VISITOR SOLUTIONS

February 2024

Thames and Sub-Region Aquatic Provision FEASIBILITY STUDY

INFORMATION

Document Reference	Thames and Sub-Region Aquatic Provision | Feasibility Study
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Sign off	Reviewed by Craig Jones and Andy Adams, Visitor Solutions Reviewed by Project Steering Group, Thames-Coromandel District Council
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IN ASSOCIATION WITH

ACKNOWLEDGEMENT:
Visitor Solutions would like to express its appreciation to the Project Steering Group which comprises representatives of Thames-Coromandel District Council, Thames Community Board, Hauraki District Council, Sport Waikato, Ngāti Maru and the Sport and Education Trust, based in Thames. The Project Steering Group has provided oversight of the study along with their input into the report.

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EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

DRIVER AND PURPOSE

Thames-Coromandel District Council is exploring future aquatic provision to serve Thames as it has committed to relocating Thames Centennial Pool due to its location on an urupā. Another driver is the under-supply of all-year aquatic provision identified for Thames-Coromandel and Hauraki.

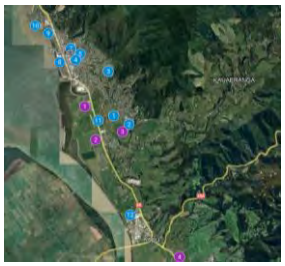
This feasibility study explores and examines potential options and seeks to answer: To meet aquatic needs should Thames-Coromandel District Council focus on a **local aquatic facility** or a **sub-regional facility**, potentially in partnership with Hauraki District Council?

CONTEXT AND ANALYSIS

2022 NEEDS ASSESSMENT

- Current provision is structured, inflexible, cold and ageing.
- Clear community desire for indoor aquatic provision.
- Priority for local functions: learn to swim, structured swimming and casual play.
- Lower but some priority for sub-regional functions: hydro-therapy, aquatic leisure and aquatic sport
- Needs of ageing population, particularly for warm water.
- Affordability factors for users and ratepayers.

LONG-LIST EVALUATION



- Developed evaluation criteria to assess potential sites.
- Assessed 18 potential site options in Thames.
- Identified fatal flaws and initial site considerations.
- Sub-regional location assessment to consider where is it best to develop a sub-regional facility.
- Six sites identified for initial consideration.
- Four sites shortlisted for detailed investigation.

DETAILED INVESTIGATION OF SHORT-LIST SITES

Preliminary design
Technical assessment
Cost-estimates
Traffic assessment
Operational considerations
Detailed site evaluation

LOCAL AQUATIC OPTIONS

1. Thames High School
- Central, accessible site
- School partnership
- Limited ground issues
- Good transport connections
- Straight-forward planning
- Lowest capital cost
- Site is tight space wise

Strongest local site

2. Upper Thames Racecourse
- Larger site
- Less central, accessible site
- Requires infrastructure
- Ground challenges
- Close to urupā and middens

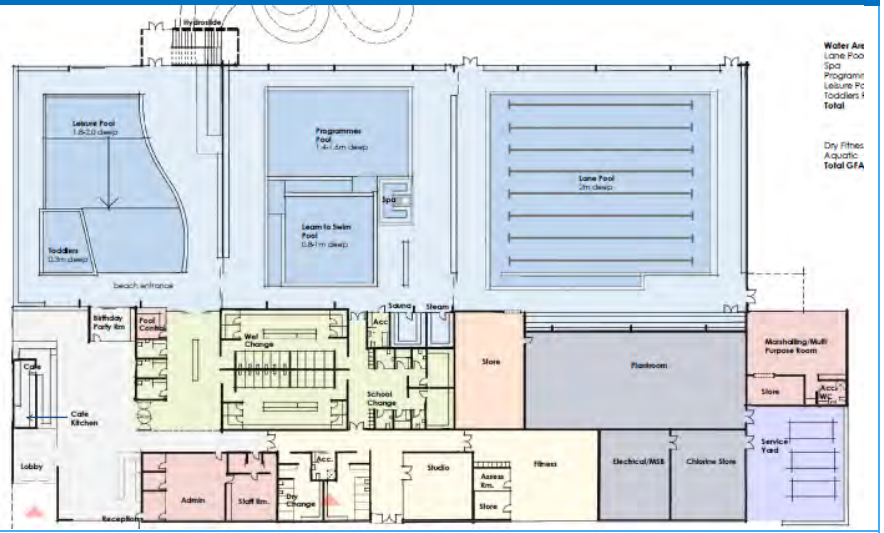
SUB-REGIONAL AQUATIC OPTIONS

3. Kōpū South: Ex-Carter H.
- Accessible, visible site
- Sufficient site size
- Willing site-owner
- High visibility
- Some ground challenges
- Requires infrastructure
- Higher capital cost

Strongest sub-regional site

4. Ngātea Pool
- HDC owned site
- Site is tight space-wise
- Less central catchment
- Poor visibility
- Lower capex, high opex

SUMMARY OF THE STRONGEST LOCAL AND SUB-REGIONAL AQUATIC OPTIONS

	OPTION 1 / 1A: THAMES HIGH SCHOOL LOCAL	OPTION 3: KŌPŪ SOUTH: EX-CARTER HOLT SITE SUB-REGIONAL
PRELIMINARY DESIGN		
METRICS	**1: All indoor** / **1A: Part Outdoor** Water size: 800m² / 800m² Estimated Capex: $37.5M - $42.5M / $32.5M - $36.5M Estimated Visits: 52,000 – 65,500 p.a. / 45,600 – 54,750 p.a. Estimated Opex: ($967K) - ($1.14M) / ($1.0M) - ($1.21M)	**Option 3** Water size: 1,109m² Estimated Capex: $68.8M - $77M Estimated Visits: 80,500 – 101,500 p.a. Estimated Opex: ($1.351M) - ($1.530M)
PROS	• Excellent accessible and visible location. • Builds on the successful school / council partnership. • Lower capital and operating cost and less operating risks. • Will meet the local aquatic needs for the foreseeable future. • Good site for aquatic facility development with minimal risk.	• Larger facility with greater appeal for residents and visitors. • Potential for some external funding although small. • Potential to align with future population growth and possible sport hub on the adjacent property (Spatial Plan). • Potential public/private partnership but needs exploration. • Sustainable energy options available from the site.
CONS	• Smaller facility offers core aquatic elements but lower appeal. • No / limited growth potential as the site is maximised. • Requires approval from Ministry of Education, which adds time. • Minimal external investment is likely. • Likely to be mostly TCDC's cost.	• HDC indicated no financial capacity to invest in sub-regional. • Higher capital cost and operating cost, largely TCDC's. • Less accessible to local Thames catchment. • Range of technical and infrastructure issues adds cost. • Undetermined land occupancy costs.
	Lower costs, lower risks, appears more achievable and viable.	**Higher costs, higher risks, greater potential strategic outcomes, more complicated, therefore achievability may be impacted.**

RECOMMENDATIONS

The Thames Aquatic Facilities Feasibility Study recommends:

1. The Thames-Coromandel District Council endorse **the Thames and Sub-Region Aquatic Provision Feasibility Study** and the companion study titled ***Thames-Coromandel and Hauraki Districts: Sub-regional Aquatic Location Assessment***., noting:
    - The Feasibility Study assessed potential options for both local and sub-regional aquatic provision in Thames and the Sub-region.
    - The Feasibility Study concluded Option 1/1A Thames High School is the strongest local option and is lower cost, lower risk and appears more achievable and viable.
    - The Feasibility Study concluded Option 3 Kōpū South: Ex-Carter Holt site is the strongest sub-regional option and has higher costs, higher risk, greater potential strategic outcomes, but more complicated and therefore may have lower achievability.
    - Hauraki District Council has indicated it does not have the financial capacity to the level required to invest in a sub-regional aquatic facility.
2. The Council approves the development of a business case to set-out the case for investment in an aquatic facility and outline the financial impact. In doing so the Council should decide if it wishes to:
    - Select a single preferred option for detailed analysis in the business case. OR
    - Progress both the strongest local and sub-regional options for more detailed analysis in the business case (allowing for detailed comparison).
3. The business case includes:
    - Community engagement to understand perceptions of each option.
    - Engagement with potential funders to understand potential levels of investment (if any) in each option.
    - Explore procurement options to see if these would offer any cost-savings.
    - Consider the ‘do nothing’ option.
4. The feasibility study reports be shared with Hauraki District Council.

CONTEXT & ANALYSIS

2.0 INTRODUCTION

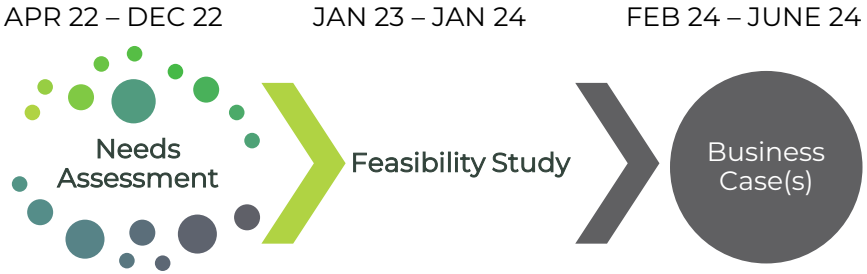
2.1 BACKGROUND

The Thames-Coromandel Long Term Plan 2021 – 2031 includes two key locally funded projects for Thames:

1) A like for like replacement of Thames Centennial Pool (2025/26 to 2026/27). Council will remove the existing swimming pool facilities at Taipari Park, and land ownership will be transferred to Ngāti Maru, in accordance with the Thames and Thames Coast Reserves Management Plan (2020).
2) Thames sports precinct (2026/27 to 2027/28) with the intention of a sports partnership / hub for sports groups currently based at Rhodes Park. Referred to as the Thames Sports Partnership Project.

The Council commissioned Visitor Solutions to complete comprehensive investigations into aquatic and sport facility provision (through a needs assessment, feasibility study and business case). Due to the potential synergies, the aquatic and sport precinct projects are being undertaken in parallel. The investigation has been guided by a Steering Group comprised of representatives from Thames-Coromandel District Council, Thames Community Board, Hauraki District Council, Sport Waikato, Ngāti Maru and the Sport and Education Trust (Thames). The investigation process is outlined in Figure 2.1. The needs assessment was completed in September 2022.

FIGURE 2.1 OVERALL INVESTIGATION PROCESS



2.2 DEVELOPMENT DRIVERS

The development drivers have been well established through extensive work completed over the last decade on aquatic provision in Thames and the sub-region.

DRIVER 1: IMPENDING CLOSURE OF THAMES CENTENNIAL POOL

The Thames Centennial Pool is located on an urupā (burial ground) and under the agreement between Ngāti Maru and Thames-Coromandel District Council, it has been agreed the facility will be relocated by 2027 and the land returned to Ngāti Maru.

At 50 years old the Thames Centennial Pool is reaching the end of its useful life and investment would have been needed to address its condition in the very near future.

DRIVER 2: GAP IN PROVISION OF ALL-YEAR AQUATIC PROVISION

The Waikato Regional Aquatic Plan 2017 identifies an under-supply in all-year aquatic provision in both Thames-Coromandel and Hauraki districts. The Plan recommends 1,312m^2 of all-year indoor pool area to serve both districts (investigate a partnership). It also recommends focus on meeting the needs of an aging population.

The needs assessment identified a key question to resolve is the purpose of a new aquatic facility. Should the facility be developed to serve the sub-region or a local Thames catchment. The Waikato Regional Aquatic Facility Plan (2017) defines local and sub-regional as:

Local aquatic facility:	Sub-regional aquatic facility:
Predominantly single TA. Drive-time 20 minutes. Indoor or outdoor pool with learn to swim, lane swimming and basic aquatic sport needs with limited leisure features.	Cross-boundary use. Drive time 30 minutes. Year-round indoor pool with learn to swim, lane swimming, therapy, spa and some leisure features. Aquatic sport across boundaries for competition and training.

2.3 FEASIBILITY STUDY QUESTION

The primary purpose of the feasibility study is to explore and assess potential options for aquatic provision and answer the following question:

1. To meet aquatic needs should Thames-Coromandel District Council focus on a **local aquatic facility** which primarily serves a 20 minute catchment around Thames township or instead focus on a **sub-regional facility,** potentially through a partnership with Hauraki District Council, that aims to serve a wider 30 minute catchment encompassing Thames and Paeroa?

2.4 METHODOLOGY

Progressing the feasibility study and answering this primary question (and related questions) has been more complex than originally envisioned, due to a range of reasons including:

- Suitable land in Thames is sparse leading to significant reconsideration and refinement of site and design options through-out the study.
- Considering both local and sub-regional aquatic options alongside sport partnership options.
- The complexity of associated strategic issues and projects.
- Working across multiple stakeholders and organisations.
- The impact of the extreme weather events in early 2023 on project resources and timelines.

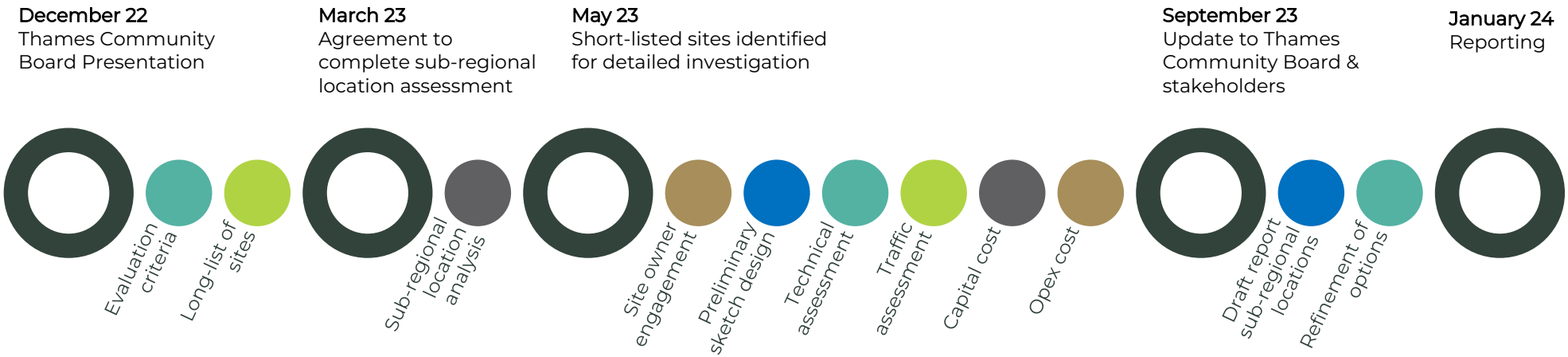
The methodology is summarised in Figure 2.2 (see over page) and includes the following steps:

1. **Commencement**: the feasibility study started in late 2022 after the completion of the needs assessment. A presentation to the newly elected Thames Community Board in December 2022 (following local government elections) summarised the needs assessment findings.
2. **Long-list site assessment**: site evaluation criteria were developed to assess all possible sites in and around Thames. The goal was to identify a short-list of suitable sites for detailed investigation.
3. **Sub-regional location assessment**: As part of the long-list site assessment, Sport Waikato asked whether the feasibility study would answer the question *"Where is it best to develop a sub-regional aquatic facility to serve Thames-Coromandel and Hauraki districts?".* While related, this is a different question to determining whether a replacement Thames pool should be a local or sub-regional facility. Consequently, it was agreed to complete a companion assessment to specifically address this question. The findings are detailed in a companion report ***Thames-Coromandel and Hauraki Districts: Sub-regional Aquatic Location Assessment***. The key findings from the companion assessment are summarised in Section 4.5 of this report.
4. **Short-list site investigation**: The long-list site assessment was presented to Thames Community Board in May 2023 with recommendations to investigate short-listed sites in detail. The detailed investigations involved:
   - Engagement with site owners and key stakeholders.
   - Preliminary sketch designs completed by Architecture HDT.
   - Technical assessment including planning, geo-technical, civil and infrastructure requirements by Beca Consulting.
   - Traffic assessment by Team Traffic.
   - Capital cost estimates by MPM Projects.
   - Operational cost estimates by Visitor Solutions.

