking for at least ten years.

b. Obtain a commitment from Health NZ not to erect a building adjacent to the Physio Pool for at least ten years.

c. Seek financial assistance from the DCC for capital expenditure on a compliance only option and for operating expenses when the Physio Pool reopens. This would include making submissions to the DCC Annual Plan and Nine-Year Plan.

d. Seek assistance from the DCC Aquatics Team about health and safety compliance, staffing and the provision of plant infrastructure monitoring at the Physio Pool when it reopens.

e. Prepare a detailed business plan for capital expenditure and operating expenditure requirements and to address the funding of potential annual operating deficits for at least ten years.

f. Prepare a detailed fundraising plan for the capital expenditure and operating expenditure requirements identified in the business plan.

Feldspar would like to thank the Physio Pool Trust for the opportunity to complete this feasibility study.

We would also like to thank the DCC and Health NZ for all their help and input.

This is an exciting project, with a lot of challenges to overcome. Feldspar would be delighted to continue our involvement as the project moves to the next stage.

Appendices

APPENDIX 1

Architecture HDT - Conditions survey and options report

APPENDIX 2

Powell Fenwick – Engineering reports

APPPENDIX 3

Origin – Heritage Assessment

APPENDIX 4

Site selection exercise information

APPENDIX 5

4Sight - High level planning due diligence report

APPENDIX 6

Rough Orders of Cost from Chas E George & Sons

APPENDIX 7

Public consultation results