   The detailed site investigations uncovered a range of issues and challenges. This meant the short-list options required several iterations of rework and refinement.
5. **Reporting**: the outcomes of the feasibility study and companion reports were socialised with the Steering Group and Thames Community Board before finalising[1].

[1] It is noted the original methodology included a phase of community engagement to socialise the draft development options and understand initial community views on these options. Due to the complexities faced during the feasibility study, it was resolved this community engagement was best undertaken once the draft feasibility study was completed alongside any funding consideration.

FIGURE 2.2 SUMMARY OF THE FEASIBILITY STUDY METHODOLOGY



2.5 STRUCTURE OF REPORT

The feasibility study report is structured as follows:

- A recap of the needs assessment including the strategic context, demographic context, survey highlights and key facility requirements.
- A summary of the long-list site assessment that identified a short-list of sites to investigate in detail. This includes a summary of the sub-regional aquatic location assessment.
- An outline of the detailed investigation methodology.
- Detail for the local aquatic options. This includes capex, opex, and governance models, pros and cons for each option.
- Detail for the sub-regional aquatic options.
- A summary of funding opportunities.
- An evaluation of the options against the site assessment criteria and key success factors.
- The key conclusions including a summary of findings and recommendations.

3.0 SUMMARY OF NEEDS ASSESSMENT

3.1 KEY STRATEGIC CONTEXT[2]

A summary of the key strategic context relevant to aquatic provision is outlined below. Refer to Section 11 for more detail on each of the reference documents.

THAMES COROMANDEL

Vision: Council will provide reliable services to support a vibrant, connected, and sustainable district through strong governance.

A like for like replacement of Thames Centennial Pool (2025/26 to 2026/27).

THAMES AND SURROUNDS SPATIAL PLAN
OCTOBER 2022

High-level development blueprint for the future.

Identifies 3 key issues facing Thames:

- Need for more housing.
- Constrained economic development.
- Coastal inundation due to rising sea levels.

Thames-Coromandel District Sport and Active Recreation Plan

Strategic approach to achieving sport and recreation outcomes.

- Continue investigation for Thames Pool.
- Collaborate with Hauraki District Council.
- Cross-boundary support commensurate with benefits.
- Identify community needs.

AQUATIC PROVISION

Waikato Regional Aquatic Facilities Plan

Outlines best-practice aquatic network to meet current & future needs.

- Flexible / future-proof spaces.
- Learn to swim.
- Warm programme water.
- Income generation.
- Careful balance between users.

Waikato Regional Active Spaces Plan

High-level strategic framework for play, active recreation and sport facilities and spaces.

- Key principles for facility planning & provision: meet needs, sustainable, collaborative, integrated, flexible, inclusive.
- Sport facility process: concept, plan, design, build, operate and improve.

Hauraki District Sport and Active Recreation Plan
2018-2028

Guide facility development and investment, ensuring a strategic approach to provision.

- Cross-boundary partnership project with TCDC and/or Matamata Piako.
- Investigate options for Waihi.
- Develop partnership with schools, TAs, DOC and Iwi.

[2] Section 3.0 outlines key points from the needs assessment. For more detail refer to the full Thames and Sub-region Aquatic Provision Needs Assessment Report.

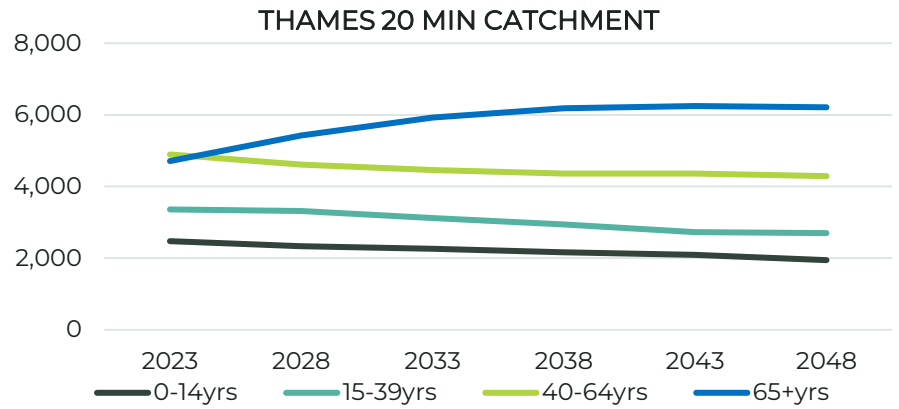
3.2 KEY DEMOGRAPHIC CONTEXT

A summary of the key demographic features relevant to aquatic provision is outlined below.

LIMITED POPULATION GROWTH

	2006	2018	2023	2048
Thames Town	7,461	7,881	8,270	8,130
Thames Ward	10,233	10,644	11,200	11,360
Thames 20 min Catchment	**13,842**	**14,616**	**15,430**	**15,210**
Thames-Coromandel District	25,938	29,895	32,400	32,800
South/West of TCDC & HDC	**27,426**	**29,814**	**32,670**	**33,700**
Hauraki District	17,856	20,022	21,800	21,800

AGEING POPULATION



LOW AVERAGE INCOME LEVELS

	MEDIAN PERSONAL INCOME
Thames Town	$25,560
Thames Ward	$26,214
Thames 20 min Catchment	**$27,890**
Thames-Coromandel District	$24,900
Hauraki District	$24,600
New Zealand	**$31,800**

3.3 CURRENT PROVISION

A summary of current provision and associated issues is summarised below.

CURRENT AQUATIC PROVISION (SURFACE WATER)

TYPE	THAMES	TCDC	HDC
All-year public pools	375m²	750m²	-
Seasonal public pools	-	705m²	1,207m²
Other pools (schools & private)	547m²	1,529m²	1,655m²
Total provision in all pools	**922m²**	**2,984m²**	**2,862m²**

KEY ISSUES WITH CURRENT AQUATIC NETWORK

Lack of indoor, all-year provision

- Network is almost exclusively outdoor.
- All-year pools are based in outdoor pools, operating through winter with heat-pumps.

Lack of flexibility

- Almost all pools are structured in design.
- Limits functionality for a range of activities.

Ageing facilities

- Average age across all pools is 60 years.
- Thames Centennial Pool is over 50 years.
- Average age of Hauraki pools is 45 years.

Lack of learn to swim & hydro-therapy

- Few pools suited for learning or therapy.
- Very little warm-water suitable for young and old.

THAMES CENTENNIAL POOL

- Attracts around 30,000 visits per annum.
- Partially used in a sub-regional capacity: 59% visits from Thames and 41% visits from outside Thames.

3.4 COMMUNITY SURVEY

A summary of community survey findings from the needs assessment (n=399) are outlined below.

90% SUPPORT FOR IMPROVED AQUATIC PROVISION IN THAMES

IMPORTANCE OF FUTURE ACTIVITIES / 1 TO 5 (5 BEING HIGH)

Personal swimming	4.09
Learn to swim	4.05
Playing around	3.80
Relaxing	3.74
Aquatic sport	3.57
Socialising	3.44

Future desired activities

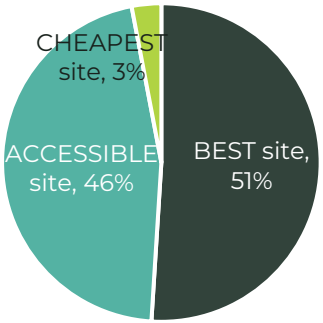
IMPORTANCE OF FUTURE FACILITIES / 1 TO 5 (5 BEING HIGH)

Learn to swim	4.11
Lap pool	4.07
Shallow pool	4.02
Indoor pools	4.01
Outdoor areas	3.86
Hydro pool	3.4
Deep pool	3.34
Splash-pad	3.26
Spa pool	3.18
Function area	3.14

Clear priorities for local aquatic provision

Desire for sub-regional aquatic provision

SITE SELECTION



LOCATION IS CRITICAL

Need to identify a site that is both the best site for a swimming pool and is accessible to the community.

Free from the risk of flooding.

3.5 KEY FACILITY REQUIREMENTS

SUB-REGIONAL VERSUS LOCAL CONSIDERATIONS

Thames Centennial Pool must be replaced, and Thames-Coromandel District Council has committed funding towards aquatic development. The Waikato Regional Aquatic Facility Plan recommends consideration of a larger sub-regional aquatic facility to serve a wider area (achieved via a partnership with Hauraki District Council). Information on the location, scope, and cost of local versus sub-regional provision is needed to determine the best option.

INDOOR POOL

There is a clear call for indoor aquatic provision to achieve all-year access. The biggest issue with the current Thames Centennial Pool is the poor winter and cold experiences due to its outdoor design.

Responding to the identified needs, the minimum scope for a **local facility** is:

- Learn to swim for children and adults.
- Structured pool which provides for personal swimming and basic aquatic sports.
- Casual play opportunities for families, children, and youth.

For a sub-regional facility, the scope is expanded to include:

- More comprehensive provision for a range of aquatic sports.
- Hydrotherapy options including a spa and/or programme pool.
- Leisure features for a wide cross-section of the community.

AGING POPULATION

As Thames and the sub-region population is forecast to become increasingly older, it is important to include warm water and all-pool accessibility to cater for older age cohorts.

AFFORDABILITY

Given the socio-demographic composition of the community, affordability in terms of the capital cost, ongoing operational cost, cost of entry and cost of transport are all critical elements for the future.

3.6 OPERATIONAL CONSIDERATIONS

Almost all public aquatic facilities cannot generate sufficient revenue to cover annual operating costs. To improve financial viability, the recommended best practice is to:

- Provide programmes to increase utilisation during off-peak.
- Consider cost saving opportunities to reduce energy consumption.
- Provide a strong learn to swim programme.
- Provide health and fitness facilities which generally deliver strong revenue for limited operating costs.
- Consider complementary revenue generating opportunities including spa, sauna, food, retail, childcare and meeting spaces.
- Develop facilities co-located with other community facilities to create social infrastructure hubs and drive cross-patronage.

When considering the development of a new or upgraded aquatic facility, the 2015 National Aquatic Facilities Guidelines identify the following best practice approaches:

- **Needs-driven** – ensure any development is supported by well researched markets, trends, and projections.
- **Long-term horizon** – planning for demand changes and utilising robust aquatic design and high-quality materials to provide longevity in the facility use and operations.
- **Flexibility** – ensure the layout, depths, temperatures, and equipment provide flexibility to accommodate a wide range of activities.
- **Revenue generating** – consider opportunities to generate revenue and increase revenue in off-peak periods from aquatic and ancillary or complementary services.
- **Operationally efficient** – ensure design and material selection provides for ease of operation, management, and maintenance.
- **External integration** with the outdoor environment and facility setting and consider partnership opportunities.
- **Optimal location** for market accessibility, exposure, visibility, transport connections and collocation with complementary offers.
- **Economically sustainable** – consider opportunities to optimise operating costs, improve revenue and leverage funding opportunities.

3.7 KEY SUCCESS FACTORS

In adopting the needs assessment, the following key success factors for future aquatic provision were confirmed:

SUB-REGIONAL CONSIDERATION

Test as the first priority, the potential location, scope and scale of sub-regional provision compared against local provision. Engage with Hauraki District Council and complete financial analysis to inform this decision-making.

BEST AND MOST ACCESSIBLE LOCATION

Find the best and most accessible location for aquatic provision, whether local or sub-regional, which is not at risk of flooding.

INDOOR QUALITY PROVISION

Indoor all-year provision which provides opportunities for learn to swim, personal swimming, aquatic training, and casual play. If sub-regional provision is determined, then consideration of aquatic sport, hydrotherapy, and leisure provision.

DIVERSE COMMUNITY NEEDS

Reflecting on the aging population now and into the future ensure there is sufficient warm water provision to suit the needs of older people, and taking account of the needs of families, children, and youth.

COMPLEMENTARY

Ensure there is a range of complementary amenities to support high use of the aquatic facility.

AFFORDABILITY

The goal is delivering the most affordable development, both in terms of the capital cost to develop any facilities, the on-going affordability to maintain and operate any facilities and the cost for users to access aquatic opportunities.

4.0 LONG-LIST SITE ASSESSMENT

4.1 SITE EVALUATION CRITERIA

The site assessment criteria were used to assess the suitability of sites for the development of an aquatic facility. The site evaluation criteria are not to be confused with the key success factors developed in the Needs Assessment which will be considered as part of determining the preferred option.

The site evaluation criteria consider which sites offer the strongest attributes for an aquatic facility development. They include variables such as:

- Whether a site is available for development.
- Is the site free or with minimal risk from flooding or coastal inundation.
- Is there sufficient size to accommodate an aquatic facility.
- The community accessibility of the site across a range of travel modes (considered from a local and sub-regional perspective).
- The technical suitability of the ground and site for an aquatic facility.
- The practicality and sustainability for development.

The criteria are split into:

- Fatal flaws – the minimum baseline requirements for a site.
- Long-list considerations – criteria applied to all sites under consideration.
- Short-list considerations – criteria applied only to short-listed sites being investigated further.

The full criteria are summarised in Table 4.1. The criteria were approved by the Thames Pool and Sports Hub Steering Group.

TABLE 4.1 AQUATIC SITE EVALUATION CRITERIA

FATAL FLAWS	
Flood risk	Is the site susceptible to flooding now or in the future?
Site availability	Is the site available for development or is there any current or potential impediment (such transfer/sale of the land or impending development for another purpose)?
LONG-LIST CONSIDERATIONS	
Size	Will the site accommodate a local or regional sized facility?
Topography	Is the topography of the site suitable for aquatic facility development or will it require significant earthworks?
Land ownership	Who owns the site and how easy will it be to develop an aquatic facility on the site?
Zoning	What is the site currently zoned for and what impact will this have on the consent process? (Noting that zoning can go through a process to be changed but this adds time and cost).
Local Catchment accessibility	How accessible is the site for the local catchment to access?
Sub-regional catchment accessibility	How accessible is the site for a sub-regional catchment to access?
Visibility	How visible is the site to the community in terms of ease of finding and visual presence?
Vehicle accessibility	How accessible is the site for vehicle access?
Walkable accessibility	How accessible is the site for walking / cycling access?

SHORT-LIST SITE CONSIDERATIONS	
Geotech	What is known about the underlying ground conditions and how suitable is the site for an aquatic facility? What is the potential for liquefaction or impact from high water table?
Practicality	Does the site enable practical aquatic facility design or does it present significant constraints?
Cost implications	Does the site present any additional cost implications such as earthworks, access etc
Sustainability	Does the site offer any sustainability opportunities which will provide operational benefits.
Community perceptions	Are there particular known community perceptions around the site which will need to be managed?
Mana Whenua views	What are Mana Whenua views on the site and will these have any constraints?

4.2 LONG-LIST OF SITES

A long-list of sites was generated through a desk-top review and informed by input from Thames Coromandel District Council staff. This initial assessment only focused on sites within Thames Ward. Additional sites were added as part of the Sub-regional Location Assessment, summarised in Section 4.5.

There are two groups of sites:

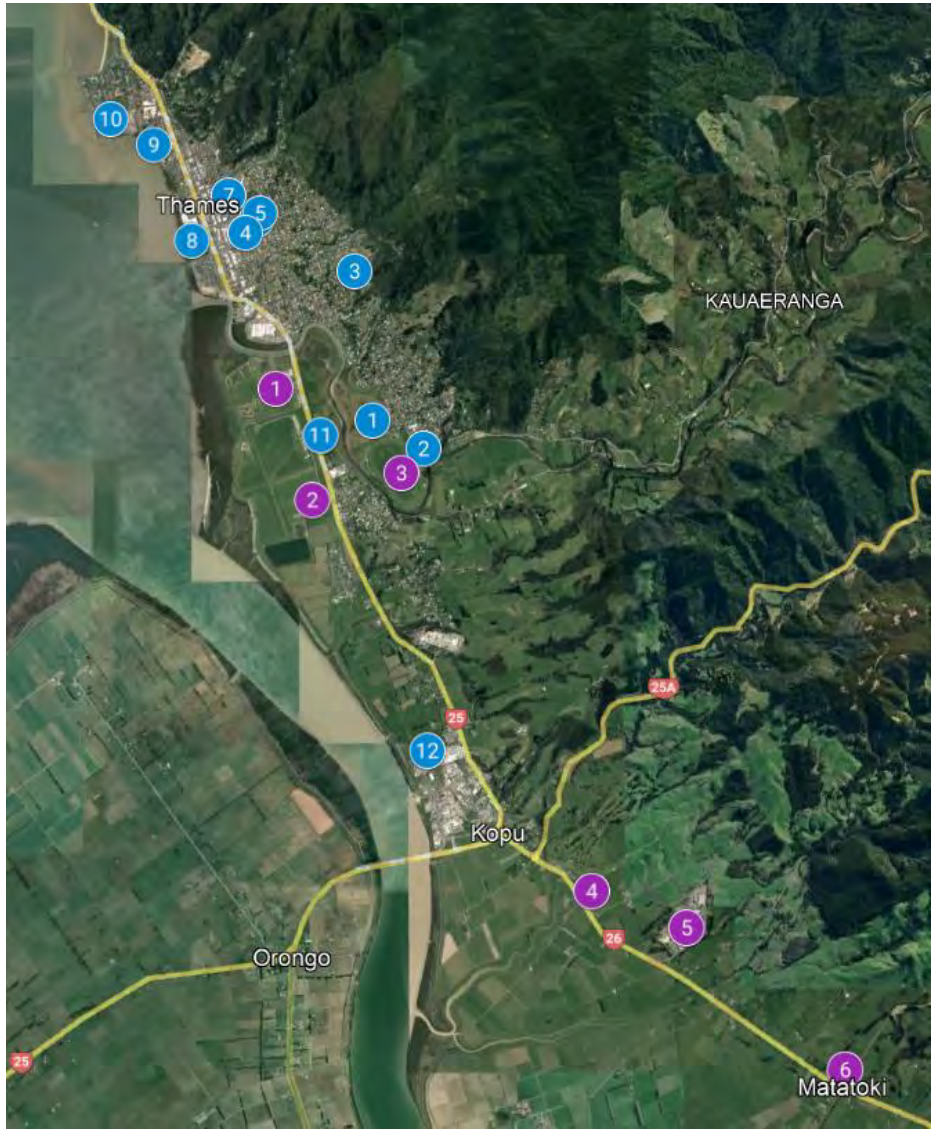
- Sites which may be large enough to accommodate both aquatic and sport facilities.
- Sites which are only large enough for an aquatic facility.

Table 4.2 provides a list of sites, which are shown in Figure 4.1.

TABLE 4.2 LONG-LIST OF SITES

POTENTIAL SPORT & AQUATIC SITES (PURPLE DOTS)
1. Rhodes Park
2. Airfield South / Maramarahi
3. Lower Racecourse (non-council)
4. Kōpū South: Wenzlick Block (private property identified in Spatial Plan)
5. Kōpū South: Ex-Carter Holt site (private property identified in Spatial Plan)
6. Matatoki site (private property identified in Spatial Plan)
POTENTIAL AQUATIC SITES ONLY (BLUE DOTS)
1. Lowe Avenue Reserve
2. Upper Racecourse (non-council)
3. Hauraki Terrace Reserve
4. Thames High School – court site
5. Thames High School – pool site
6. Thames High School – Field site
7. Thames Bowling Club (non-council)
8. Danby Field
9. Victoria Park
10. Burke Street Reserve
11. Pony Club Site
12. Kōpū Light Industrial (private property identified in Spatial Plan)

FIGURE 4.1 MAP OF LONG-LIST OF SITES



4.3 LONG-LIST EVALUATION

A full assessment of each site is outlined in Appendix A. Each site was scored on a five point scale summarised in Table 4.3.

TABLE 4.3 SCORING APPROACH

SCORE	FATAL FLAWS		LONG-LIST	
1	Extreme	Extreme issues	1	Weak delivery
2	Poor	Significant issues	2	Some delivery
3	Average	Average issues	3	Average delivery
4	Good	Some issues	4	Good delivery
5	Excellent	No issues	5	Excellent

The scores for the 18 sites are outlined in Table 4.4 on the following page. Appendix A provides more detail on each site and the rationale behind the scoring.

4.4 INITIAL SITE INVESTIGATIONS

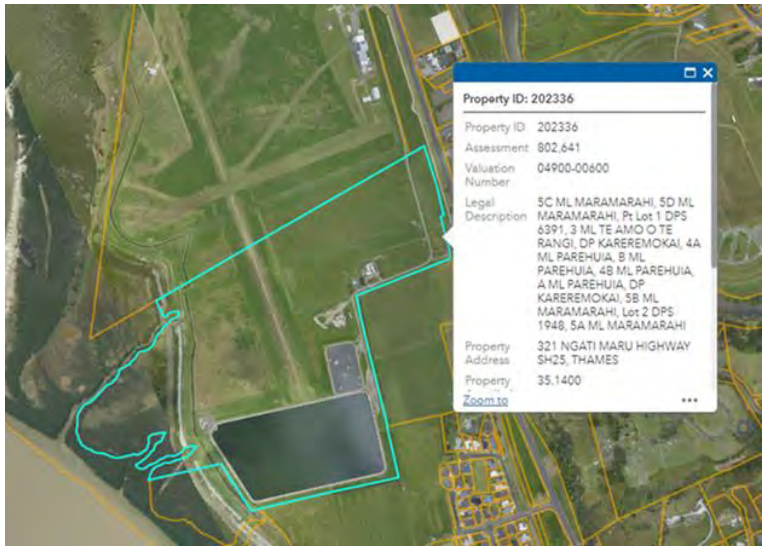
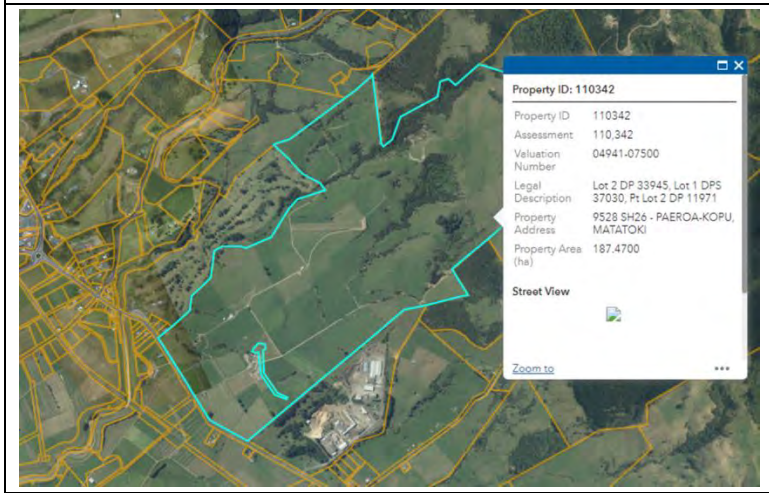
From the long-list assessment, six sites were identified for initial investigation. This involved engagement with site owners and a first-cut size assessment. The outcomes of this initial site investigation are outlined in Table 4.5, along with recommendations on investigating the sites in more detail.

This initial investigation was completed before the detailed (and costly) technical investigation was completed.

TABLE 4.4 LONG-LIST SCORING FOR POTENTIAL AQUATIC SITES

SITES	FATAL FLAWS		LONG LIST CRITERIA									SCORE
	Flood Risk	Availability	Size	Topography	Ownership	Zoning	Local Catchment Accessibility	Sub-regional Accessibility	Visibility	Vehicle Accessibility	Walkable Accessibility	
1. Rhodes Park	Extreme	Poor										
2. Airfield South	Poor	Poor	3	3	4	4	3	3	5	4	3	36
3. Lower Racecourse	Poor	Average	4	2	2	3	3	1	2	3	3	28
4. Kōpū South: Wenzlick Block	Good	Poor	5	3	1	2	2	5	4	3	1	32
5. Kōpū South: Ex-Carter Holt site	Excellent	Poor	5	3	1	2	2	5	4	3	1	32
6. Matatoki site	Excellent	Poor	3	4	1	2	1	4	1	2	1	26
1. Lowe Avenue Reserve	Poor	Extreme										
2. Upper Racecourse	Excellent	Average	4	2	3	3	3	1	3	3	2	32
3. Hauraki Terrace Reserve	Excellent	Excellent	2	4	5	3	4	1	2	3	3	37
4. Thames High School - courts	Average	Average	4	5	3	4	5	2	5	5	5	44
5. Thames High School - pool	Good	Average	2	3	3	3	5	2	4	4	5	38
6. Thames High School - Jack McLean	Good	Average	3	5	3	4	5	2	5	4	5	43
7. Thames Bowls Club	Excellent	Poor	1	5	1	3	5	2	5	4	5	38
8. Danby Field	Extreme	Poor										
9. Victoria Park	Poor	Poor	1	2	4	3	3	1	2	4	4	28
10. Burke Street Reserve	Good	Poor	4	1	5	4	3	1	3	3	4	34
11. Pony Club Site	Poor	Poor	2	4	4	3	3	3	5	4	2	34
12. Kōpū Light Industrial Site	Good	Poor	4	4	1	1	2	4	3	2	1	28

TABLE 4.5 INITIAL SITES CONSIDERED AND RECOMMENDATIONS FOR DETAILED INVESTIGATION

INITIAL SITES	INITIAL ASSESSMENT & RECOMMENDATION FOR DETAILED INVESTIGATION
	**Airfield South / Maramarahi site** • This site is large enough for development of aquatic and sport hub facilities. • The most significant issue is the presence of a wāhi tapu across the site. • The 2018 Cultural Values Assessment by Ngāti Maru and the 2020 report by Dave Robson, identify the site is very significant as a battleground and urupā. • Ngāti Maru view the area as very important / significant and it is wāhi tapu. • The current fence around the urupā area is nominal and does not really reflect where archaeological remains could be present. It is likely that archaeological remains will be present through-out the site. • The area is important as it links to the “deathscape”. There are too many unknowns with this site to allow development. Any development will visually change the whenua and would under-value the importance of the site to the Hapu. • The Tōtara Hapu vision is to see the site left alone. In this context, the site is not considered appropriate for the development of an aquatic or sport facility. • Given one of the key drivers for aquatic development is the removal of Thames Centennial Pool from an urupā, it seems illogical to consider another site with the same site challenges. • On this basis, the site was deemed inappropriate for development and was not considered further.
	**Kōpū South: Wenzlick Block (private property)** • This site is privately owned but identified in the Thames and Surrounds Spatial Plan for potential future development. • The site is large enough for development of aquatic and sport hub facilities and has limited flooding risk. • The key constraint is the timeline and cost associated with securing the site for development (a greater issue for the aquatic centre given the timeline based on the 2027 deadline for the Thames Centennial Pool). • Given the shorter timeframes for the aquatic facility, it was resolved this site is not suitable for further consideration (but is still being considered for the sport facility development as there are potentially longer development timeframes). • On this basis, the site was deemed inappropriate for aquatic facility development and was not considered further.

INITIAL SITES	INITIAL ASSESSMENT & RECOMMENDATION FOR DETAILED INVESTIGATION
	**Kōpū South: Ex-Carter Holt site (private property)** • This site is privately owned by Southbridge Industrial Park Ltd. • It is identified in the Thames and Surrounds Spatial Plan for potential future development. • The site is only large enough for development of an aquatic facility, on the site frontage. • There appears to be limited flooding risk. • The key constraint is the timeline and cost associated with securing the site for aquatic facility development. • The site owners are keen to explore a complementary development that forms part of the wider redevelopment of the industrial park. • The location is strategically placed to suit a sub-regional facility on the main state highway and close to holiday traffic (potentially becoming a destination facility). • On this basis, the site was recommended for detailed investigation as a sub-regional facility.
	**Hauraki Terrace Reserve** • This site was initially identified as having potential for the development of a local aquatic facility, being central to the Thames community and relatively accessible location. • However, once the size of a local aquatic facility was overlaid, it was clear the facility would dominate the entire site leaving no/limited space for carparking or transport requirements (or other park elements like a playground or open-space). • As the Reserve is located within a residential area, it was determined an aquatic facility would create a significant localised impacts and may have planning constraints. • On this basis, the site was deemed inappropriate for development and not considered further.

INITIAL SITES	INITIAL ASSESSMENT & RECOMMENDATION FOR DETAILED INVESTIGATION
	**Thames High School – 3 potential sites** • Three potential sites were identified within Thames High School, these being: on the current court area, over the current swimming pool and adjacent to the Jack McLean facility. • An initial site assessment identified both the current pool site and Jack McLean sites were too small. Both sites would require acquisition of private properties to provide sufficient space for a local aquatic facility. • The court site was the only site large enough for a local aquatic facility (without requiring purchase of neighbouring properties). • Initial discussions with Thames High School representatives confirmed they were open to considering a potential aquatic facility on their site, provided any associated site consequences were included within the project budget. The School favoured the court site as it had minimal impact on other school amenities. • The court site is very central within Thames and offers excellent accessibility. • The court site is flat and has good road and walking access. • The court site is also relatively close to other Schools. • On this basis, the Thames High School court site was recommended for detailed investigation for a potential local facility.
	**Thames Racecourse Upper Platform** • This site is owned by Thames Jockey Club. • Initial feedback from the Club indicated they were open to considering the potential for development of the upper platform on their site. • An initial site assessment identified the upper platform was large enough for a local aquatic facility. • Key disadvantage is the site's placement within Thames, being on the outskirts of the residential area. • The site is also close to a marked urupā (which may be a nominal rather than exact location and needed further clarification). • The platform has potential geotechnical issues which would need to be understood. • On this basis, the site was recommended for detailed investigation for a potential local facility.

4.5 SUB-REGIONAL LOCATION ASSESSMENT

As part of the long-list site assessment, Sport Waikato asked whether the feasibility study would answer the question "Where is it best to develop a sub-regional aquatic facility to serve both the Thames-Coromandel and Hauraki districts?".

While related, this is a different question to determining whether a replacement Thames pool should be a local or sub-regional facility. Consequently, it was agreed to complete a companion assessment to specifically address this question. The findings are detailed in a companion report *Thames-Coromandel and Hauraki Districts: Sub-Regional Aquatic Location Assessment*. This section summarises the key findings.

METHODOLOGY

There are three components that contribute to determining the best location for a sub-regional aquatic facility capable of serving the Thames-Coromandel and Hauraki districts. These are:

- **Geographic area** – the ability of the location to serve the greatest geographic area based on a 30 minute drive-time (being the recommended catchment area for a sub-regional facility). The minimum threshold was reaching Thames and Paeroa.
- **Population capture** – the number of people living within 20 and 30 minutes of the location. While a location in the dead-centre of the districts may serve the greatest geographic area, we also know there needs to be sufficient population in the local 20 minute catchment to ensure there is sufficient daily use of the facility. This will contribute to the financial viability and sustainability of any sub-regional aquatic facility.
- **Site suitability** – the actual site needs to be suitable for aquatic facility development. Factors include:

  a. Land being available for development,
  b. Ease of road travel to the site,
  c. Road-side visibility and visible street frontage,
  d. Sufficient size to accommodate sub-regional facility,
  e. Sufficient size for carparking including for bus parking,
  f. Appropriate zoning for aquatic facility,
  g. Resilience of the site particularly for flooding,
  h. Appropriate ground conditions for an aquatic facility.

KEY FINDINGS

- It is not possible for one facility / location to serve the entirety of Thames-Coromandel and Hauraki Districts due to the geography and the spatial distribution of the population.
- As a commitment has already been made to replace the Thames Pool, the analysis focused on the west/south side of the districts.
- 32,600 people reside on the west/south side of the Coromandel Ranges (including Waihi) with 21,200 on the north/east side.
- There is limited population growth forecast (33,700 on the west/south side, although potentially constrained by housing).
- The population is forecast to become increasingly older which is likely to drive demand for more hydrotherapy provision (warm water, gentle exercise and rehabilitation activities).
- The current aquatic network is dominated by aging structured outdoor pools. There is 2,662m^2 of public water-space across both districts which includes 750m^2 of all-year water.
- Current provision has a significant under-supply of quality learn to swim, hydrotherapy and leisure water across both districts.
- A third of the population are interested in swimming as an activity.
- Most people use the closest aquatic facilities to them, although some appear willing to travel for specific features such as winter availability or pools designed for specific activities.
- There appears to be support for improved aquatic provision. The greatest support is for indoor all-year provision with the basics: learn to swim, play and fitness. There appears to be lower priority for sub-regional features: hydrotherapy, leisure, and aquatic sport (however, this could be partially attributed to a lack of awareness and limited experience).
- Drive-time catchment analysis identified four sites as having the potential to serve a sub-regional 30 minute catchment which extends to Thames and Paeroa as a minimum threshold. These are Kōpū South: Ex-Carter Holt site, Ngātea Pool, Hikutaia and Paeroa Racecourse.

- Hikutaia was discounted due to a very small local catchment, making this location non-viable.
- Paeroa Racecourse was discounted as the intended use of the site has changed, and it is no longer available for development.
- Analysis identified Kōpū South: Ex-Carter Holt site has the largest local 20 minute catchment at around 22,000 residents and a 30 minute catchment of 26,000 residents.
- Ngātea Pool has a smaller 20 minute catchment population of 15,000 residents and a similar 30 minute catchment population of 25,500 residents.
- Both sites have similar ground challenges but the Kōpū South site offers better characteristics in terms of visibility and size.
- Based on these findings, Kōpū South: Ex-Carter Holt site has the strongest attributes for a sub-regional aquatic facility. A summary of the drive-times to Kōpū South is illustrated in Figure 4.2.

FIGURE 4.2 DRIVE-TIME TO KŌPŪ SOUTH AS THE STRONGEST SUB-REGIONAL SITE

4.6 SITE ASSESSMENT CONCLUSIONS

From the long-list site investigation, three sites (within Thames Ward) were identified for detailed investigation for either a local or sub-regional aquatic facility. These are:

- Thames High School (court site) for a local aquatic facility.
- Thames Racecourse (upper platform) for a local aquatic facility.
- Kōpū South: Ex-Carter Holt site for a sub-regional aquatic facility.

The Sub-regional Location Assessment considered sites in Thames-Coromandel and Hauraki districts that are suitable for a sub-regional aquatic facility. This analysis identified:

- Kōpū South: Ex-Carter Holt site has the strongest attributes for a sub-regional aquatic facility.
- Ngātea Pool site is a potential site. However, it's site characteristics are not as strong.

On the basis of having options for both local and sub-regional provision, the following options were taken forward for detailed investigation:

- **Local aquatic options**: Thames High School court site and Upper Thames Racecourse site.
- **Sub-regional aquatic options**: Kōpū South: Ex-Carter Holt site and Ngātea Pool site.

The methodology for the detailed investigation is summarised in Section 5.0, with the local options outlined in Section 6.0 and the sub-regional options in Section 7.0.

5.0 DETAILED INVESTIGATION

5.1 DESIGN

Architecture HDT prepared a preliminary layout design for each site. This is the first level of design and should be considered conceptual only. The development of the preliminary layout responds to the characteristic of each site and local and sub-regional aquatic facility core facility requirements. The following recent aquatic facilities have been used for reference:

- **Local aquatic facility**: loosely based on Stratford Aquatic Centre, completed in 2021. This facility includes 1,020m^2 of water for a population of around 10,000.
- **Sub-regional aquatic facility**: loosely based on Marlborough Lines Stadium 2000 (Blenheim) completed in the early 2000s which includes 1,370m^2 for a district population of around 48,000.

A process of refinement was applied to the preliminary layout to:

- Align the amount of water-space to indicative national provision benchmarks.
- Respond to feedback from the site owners, Project Steering Group, current aquatic management, and a selection of current users.
- Consider opportunities to reduce the capital cost.

Table 5.1 outlines the water-space in each option and the ratio of water-space per person in the catchment population. It is acknowledged the level of water is above the draft National Aquatic Strategy provision guidelines of 27 square-metres per 1,000 people. This variance is to recognise local and sub-regional functional requirements in response to the needs assessment findings. It was determined a much smaller facility would compromise the ability to meet community needs.

The preliminary layout design for each option is outlined in section 6.0 and 7.0 and the full design material is in Appendix B.

TABLE 5.1 SUMMARY OF CATCHMENT POPULATION AND WATER-SPACE

	THAMES HIGH SCHOOL	UPPER RACECOURSE	KŌPŪ SOUTH	NGĀTEA
Scale	Local	Local	Sub-Regional	Sub-Regional
Catchment population	19,120	19,120	27,350	26,200
Water-space	800	827	1,109	1,121
Water per 1,000 people	41.8	43.2	40.5	42.8

5.2 TECHNICAL ASSESSMENT

Beca completed technical assessment of the short-listed sites, which includes:

- Planning assessment and summary of requirements for compliance under the relevant District Plan.
- Desk-top geotechnical assessment to identify the key geotechnical risks associated with each site.
- Civil infrastructure assessment to consider the availability of stormwater, wastewater, water supply, power, and communications to the sites and commentary on whether additional capacity may be required.
- Building services assessment to provide a high-level assessment of operational costs for each preliminary concept layout.

The key findings from the technical assessment are summarised under each option in section 6.0 and 7.0 and the full reports are in Appendix C.

5.3 COST-ESTIMATES

MPM Projects completed cost estimates for each option. The key assumptions / clarifications used are:

- Costings are based on the preliminary layout design by Architecture HDT.
- They incorporate the findings from the technical assessment to inform potential foundation design and infrastructure requirements.
- Low and high specification cost are provided based on assumptions on the level of finishes that may be considered in the final design e.g. concrete versus tiles etc.
- A traditional procurement process is assumed.
- No escalation allowances (unless noted) are included beyond the date of the estimate (either November 2023 or January 2024).

The following costs are excluded:

- Site specific allowances not covered by the BECA reports such as removal of hazardous material or site contamination.
- Development contributions.
- Infrastructure growth charges.
- Land, finance, legal costs, and GST.

The capital cost estimates are outlined for each option in section 6.0 and 7.0 and the full reports are in Appendix D.

5.4 TRAFFIC ASSESSMENT

Team Traffic completed a high-level traffic assessment for selected sites and provided initial advice on the likely traffic management implications. The high-level findings from this assessment are included in Section 6.0 and 7.0 and the full reports are in Appendix E.

5.5 OPERATIONAL CONSIDERATIONS

GOVERNANCE MODELS

As each site has a different land ownership, a variety of governance models for the facility have been considered. These are based on common models across New Zealand.

Due to the number of options under considerations, the governance models are outlined at a high-level on the assumption the preferred option would be scoped in more detail in the Business Case.

OPERATIONAL MODELS

Operational modelling was undertaken to understand the anticipated operating costs of each option. This has been done at a high-level on the basis more detailed modelling would be developed for the preferred option in the Business Case. As the operational models use the same assumptions there is a relativity allowing comparisons between the options.

Key assumptions which are applied to all operational models are:

- All facilities are operated by the local authority (as opposed to management being contracted).
- Inflation is calculated at 2.5% per annum on all revenue and costs.
- Assumes a theoretical year 1 start position.
- Specific facility components are based on pro-rata of the current Thames Facility or equivalent facilities in New Zealand.

ESTIMATING USAGE

Estimating aquatic facility visits first involved benchmarking based on the population size in each catchment and calculating potential visits per person (a top-down approach). Currently visits to Thames Centennial Pool are relatively low at 1.9 visits per person, however this is impacted by the current outdoor aquatic provision.

A starting point for future annual use, is estimated at 3.0 visits per person in the catchment growing to 4.5 visits over time. Table 5.1 provides a comparison between the options and the potential visits per person.

TABLE 5.1 POTENTIAL VISITS BASED ON VISITS/CATCHMENT POPULATION

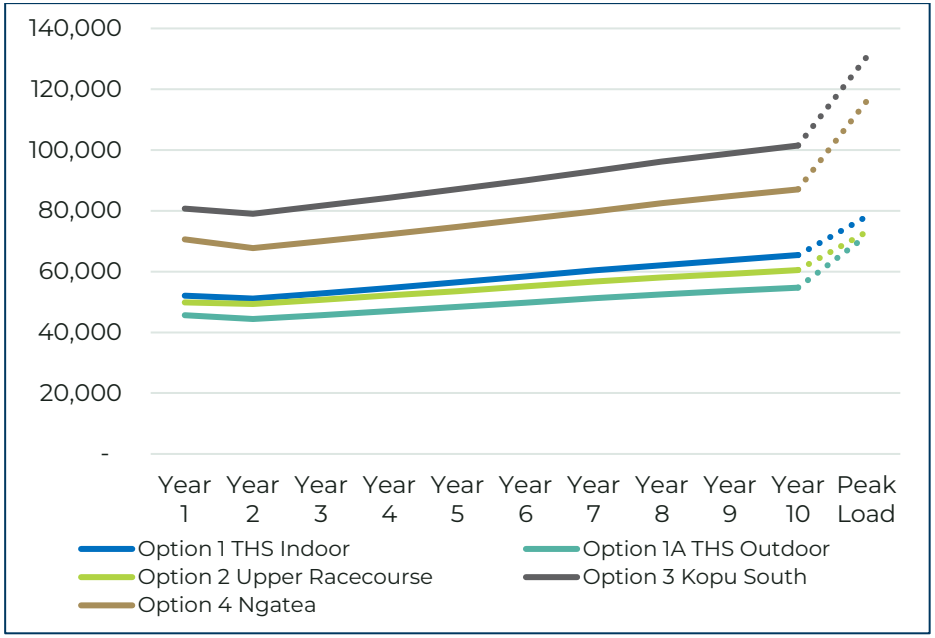
	THAMES HIGH SCHOOL	UPPER RACECOURSE	KŌPŪ SOUTH	NGĀTEA
Scale	**Local**	**Local**	**Sub-Regional**	**Sub-Regional**
Catchment population	19,120	19,120	27,350	26200
VISITS PER POPULATION				
1.0	19,200	19,200	27,680	26,060
1.5	28,800	28,800	41,520	39,090
2.0	38,400	38,400	55,360	52,120
2.5	48,000	48,000	69,200	65,150
3.0	**57,600**	**57,600**	**83,040**	**78,180**
3.5	67,200	67,200	96,880	91,210
4.0	76,800	76,800	110,720	104,240
4.5	**86,400**	**86,400**	**124,560**	**117,270**
5.0	96,000	96,000	138,400	130,300

The operational model then uses a refined approach to build up the visit model based on the potential loading in each pool across different periods of the day (a bottom-up approach).

This approach calculates the peak loading (what we could expect when the facility if fully loaded) and then assumptions are applied to inform potential visits across different times of the day, week, and year. These assumptions are based on typical patterns of use. A drop-off over winter is assumed which is natural for all facilities. It is typically for year 1 of a new facility to have strong visits, dipping back in year 2 and then slowly increasing as programming and activities are established and grown.

The results of the pool loading are tested against the first approach and compared against similar facilities. Figure 5.1 outlines the estimated visits for the first 10 years for each option. The peak load indicates all options have capacity for growth.

FIGURE 5.1 ESTIMATED VISITS TO EACH POOL BASED ON THE LOADING MODEL



PRICING STRATEGY

A consistent pricing strategy has been used for all options (Table 5.2). Although, there is opportunity to consider a higher entry price or variable pricing at the sub-regional facility.

TABLE 5.2: PRICING STRATEGY FOR ALL OPTIONS

COMPONENT	PRICING STRATEGY
Casual entry	Average fee (for adults & child) $3.50 per entry
Swim squad	Average fee of $2.00 per entry
Schools	Average fee of $1.00 per entry
Learn to swim	$12.50 per class for 10 week programme
Aqua programmes	Current fee of $5.00 per class
Birthday Parties	Based on $12.50 per child including room hire.
Hydroslide	$5.00 over entry price (sub-regional only)
Fitness centre	Annual fee of $550 per annum, $10.50 per week.

OTHER REVENUE

Vending machine and retail merchandise profit is based on proportion of casual entry expenditure.

In the sub-regional option, a café is included based on a lease model.

OPERATING COSTS

The main cost components for aquatic facilities include:

- Staff – this makes up about 50% of the operating costs. Staffing levels have been modelled comparative to the amount of water for lifeguarding. Learn to swim and fitness staffing is calculated based on proportional amounts for the number of visits.
- Energy, water, and chemicals – the cost of heating the water and air, running the facility, water, and chemical consumption are calculated by Beca using industry standards for the facility size.
- Repairs and maintenance – to cover day to day maintenance costs.
- Consumables – including cleaning, consumables, rubbish, security.
- Administration – including finance, management, and legal costs.
- Insurance is based on an estimated cost relative to the cost and size of the facility.
- Other costs include marketing, programming, training, and uniforms.

NET OPERATING COST

Each option in sections 6.0 and 7.0 sets out the estimated visits at year 1 and 10, along with the net operating cost (being the difference between operating revenue and expenditure). It is important to note this does not include depreciation or costs of capital (these will be considered in the business case). For reference, the current net operating cost of Thames Centennial Pool is approximately a $700,000 deficit per annum.

The full 10 years of the operational model for each option is in Appendix F.

6.0 LOCAL OPTIONS

This section summarises the local aquatic options, which include:

- *Option 1: Thames High School, all indoor facilities.*
- *Option 1A: Thames High School, outdoor 25 metre pool.*
- *Option 2: Thames Racecourse Upper Platform.*

6.1 LOCAL FACILITY REQUIREMENTS

Based on the needs assessment summarised in Section 3.0 and drawing from best practice, the base requirements for a local aquatic facility include:

- Catchment population size from 15,000 to 20,000 people.
- Design concept based on:
  - **7 lane lap pool**, 1.4m to 2m deep 25-27°C:
    Provides for lap swimming, aqua-jogging/walking, aquatic sport training, school/local swimming competitions, scuba-diving, and canoe-polo.
    Also includes some terraced seating with capacity up to 150 people to facilitate small swimming competitions.
  - **Programme pool**, 1.3m deep, 30-32°C:
    Provides for gentle-exercise, relaxation, aqua-walking, 10+years learn to swim and older play.
  - **Learn to swim pool**, 0.9m deep, 30-32°C:
    Provides for 0-9 years learn to swim and younger play.
  - **Toddlers pool and splash pad**, 30-32°C:
    Under 5 years and leisure play.
  - **Spa pool**, 20m^2 for relaxation
  - 800m^2 of water (current 375m^2).
- Change rooms have a combination of group, family, and accessible/unisex change rooms. This will enable the facility to accommodate school groups and public access at the same time.
- Outdoor area with shade and space for relaxing.
- Birthday party / programme room as a flexible space for hire and activities.
- Marshalling space / clubroom for sport groups.
- Management space including reception, office and staffroom.
- Plantroom and storage.
- Small amount of carparking capacity to accommodate mobility users and parents with young children.

6.2 OPTION 1: THAMES HIGH SCHOOL ALL INDOOR

SITE MAP (with flooding overlay)

SITE VIEW

SITE OWNER VIEWS

- The site is owned by the Ministry of Education and occupied by the Thames High School.
- At this stage, the Thames High School is open to exploring the option on their site, provided any consequential impacts / costs on the school are addressed in the project budget.
- Will require Ministry of Education approval to develop on the school grounds which can take time. However, nothing is identified at this stage to indicate any concerns.

PLANNING

- The site is zoned in the Extra Density Residential zone (school).
- The site is designated by the Ministry of Education.
- It is likely an aquatic facility will be a discretionary activity.
- May require Waikato Regional Council consent for works encroaching on groundwater table.

TECHNICAL ASSESSMENT

- Water table 0.5 metres below ground will impact foundation and structural design of pool tanks.
- Low earthquake risk.
- High liquefaction risk will influence foundation design or require ground improvement.
- Low/medium soil stability risk: influence foundation design.
- Low/medium contamination risk: may require further assessment.
- Infrastructure: potential relocation of existing stormwater and wastewater pipes (across School site) but indicative there is infrastructure capacity for facility.
- Additional electrical sub-station is likely.
- Consequential costs to demolish existing swimming pool and relocate the horticulture facilities.
- Site appears feasible from a technical perspective.

TRAFFIC ASSESSMENT

- Any potential vehicle access to the site should be able to be provided without issue from Richmond Street.
- There are good cycling/pedestrian connections within Thames.
- Parking is generally limited to on-street parking, with the existing parking along both sides of Richmond Street being largely utilised.
- There is no on-site bus parking provided, and therefore a bus parking area would need to be provided on-street. The provision of a bus parking area would reduce the amount of car parking available on Richmond Street.
- The crash history at the Richmond Street/Mackay Street intersection is typical of cross-road intersections and would not likely be affected by the proposed development. No crashes were related to property access or access to the subject site.
- There is reasonable public transport available.

OWNERSHIP OPTIONS

1) **Recommended**: extend current model for Jack MacLean Recreation Centre: MOE lease land to TCDC to own and operate aquatic facility. School has rights to use facility during school day.
2) MOE lease land to a Trust to own and operate aquatic facility, with TCDC funding agreement for community access.
3) Ministry / School ownership: with TCDC funding agreement for community access.

CAPITAL COST ESTIMATE

- Low specification: $37.5 million
- High specification: $42.5 million

OPERATING COST ESTIMATE

- Year 1 visits: 52,000.
- Year 1 net operating cost: $967,000 deficit.
- Year 10 visits: 65,500
- Year 10 net operating cost: $1.14 million deficit.

PROS OF THIS OPTION

- Central site accessible to Thames community.
- Reasonably good site for aquatic facility development.
- Shared use and partnership with Thames High School and close to two other schools.
- Will meet the local aquatic needs for foreseeable future.

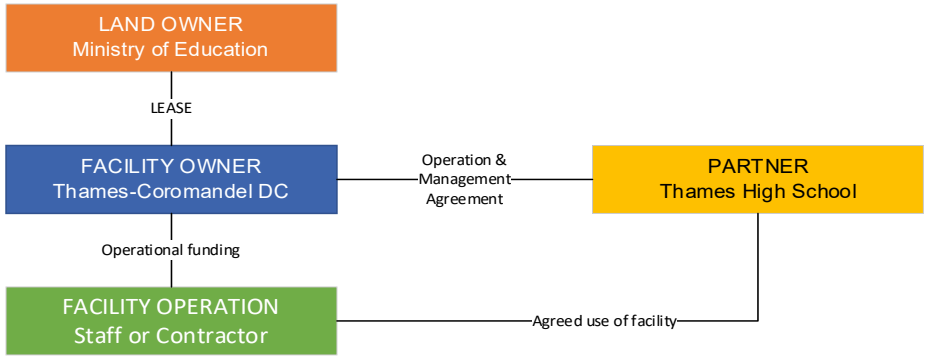
CONS OF THIS OPTION

- Size of site is tight and there is limited opportunity for future expansion without purchase or relocation of neighbouring property.
- Will require approval for development by Ministry of Education, which can take some time to process and is not guaranteed.

OPTION 1: THAMES HIGH SCHOOL ALL INDOOR PRELIMINARY LAYOUT DESIGN

THAMES HIGH SCHOOL GOVERNANCE OPTIONS

EXTEND CURRENT MODEL: COUNCIL OWNERSHIP



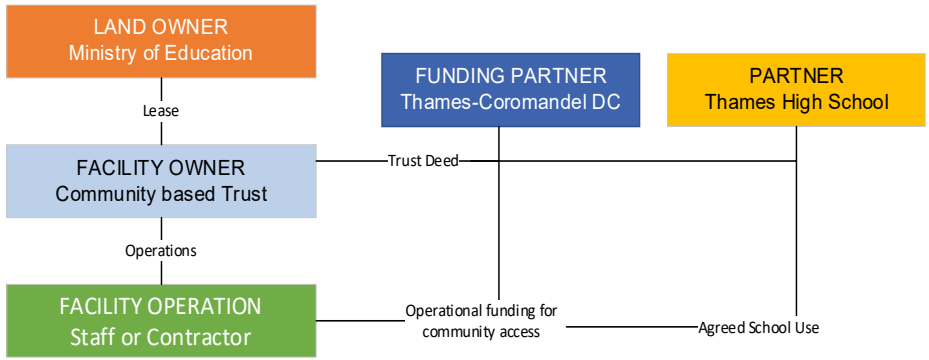
For the Jack Mclean Recreation Centre:

- Ministry of Education lease to Thames-Coromandel District Council for construction adjacent to existing school gym.
- Court 1 (new court and multi-purpose room) is owned and operated by Council. School has access during school times. The community has priority access to the multi-purpose room, but it is used by the School by arrangement.
- Court 2 (old school gym) is owned by Ministry and School has access Monday to Friday during school term.
- Council operates entire facility and manages all bookings.
- There is a cost-sharing arrangement between the Council and School for cleaning, caretaking, maintenance, insurance, and operating costs.

How this model could extend to a new aquatic facility:

- Ministry of Education lease to Thames-Coromandel District Council land for construction of aquatic facility.
- Council takes responsibility for operating the aquatic facility.
- School has agreed access rights to aquatic facility (level and timing to be agreed).

TRUST OWNERSHIP



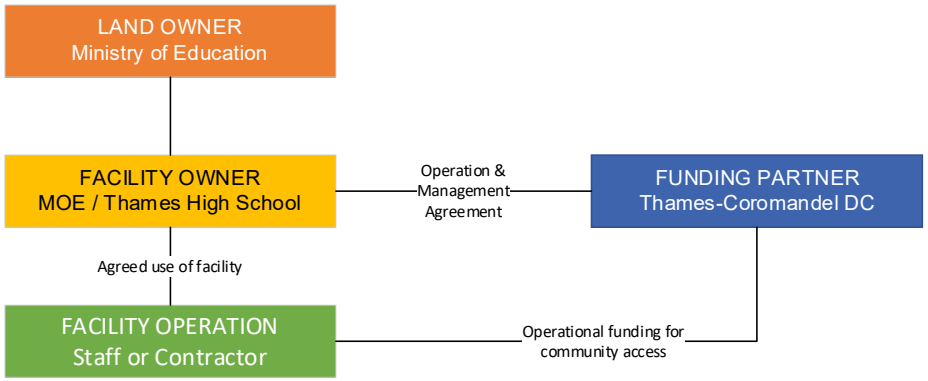
How this model would work:

- Ministry of Education owns the land and leases land to a community based Trust to own and construct aquatic facility.
- Council and School are party to the Trust Deed, establishing expectations and responsibilities for the aquatic facility.
- Thames-Coromandel District Council would provide capital funding to the Trust to construct the facility and operational funding for community access to the facility.
- The Trust Deed or similar agreement would set out the School's access rights.
- The facility could be operated by Trust employed staff or through a contracted model.

Examples of this model:

- Mt Albert Aquatic Centre (Auckland): the Ministry provide a Licence to Occupy to the Trust to own and operate aquatic facility on Mt Albert Grammar School. The School and Council are represented on the Trust. The facility is managed by Council and operated by contractors through an operating contract.
- Aquadome (Wellington): Swimming Trust of Wellington sourced funding from Wellington City Council (and other funders) to redevelop the Wellington East Girls College. The facility is operated by the Trust for predominantly structured school and community based swimming (as opposed to casual access).

MINISTRY / SCHOOL OWNERSHIP



How this model would work:

- Ministry of Education owns the land and the facility.
- Thames-Coromandel District Council would provide a capital funding grant to construct the facility and operational funding for community access to the facility.
- An Operation and Management Agreement would be developed between Council and School to set out the terms for the facility operation and community use.
- The facility could be operated by School employed staff or through a contracted model.

Examples of this model:

- Sacred Heart Aquatic Centre: The School owns the land and facility and received capital funding from Auckland Council for the construction. The School have operated the facility through both a contract with a private operator and through School-employed staff.

This option is not recommended as the Ministry of Education have previously indicated it is not a preferred governance model.

TABLE 6.1 PROS AND CONS OF GOVERNANCE OPTIONS

	PROS	CONS
Council owned	• Extends current working model. • Council have capability to operate facility. • Council funding direct to subsidise operations. • Community access is secured.	• Requires approvals by MOE with potential impact on timeframes. • Council ownership may make external funding more difficult.
Trust owned	• Technically able to source external funding for project. • Community outcomes are secured through agreements.	• Requires approvals by MOE with potential impact on timeframes. • In the long-term Trust may not have capacity and capability to manage operations. • Council funding required for operating costs.
School owned	• Does not require MOE approvals to third party. • School may be able to source external funding for project.	• Requires MOE approval for School. • School may not have capacity or capability to manage operations. • Perception community access may not be secure. • Council funding required for operating costs.

The preferred option for Option 1 (and 1A) is extending the current model, for a Council-owned facility occupying land via a lease from the Ministry of Education.

6.3 OPTION 1A: THAMES HIGH SCHOOL OUTDOOR 25M POOL

This option is essentially the same as Option 1, except the 25 metre pool is outdoor. All other aspects are the same. This option was developed late in the feasibility study process for two reasons:

- The capital cost of the all-indoor facility was significantly higher than anticipated, and there was a desire to consider a lower cost option.
- Feedback from some aquatic users indicated a preference for an outdoor 25 metre pool. However, it is important to acknowledge this only represents a portion of potential users. The outdoor / cold winter experience was a key source of dissatisfaction with Thames Centennial Pool in the 2022 community survey (see the 2022 Thames and Sub-region Aquatic Provision Needs Assessment).

Key differences between Option 1 and Option 1A are:

- The cost to build an outdoor pool is around $5 to $6 million cheaper than an all indoor facility (depending on specification).
- The cost of heating an outdoor pool is higher than an indoor pool.
- There is additional lifeguarding associated with two pool tanks in two separate areas.
- Visits are anticipated to be slightly lower with greater drop-off over winter in the outdoor pool only (visits for learn to swim, programmes and indoor play are not impacted).
- The net operating cost is estimated to be around $100,000 worse compared to option 1.

The preliminary design for Option 1A is outlined on the following page. If this option is pursued, it is recommended the layout is refined by locating the outdoor 25m pool adjacent to the outdoor courtyard as this would be more efficient. This would be a relatively simple layout change without impacting the building design.

It is further noted, the building interface around the 25metre pool can be designed to enable future covering of the pool is desired.

CAPITAL COST ESTIMATE

- Low specification: $32.5 million
- High specification: $36.5 million

OPERATING COST ESTIMATE

- Year 1 visits: 45,600.
- Year 1 net operating cost: $1,000,000 deficit.
- Year 10 visits: 54,750
- Year 10 net operating cost: $1.21 million deficit.

PROS OF THIS OPTION

- Cheapest capital cost.
- Still a good central site accessible for Thames community.
- A relatively good site for aquatic facility development.
- Shared use and partnership with Thames High School plus close to two other schools.
- Will provide improved quality of provision for learn to swim and programming but same quality of provision for structured aquatic activities.

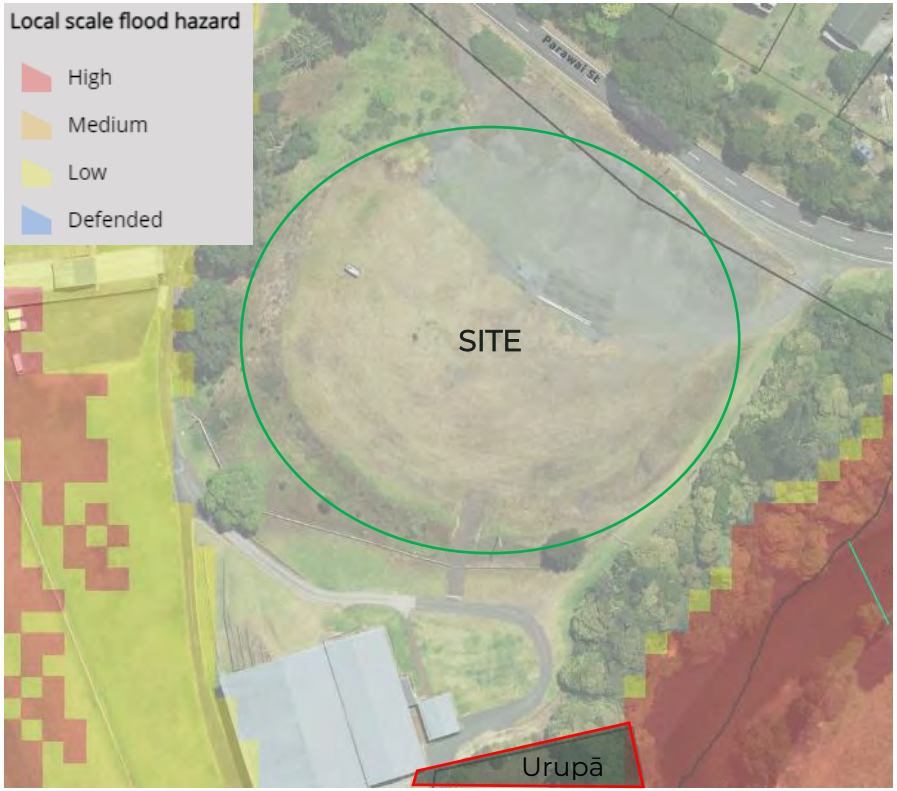
CONS OF THIS OPTION

- Higher operating cost compared to Option 1 and 2.
- Some aspects of community needs will not be meet with an outdoor pool.
- Size of site is tight and there is limited opportunity for future expansion without purchase or relocation of neighbouring property.
- Will require approval for development by Ministry of Education, which can take some time to process and is not guaranteed.

OPTION 1A: THAMES HIGH SCHOOL OUTDOOR 25M POOL PRELIMINARY LAYOUT DESIGN

6.4 OPTION 2: UPPER THAMES RACECOURSE

SITE MAP (with flooding overlay)



SITE VIEW

SITE OWNER VIEWS

- The site is owned by Thames Jockey Club.
- Initial conversation with the Club indicated they were happy with the site being considered.
- Further discussions would be required with the Club to discuss the details if the site is favoured.

PLANNING

- The site is zoned in the Rural Zone.
- There is an urupā to the south and several marked middens to the north of the site.
- It is likely an aquatic facility will be a discretionary activity (if bulk and location requirements can't be achieved it could be non-complying).
- May also require consent for land contamination.
- May require Waikato Regional Council consent for infrastructure.

TECHNICAL ASSESSMENT

- Aerial photographs indicate a series of cut and fill activity between 1944 and 1994 with evidence of some slope instability during this period.
- No issues relating to the water-table or flood-risk.
- Low earthquake risk.
- Low/medium liquefaction risk and expansive soils.
- High risk of soft ground / non-engineered fill. This will influence the foundation design.
- Medium slope instability risk.
- Low/medium contamination risk: may require assessment.
- Infrastructure: there is no water, wastewater, or stormwater services to the site. This will have to be a project cost.
- Power connection is adjacent to the site.
- Site has more risk from a technical perspective.

TRAFFIC DESKTOP ASSESSMENT

- This site was not assessed by Team Traffic (due to time constraints). However, the following desktop assessment notes are provided.
- Potential vehicle access to the site is on the bend of Parawai Street. Turning bay(s) may be required due to the bend/blind corner.
- There is a public transport connection which terminates at the base of the hill. This may be able to be extended to the site.
- There are no formalised cycling/pedestrian connections to the site other than those associated with the road network.
- For these reasons, extra carparking capacity is included in the preliminary concept design which includes bus turning and parking.

OWNERSHIP OPTIONS

1) **Recommended**: lease from the site-owners with Council owning and operating the facility.
2) Council acquires the land from the site-owners (through sub-division) however this is likely to be a protracted and complicated process due to the legislative provisions associated with racing sites.

CAPITAL COST ESTIMATE

- Low specification: $41.8 million (higher due to infrastructure costs)
- High specification: $47 million

OPERATING COST ESTIMATE

- Year 1 visits: 50,000.
- Year 1 net operating cost: $980,000 deficit.
- Year 10 visits: 60,500
- Year 10 net operating cost: $1.17 million deficit.

PROS OF THIS OPTION

- Large site with sufficient cost for the design and future expansion.
- Site is free of flood risk and does not have any issues with high water-table.
- Will meet the local aquatic needs for foreseeable future.

CONS OF THIS OPTION

- Range of technical issues on ground conditions and infrastructure connections that will add significant capital cost.
- Site is very close to an urupā and archaeological sites.
- Site is not as accessible to the bulk of Thames township.
- Less access location means the expected visits are estimated to be slightly lower compared to Option 1.

OPTION 2: UPPER THAMES RACECOURSE PRELIMINARY LAYOUT DESIGN

7.0 SUB-REGIONAL OPTIONS

This section summarises the sub-regional aquatic options, which include:

- *Option 3: Kōpū South (Ex-Carter Holt Harvey site).*
- *Option 4: Ngātea Pool.*

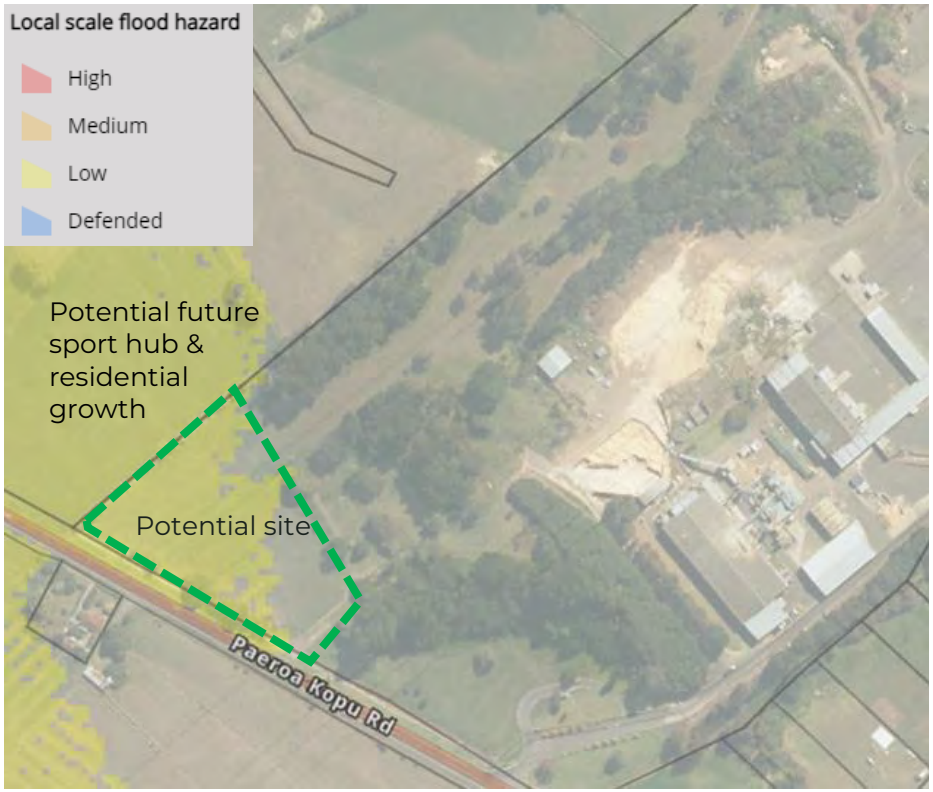
7.1 SUB-REGIONAL FACILITY REQUIREMENTS

Based on the needs assessment summarised in Section 3.0 and drawing on best practice, the base requirements for a sub-regional aquatic facility include:

- Designed to meet aquatic needs of the sub-region on the west / south of Thames-Coromandel and Hauraki districts.
- Serve a catchment population size from 20,000 to 35,000 people.
- A design concept based on:
  - **8 lane lap pool**, 2m deep 25-27°C:
    Provides for lap swimming, aqua-jogging/walking, aquatic sports training, district level competitions, scuba-diving, water-polo, and canoe-polo.
    Also includes some terraced seating with capacity up to 165 people to facilitate moderate sized swimming competitions.
  - **Programme pool**, 1.4 – 1.6m deep, 30-32°C:
    Provides for hydro-therapy, gentle-exercise, aqua-walking.
  - **Learn to swim pool**, 0.8m – 1.0m deep, 30-32°C:
    Provides for 0-9 years learn to swim.
  - **Leisure pool, toddlers pool and splash pad**, 30-32°C:
    Leisure for all age-groups.
  - **Hydroslide** option.
  - **Spa pool**, 15-20m^2 for relaxation
  - 1,100m^2 of water (current 375m^2).
- Change rooms have a combination of group, family, and accessible/unisex change rooms. This will enable the facility to accommodate school groups, competitions, and public access at the same time.
- Outdoor area with shade and space for relaxing.
- Birthday party / programme room as a flexible space for hire and activities.
- Marshalling space / clubroom for sports groups.
- 350m2 fitness space which has a separate entrance to enable 24 hours access if the operating model allows for this.
- Management space including reception, office, staffroom.
- Café.
- Plantroom and storage.
- Appropriate carparking capacity relative to the site.

7.2 OPTION 3: KŌPŪ SOUTH: EX-CARTER HOLT SITE

SITE MAP (with flooding overlay)



SITE VIEW

SITE OWNER VIEWS

- The site is owned by Southbridge Industrial Park Ltd.
- Initial conversations with the owner were very positive.
- The owners indicate an intention to develop the site as a large scale industrial park and open to locating complementary activities / facilities on the site.
- The owners have indicated the front of the site is available for development with the rear currently used for industrial activity.

PLANNING

- The site is an Industrial Zone.
- Depending on how the aquatic facility is defined under the District Plan the facility would be a discretionary activity or non-complying activity.
- May require Waikato Regional Council consent for works. encroaching on groundwater table.
- May require ecological investigation as a wetland.

TECHNICAL ASSESSMENT

- Water table may be less than 0.5 metres below ground level and in a low-level flood risk zone. Not a fatal flaw and the design could be moved to the east to reduce the risk.
- Low earthquake risk.
- High liquefaction risk: this will influence foundation design or require ground improvement.
- Medium/high soil stability risk: influence foundation design and may require ground improvement works. Not a fatal flaw.
- Infrastructure: there is no public stormwater, wastewater, and water supply to site. There are some services on site which could be accessed. Cost of extending infrastructure to site could be shared with wider site development (and/or neighbouring site).
- Potential pool energy savings available through using waste-heat from industrial plant (including further development).

TRAFFIC ASSESSMENT

- Access to the highway will require widening of the carriageway to provide left and right turning facilities. The site-owners have indicated potential for this to be included as part of the wider site development, with an internal access road to the pool site.
- There are no cycling/pedestrian connections. However, the Hauraki rail trail is located 550 metres to the west of the site. Although safe crossing is likely to be required.
- An onsite turnaround area or multiple site accesses should be considered for bus operations.
- All parking will need to be provided onsite and potential future expansion of parking areas should be considered.
- There are no existing traffic safety issues associated with the site.
- There are currently poor public transport amenities.

OWNERSHIP OPTIONS

1) **Recommended**: lease from the site-owners to Council to own and operate the facility. Land occupancy costs to be confirmed.
2) Site owners develop and own the facility and lease the operation to Council. A form of pubic: private partnership which would need further definition if pursued.
3) Lease from site-owners to a new Charitable Trust (potential partnership between TCDC and HDC) to own and operate facility. Land occupancy costs to be confirmed.

CAPITAL COST ESTIMATE

- Low specification: $68.8 million (higher due to infrastructure costs)
- High specification: $77.0million

OPERATING COST ESTIMATE

- Year 1 visits: 80,500.
- Year 1 net operating cost: $1.35 million deficit.
- Year 10 visits: 101,500
- Year 10 net operating cost: $1.53 million deficit.

PROS OF THIS OPTION

- Large site with good visibility and accessibility for the sub-region.
- Close to holiday traffic route, potential destination use.
- Adjacent to future growth area and potential sport hub location.
- Potential for public-private partnership (needs more exploration).
- Opportunities for sustainable energy sources.
- Proximity to industrial park and growth area may open other funding sources (see section 8.0).
- Will meet sub-regional needs for foreseeable future.

CONS OF THIS OPTION

- Range of technical issues associated with ground conditions and infrastructure connections that may add significant capital cost.
- While a prominent site and easy to access via car, there is currently very limited public transport, walking or cycling options. Although this could be addressed as part of wider site development.
- Small flood risk, but site-owners note this is minimal.
- Land-occupancy costs have not been confirmed (yet).

OPTION 3: KŌPŪ SOUTH: EX-CARTER HOLT SITE PRELIMINARY LAYOUT DESIGN

7.3 OPTION 4: NGĀTEA POOL

SITE MAP (with flooding overlay)

SITE VIEW

SITE OWNER VIEWS

- The site is owned by Hauraki District Council.
- The Council are open to a partnership with Thames-Coromandel District Council to develop a sub-regional facility. However, they have indicated they do not have financial capacity to support the level of investment required for a sub-regional facility.
- However, the site remains a potential site location.

PLANNING

- The site is a Reserve (Active) Zone under Hauraki District Plan.
- Likely to be a controlled activity but may become discretionary due to bulk and location infringements.
- May require Waikato Regional Council consent for works encroaching on groundwater table.

TECHNICAL ASSESSMENT

- The site is subject to a regional scale flood hazard which is at risk of both river flooding and coastal inundation.
- Stop bank and floodwater pumpstation protection are in place to protect Ngātea up to including 1% AEP (1 in 100 year event). Site specific flood modelling would be required to inform the design of any aquatic facility.
- Water table may be less than 0.5 metres below ground level and in a low-level flood risk. Not a fatal flaw but impacts design.
- Geo-technical risks were not assessed but estimated as being low to medium risk.
- Infrastructure: there is current connections for stormwater, wastewater, water supply, electrical and communications.

TRAFFIC ASSESSMENT

- Access to the site is very good and will accommodate additional movements without issue.
- There are good cycling/pedestrian connections within Ngātea.
- Bus access is very good with busses being able enter the site via one access and depart via the other access without the need for any onsite manoeuvring.
- There is significant onsite parking and there is also the ability for overflow parking to occur to the surrounding streets without causing any issues.
- There are no existing traffic safety issues associated with the site.
- There is poor public transport available.

OWNERSHIP OPTIONS

1) **Recommended:** Lease from site-owners to a new Charitable Trust (potential partnership between TCDC and HDC) to own and operate facility. Land occupancy costs from Hauraki District Council to be confirmed.
2) Hauraki District Council own and operate the facility. The Council have indicated they do not have the financial capacity for this approach.

CAPITAL COST ESTIMATE

- Low specification: $60.4 million
- High specification: $67.0million

OPERATING COST ESTIMATE

- Year 1 visits: 70,000.
- Year 1 net operating cost: $1.49 million deficit.
- Year 10 visits: 87,000.
- Year 10 net operating cost: $2.0 million deficit.

PROS OF THIS OPTION

- Council owned site with access to serve infrastructure.
- Potentially cheaper or no land occupancy cost.
- Cheaper construction cost compared to option 3.
- Will meet sub-regional needs for foreseeable future.

CONS OF THIS OPTION

- High water table and flood-risk will add complexity to design.
- Poor roadside (street front) visibility, which is not good for a sub-regional facility.
- Constrained site which means design requires 2 levels.
- Sub-regional accessibility is not as good at Option 3.
- The nature of a partnership is unclear as Hauraki District Council have indicated they do not have financial capacity to the level required to invest in a sub-regional facility.

OPTION 4: NGĀTEA PRELIMINARY LAYOUT DESIGN

8.0 FUNDING OVERVIEW

8.1 FUNDING LANDSCAPE

In general, the funding landscape is increasingly constrained as higher value projects seek funding from an ever-shrinking funding pool.

Aquatic facilities that are owned by local authorities are generally considered a low priority by charitable funders. This is because they see aquatic facilities as a core council responsibility.

Examples where aquatic facilities have been more successful in obtaining external funding are:

- Partnership aquatic facilities developed with a School, another organisation or local authority. Stand-alone aquatic facilities run by a single local authority are less likely to receive funding.
- Where the aquatic facility is sub-regional serving a larger population as opposed to local facility. However, some very isolated communities have been successful in gaining funding for small aquatic projects.
- Projects where there is demonstrated strong community support and benefits.

The feasibility study has identified a list of potential funders that may fund an aquatic facility development, these are outlined in Table 8.1. Once a preferred option has been selected, the Business Case should explore the funding options associated with the particular option in more detail.

TABLE 8.1 POTENTIAL FUNDING OPTIONS TO EXPLORE

FUNDER
Trust Waikato Trust Waikato's priorities are aimed at achieving transformational change for people, families, community, and places where the need is greatest. Sports and recreation are an identified funding area. Grants are preferred to: • Groups that offer their facilities or services for the benefit or enjoyment of the public and contribute to community vibrancy and resilience. • Have a proven track record in their area of operation. • Can show community support for their operation. • Have strong volunteer involvement. • Can make a real difference for the highest need communities.
Brian Perry Charitable Trust The Brian Perry Charitable Trust develops partnerships aimed at contributing to a vibrant Waikato Region
Lotteries Community Facilities Lottery Community Facilities will fund projects to improve or build new community facilities. The project must be advanced to resource consent stage and have robust planning and assessment along with recent quotes/cost estimates and input from volunteers.
Naming Rights or Sponsorship Naming rights and sponsorship is a potential funding avenue although can be challenging to identify the right fit. Local Businesses may be interested in sponsoring or supporting the project. Signage may be an option to provide acknowledgement.

FUNDER
Class 4 Gaming Funding Dependent on the location of gaming machines and the priorities of the funder.
Momentum Waikato Momentum Waikato is part of a network of Community Foundations, working to provide resources that will make a lasting difference in our local communities with the goal of creating "A better Waikato For Everyone, Forever". Momentum Waikato has diversified its approach to funding, using its own capital to drive its mission and growing its endowment fund. The Vital Impact Investment aims to deliver financial, and a social or environmental return through impact investment. This could be through start-up capital, equity stakes, underwrites, low interest loans or, potentially grants.
Waikato Regional Council Development Fund **The Regional Development Fund supports regionally significant projects which promote regional economic development and are achieved in a way that also enhance environmental, social and cultural outcomes.** The focus of the fund is primarily on enabling economic development as it has been determined this is where the greatest opportunity lies for better outcomes for the region in the use of the fund. However, this development must occur in a way that provides for a win-win for both the economy and the environment. i.e. 'green growth'. Waikato Regional Council will consider investing up to 50 per cent of project costs on a case-by-case basis. Investment in any project is at the discretion of Waikato Regional Council. The council will work with potential project partners as ideas are developed. At face value this option appears most suited to Option 3 Kōpū South.

8.2 HAURAKI DISTRICT COUNCIL

As indicated by the Waikato Regional Aquatic Facility Strategy, one of the benefits of considering a sub-regional aquatic facility is a potential partnership with Hauraki District Council.

Given the financial limitations and significantly higher capital cost of a sub-regional aquatic facility, staff from Hauraki District Council have advised the Council does not the funding capacity to support the level of investment required for a sub-regional facility.

Council staff have indicated the Council remains open to a partnership but not at the financial levels indicated by the capital cost of the sub-regional options developed to date.

9.0 OPTION EVALUATION

9.1 SUMMARY OF OPTIONS

Table 9.1 provides an overview of the five options developed in detail in this feasibility study.

TABLE 9.1 SUMMARY OF OPTIONS

	1 THAMES HIGH SCHOOL INDOOR	1A THS OUTDOOR 25M	2 UPPER THAMES RACECOURSE	3 KŌPŪ SOUTH: EX-CARTER HOLT SITE	4 NGĀTEA
Serves	Local	Local	Local	Sub-regional	Sub-regional
Catchment size	19,120	19,120	19,120	27,350	26,200
Water size	800m^2	800m^2	827m^2	1,109m^2	1,121m^2
Capex	$37.5-$42.5M	$32.5-$36.5M	$41.8-$47M	$68.8-$77M	$60.4-$67.0M
Visits	52,000 – 65,500	45,600 – 54,750	50,000 – 60,500	80,500 – 101,500	70,000 – 87,000
Opex	($967K) - ($1.14M)	($1.0M) - ($1.21M)	($980K) - ($1.167M)	($1.351M) - ($1.530M)	($1.496M) - ($2.002M)
Water/Population	41.8	41.8	43.2	40.5	42.8
Y1 Visits/Population	2.72	2.39	2.61	2.95	2.69
Y1 Visits/Size	65.1	57.1	60.3	72.8	63.0
Risks	**Limited** High water table	**Limited** High water table Low use due to outdoor pool	**Substantial** Infrastructure Unstable soils Urupā / middens	**Substantial** Infrastructure High water table	**Substantial** High water table Flood risk Visibility Sub-regional accessibility
Benefits	School partnership Accessible location	School partnership Accessible location		Holiday traffic Private/public partnership Future growth Possible sports hub Funding options Sustainable energy	Council site

9.2 DETAILED SITE EVALUATION

Table 9.2, provides an assessment of all four sites against the site evaluation criteria in Table 4.1 on pages 16 and 17. A three-point scoring scale is used to indicate the strength of alignment with the criteria. Colour coding is used to aid interpretation.

It is noted the community perceptions scoring is indicative only as community feedback was not undertaken to inform this assessment (this was due to complexity experienced through the feasibility study).

From this assessment it is clear there are two sites which offer the strongest overall attributes, these being Thames High School as the strongest local site and Kōpū South as the strongest sub-regional site.

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TABLE 9.2 DETAILED SITE EVALUATION OF THE FOUR SITES INVESTIGATED

	THAMES HIGH SCHOOL	UPPER THAMES RACECOURSE	KŌPŪ SOUTH: EX-CARTER HOLT SITE	NGĀTEA POOL
Size	☑	☑☑	☑☑☑	☑
Topography	☑☑☑	☑	☑☑	☑☑☑
Land Ownership	☑	☑	☑	☑☑☑
Zoning	☑☑	☑☑	☑	☑☑☑
Local accessibility	☑☑☑	☑		
Sub-regional accessibility			☑☑	☑
Visibility	☑☑☑	☑☑	☑☑☑	⊗
Vehicle accessibility	☑☑☑	☑☑	☑☑☑	☑
Walkable accessibility	☑☑☑	⊗	☑	☑☑☑
Mana whenua views	☑	⊗?	☑☑	☑?
Geotech	☑☑	⊗	☑	☑
Practicality	☑☑	☑	☑	☑
Capital cost implications	☑☑	⊗	⊗⊗	☑☑
Operating sustainability	☑☑	☑	☑☑	☑
Community perceptions	☑☑☑?	☑?	☑☑?	⊗?
CONCLUSION	**Strongest local site**		**Strongest sub-regional site**	

9.3 ANSWERING THE KEY QUESTION

The primary purpose of the feasibility study is to explore and assess potential options for aquatic provision and answer the following question:

1. To meet Thames aquatic needs should Thames-Coromandel District Council focus on a **local aquatic facility** which primarily serves a 20 minute catchment around Thames township or instead focus on a **sub-regional facility**, potentially through a partnership with Hauraki District Council, and aims to serve a wider 30 minute catchment encompassing Thames and Paeroa?

Table 9.3 compares the pros and cons of the strongest local and sub-regional options. At its core the comparison between local versus sub-regional comes down to financial capacity/willingness and the level of appetite for risk.

The local aquatic option is cheaper, less risky and will adequately meet local needs for the foreseeable future. The biggest risk is navigating the partnership process with the Ministry of Education/School.

By comparison, the sub-regional aquatic option is both more expensive and carries a greater risk. However, the potential is greater due to its greater facility appeal, possible external funding, public/private partnership options and alignment with future growth.

TABLE 9.3 ASSESSMENT OF LOCAL AQUATIC FACILITY VERSUS SUB-REGIONAL AQUATIC FACILITY

	LOCAL FACILITY	SUB-REGIONAL FACILITY
Strongest options	Option 1: Thames High School (either indoor or outdoor)	Option 3: Kōpū South: Ex-Carter Holt site
Pros	• Excellent accessible location in Thames township, being walkable, accessible by public transport and close for most schools. • Builds on the successful school / council partnership that has been established in the Jack MacLean indoor court facility. • Lower capital and operating cost with less operating risks. • Will meet the local aquatic needs for the foreseeable future. • Good site for aquatic facility development with minimal risk.	• Larger more extensive facility is likely to have greater appeal for residents and visitors due to state highway proximity. • Potential for some external funding although this is likely to be small. • Potential to align with future population growth and possible sport hub on the adjacent property (Thames Spatial Plan). • Potential public/private partnership although the details of this would need to be further explored. • Some sustainable energy options available from the site.
Cons	• Smaller facility that offers core aquatic elements, but lower appeal compared to the sub-regional option. • No / limited growth potential as the site is maximised. • Minimal external investment is likely into a local facility although the partnership with the school may be attractive to funders. • Requires approval from Ministry of Education, which adds some time to the process. • Likely to be majority TCDC cost.	• HDC have indicated it does not have financial capacity to support the level of investment required for sub-regional facility. • Higher capital cost and operating cost, largely TCDC's. • Outside of Thames therefore less accessible to local catchment (currently limited walkability or public transport). • Range of technical and infrastructure issues adds cost. • Likely to be some land occupancy costs (yet to be determined).

Considering the pros and cons outlined in Table 9.3 and recognising financial capacity of Thames-Coromandel District Council, the local aquatic facility appears to be the least risky, most achievable, and viable option.

Of particularly note for the sub-regional option is the financial constraints meaning Hauraki District Council are not able to invest. This means the financial responsibility of a sub-regional facility would largely fall to Thames-Coromandel District Council, if they wanted to pursue this option.

For these reasons, the feasibility study has reached the conclusion that future aquatic provision should be focused on delivering a local aquatic facility. In this case Option 1 or 1A on Thames High School either indoor or with an outdoor 25m pool is the best option. Determining whether to pursue Option 1 or 1A (full indoor or part outdoor) is best determined once community feedback has been obtained.

Whilst reaching this conclusion, it is acknowledged that the sub-regional option (Option 3 Kōpū South: Ex-Carter Holt site) offers significant strategic / future-proofing benefits that Thames-Coromandel District Council may still want to consider within the business case.

Thames-Coromandel District Council's options are therefore either:

- Select a single preferred option for more detailed analysis in the business case. OR
- Progress both the local and sub-regional options for more detailed analysis in the business case (allowing for a more detailed comparison).

9.4 KEY SUCCESS FACTORS ASSESSMENT

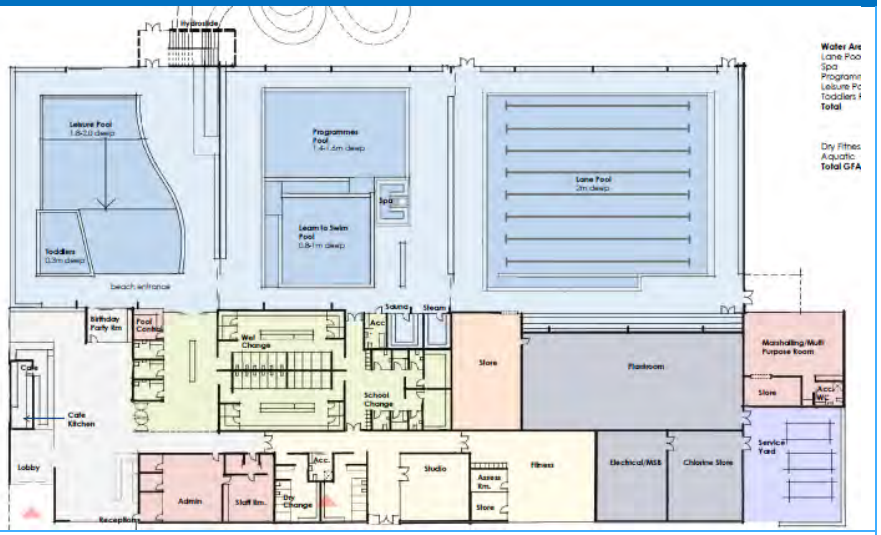
The needs assessment outlined six key success factors for future aquatic provision. Table 9.4 assesses Option 1 / 1A at Thames High School against these key success factors.

FACTORS	HOW OPTION 1 / 1A COMPARES?
Sub-regional consideration	• Local option which is cheaper and lower risk compared to sub-regional option. • HDC have no capacity to invest in a sub-regional facility.
Best and most accessible location	• Thames High School is very accessible to Thames township. • Good site with limited technical issues. • Very small risk of flooding.
Indoor provision	• Option for full indoor facility OR partial indoor with outdoor 25m pool.
Diverse community needs	• Provides for a range of aquatic needs. • 25m pool for lap swimming, swim squad, schools, and play. • Programme pool for gentle exercise & therapy. • Teaching pool for learning to swim. • Small leisure/toddlers pool for family play.
Complementary amenities	• Design includes mix of family and group-change to cater for all needs. • Birthday party / marshalling / programme room provides for variety of activities / events. • Outdoor area for leisure / picnics etc.
Affordability	• Cheapest capex cost with outdoor 25m reducing capex further. • Operational model increase of about $200,000 to $300,000 per annum over current facility. • Entry prices same/similar to current levels.

10.0 CONCLUSIONS

10.1 SUMMARY

- The Thames-Coromandel District Council is exploring future aquatic provision to serve Thames because:
  - A commitment was made with Ngāti Maru to relocate Thames Centennial Pool by 2027 due to its location on an urupā.
  - The Waikato Regional Aquatic Plan 2017 identified an under-supply in all-year aquatic provision serving both Thames-Coromandel and Hauraki districts. A partnership approach should be investigated to address this gap.
- In 2022, a needs assessment was undertaken to understand future aquatic requirements. This identified:
  - Current aquatic provision is ageing, structured, inflexible and does not offer good learn to swim or hydro-therapy options.
  - The west/south side of Thames-Coromandel and Hauraki has a population of around 32,000 with limited growth (partly constrained by housing and suitable land).
  - Thames Centennial Pool partly functions in a sub-regional capacity attracting about 40% of visits from outside Thames.
  - Community feedback indicates the biggest issue with current aquatic provision is the cold / winter experience.
  - There is a clear call for future provision to be indoor.
  - The community prioritised aquatic functions that are core to a local facility being learn to swim, structured, and casual play.
  - There was some but lessor priority placed on sub-regional functions.
  - An ageing population highlights the need for warm-water to cater for the older age cohort.
  - Low personal and household income levels highlight the need to consider affordability (both in terms of user entry charges and rates impacts).
- A long list of sites were evaluated to determine which sites are most suitable for future aquatic provision.
- Three sites were identified for detailed investigation:
  - Thames High School (court site) for a local aquatic facility.
  - Thames Racecourse (upper platform) for a local aquatic facility.
  - Kōpū South: Ex-Carter Holt site for a sub-regional aquatic facility.
- During the long-list assessment process, it was agreed to undertake a Companion Assessment to consider “the best location for a sub-regional aquatic facility”. This assessment identified Kōpū South: Ex-Carter Holt site and Ngātea Pool as possible sub-regional sites.
- Detailed investigation was undertaken on the four sites including preliminary layout design, technical assessment, cost-estimates, traffic assessment, and operational considerations.
- Five options were developed (across the four sites) and evaluated:
  - Option 1: Thames High School, all indoor facilities.
  - Option 1A: Thames High School, outdoor 25 metre pool (developed as a cheaper alternative).
  - Option 2: Thames Racecourse Upper Platform.
  - Option 3: Kōpū South: Ex-Carter Holt site.
  - Option 4: Ngātea Pool site.
- The evaluation process identified Thames High School as the strongest site for a local aquatic facility and Kōpū South: Ex-Carter Holt site as the strongest option for a sub-regional aquatic facility.
- The primary question is deciding whether in meeting Thames aquatic needs, to pursue a local or sub-regional aquatic facility. The pros and cons of the strongest local and sub-regional options are outlined in the following table. At its core, the decision comes down to the financial and risk appetite. A local facility is cheaper and carries less risk, whilst a sub-regional facility has potentially stronger long term outcomes but at a higher cost and greater risk.
- Hauraki District Council staff have indicated its Council does not have the financial capacity to invest to the required level in a sub-regional facility.

	OPTION 1/1A: THAMES HIGH SCHOOL LOCAL	OPTION 3: KŌPŪ SOUTH: EX-CARTER HOLT SITE SUB-REGIONAL
PRELIMINARY DESIGN		
METRICS	**1: All indoor** / **1A: Part Outdoor** Water size: 800m² / 800m² Estimated Capex: $37.5-$42.5M / $32.5-$36.5M Estimated Visits: 52,000 – 65,500 p.a. / 45,600 – 54,750 p.a. Estimated Opex: ($967K) - ($1.14M) / ($1.0M) - ($1.21M)	**Option 3** Water size: 1,109m² Estimated Capex: $68.8-$77M Estimated Visits: 80,500 – 101,500 p.a. Estimated Opex: ($1.351M) - ($1.530M)
PROS	• Excellent accessible location. • Builds on the successful school / council partnership. • Lower capital and operating cost and less operating risks. • Will meet the local aquatic needs for the foreseeable future. • Good site for aquatic facility development with minimal risk.	• Larger facility with greater appeal for residents and visitors. • Potential for some external funding although be small. • Potential to align with future population growth and possible sport hub on the adjacent property (Thames Spatial Plan). • Potential public/private partnership but needs exploration. • Some sustainable energy options available from the site.
CONS	• Smaller facility offers core aquatic elements but lower appeal. • No / limited growth potential as the site is maximised. • Requires approval from Ministry of Education, which adds time. • Minimal external investment is likely. • Likely to be mostly TCDC's cost.	• HDC indicated no financial capacity to invest in sub-regional. • Higher capital cost and operating cost, largely TCDC's. • Less accessible to local Thames catchment. • Range of technical and infrastructure issues adds cost. • Undetermined land occupancy costs.
	Lower costs, lower risks, appears more achievable and viable.	**Higher costs, higher risks, greater potential strategic outcomes, more complicated, therefore achievability may be impacted.**

10.2 RECOMMENDATIONS

The Thames Aquatic Facilities Feasibility Study recommends:

1. The Thames-Coromandel District Council endorse **the Thames and Sub-Region Aquatic Provision Feasibility Study** and the companion study titled *Thames-Coromandel and Hauraki Districts: Sub-regional Aquatic Location Assessment*., noting:
    - The Feasibility Study assessed potential options for both local and sub-regional aquatic provision in Thames and the Sub-region.
    - The Feasibility Study concluded Option 1/1A Thames High School is the strongest local option and is lower cost, lower risk and appears more achievable and viable.
    - The Feasibility Study concluded Option 3 Kōpū South: Ex-Carter Holt site is the strongest sub-regional option and has higher costs, higher risk, greater potential strategic outcomes but more complicated and therefore may have lower achievability.
    - Hauraki District Council has indicated it does not have the financial capacity to the level required to invest in a sub-regional aquatic facility.
2. The Council approves the development of a business case to set-out the case for investment in an aquatic facility and outline the financial impact. In doing so, the Council should decide if it wishes to:
    - Select a single preferred option for detailed analysis in the business case. OR
    - Progress both the strongest local and sub-regional options for more detailed analysis in the business case (allowing for a detailed comparison).
3. The business case includes:
    - Community engagement to understand perceptions of each option.
    - Engagement with potential funders to understand potential levels of investment (if any) in each option.
    - Explore procurement options to see if these would offer any cost-savings.
    - Consider the ‘do nothing’ option.
4. The feasibility study reports be shared with Hauraki District Council.

11.0 REFERENCES

This section outlines documents that have been referenced during the feasibility study process.

DOCUMENT & OWNER	RELEVANT DETAIL
Thames Coromandel District Council Long-term Plans / Te Mahere Pae Tawhiti Thames-Coromandel District Council	Replacing Thames Centennial Pool was signalled in the 2009-2019 Ten Year Plan. The plan states further evaluation was required to assess when the pool should be replaced. A review of long-term plans since 2009 includes the following: • 2009-2019 LTP - the expected useful life of the Thames Pool was estimated to be beyond the 2009 – 2019 Ten Year Plan. Funds were budgeted for 2014/2015 to investigate the pool replacement. • 2012–2022 LTP - Council budgeted $5m for pool replacement in 2020/2021. • 2015–2025 LTP - no significant capex was budgeted; $175,000 was budgeted for renewal work in 2020/2021. • 2018-2028 LTP - refers to the intention to replace the pool by 2027 acknowledging the agreement with Ngāti Maru. The budget does not include funds for planning for a swimming pool. • 2021–2031 LTP - $14m is budgeted for a renewal (like-for-like) in 2025/2026 ($6,922) and 2026/2027 ($7,078).
Thames Community Leisure Centre Report 2009 Thames-Coromandel District Council Prepared by SGL Group	Review the needs and options for the development of a community indoor court facility (on Thames High School). The options analysis considered the development of a future aquatic facility, contemplated over a longer 10 year timeframe. The report considered an outdoor 25m lane pool with support amenities as the minimum like for like replacement and recommended consideration of other possible options which include an indoor hot water programme pool, fitness centre and indoor lane pool. The preliminary (high-level) options envisioned development on Thames High School, but acknowledged this needed further examination.
2013 Thames Sport and Recreation Facilities Review and Future Directions Thames-Coromandel District Council Prepared by SGL Group	A comprehensive review of Thames sport and recreation facilities provision including skate, indoor court, aquatic and sport facilities. The report provides an outline of general aquatic demands, markets and trends which informs consideration for the type of aquatic facilities and concludes further analysis is required to consider district wide provision, if not wider sub-regional provision. The report examines potential sites for aquatic provision in Thames but made no conclusions regarding a preferred site. It provides an indicative schedule of facilities and staging and identifies the potential cost at around $14 to $15m at 2013 dollars. The report indicated aquatic provision in the future, anticipated 2020 onwards.

DOCUMENT & OWNER	RELEVANT DETAIL
Eastern Waikato Sub-Regional Aquatic Facility Feasibility Discussion Report 2017 Thames-Coromandel District Council Prepared by Visitor Solutions	A preliminary feasibility study and business modelling for the development of a sub-regional pool to serve the Eastern Waikato area. The report was intended to help progress discussions around sub-regional partnership approach and should be considered a conceptual starting point for provision. The report examined the network provision and population demand across Thames-Coromandel and Hauraki Districts. A range of sites in Thames / Hauraki were examined with three sites in Thames shortlisted. Preliminary concept design was developed and costed between $18 to $22 million (2017 dollars) and an initial business model identified the conceptual facility would required an operational subsidy between $1.3 to $1.4 million per annum.
2018 Site Planning Thames-Coromandel District Council Prepared by Architecture HDT	Development of concept plans for a sub-regional pool to serve the Eastern Waikato area. The work contemplated a site south of the airfield. The high-level concept design contemplated a large sport and recreation hub which included an indoor aquatic facility, multi-sport clubroom and sport fields/courts (as a potential replacement to the sport facilities on Rhodes Park).
Eastern Waikato Sub-regional Aquatic Facility Business Case 2019 Thames-Coromandel District Council Prepared by Visitor Solutions	Preparation of a business case for the development of a sub-regional aquatic facility in Thames. The report was intended to inform considerations in the 2021-2031 long-term planning process. The business case outlines the strategic case for aquatic provision based on the strategic direction in the Waikato Regional Aquatic Facilities Plan and the need for all-year round provision to serve the Thames-Coromandel and Hauraki Districts. The business case outlined two design options on land south of the airfield which included a core aquatic facility (25m lap pool, programme pool and leisure pool) and an enhanced option (which included a hydroslide, external splash-pad and function space). The likely capital costs, operational costs and the net financial impact including depreciation and the cost of capital based on these options.
Thames and Thames Coast Reserves Management Plan 2019 Thames-Coromandel District Council	Confirms the land comprising Taipari Park where the Thames Centennial Pool is located was originally the site of a major burial ground (urupa) for Te Kauaeranga Pa. Under an agreement between Ngāti Maru and Council, the swimming pool will be removed from this site by 2027 and the land returned to Ngāti Maru.
2020 Thames-Coromandel District Sport and Active Recreation Plan Thames-Coromandel District Council	Developed in collaboration between TCDC and Sport Waikato to provide a coordinated, collaborative, and clear plan to lead, enable, and guide future provision of sport, recreation and physical activity opportunities for the people of Thames-Coromandel District. This plan recommends for Thames Replacement Pool / Sub-Regional Pool “continued investigation and development of business case to confirm the scale of facility to meet the needs of the community. Collaboration with Hauraki District to promote the concept of sub-regional facility with the inclusion of users from other districts”.

DOCUMENT & OWNER	RELEVANT DETAIL
Thames and Surrounds Spatial Plan 2022 Thames-Coromandel District Council	An evidence-based, future-focused (30-year plus) strategy that outlines an agreed vision and direction for Thames and surrounds. The plan helps to plan for future prosperity, identify areas for growth and change, and promote the aspirations of the district's iwi. It is an important umbrella project and identifies: • The need for more housing to meet demand. There is a high cost to access infrastructure and access to developable land due to terrain. • Thames is the economic powerhouse of the Coromandel, but businesses struggle to recruit workers due to lack of housing. • Thames will be impacted by coastal inundation due to rising sea levels in the future.
Shoreline Management Plan 2022 Thames-Coromandel District Council	Sea-level is a significant challenge facing Thames-Coromandel given the 400km of coastline in the district. The Shoreline Management Plan analyses the risks associated with sea-level rise and considers potential options to respond to these options. The report highlights a significant portion of Thames is at risk of coastal inundation and outlines 138 pathways to respond to specific risks along the coastlines.
Thames and Wider Sub-Regional Aquatic Provision Needs Assessment 2022 Thames-Coromandel District Council Prepared by Visitor Solutions	Outlines the needs assessment for aquatic provision in Thames and the Eastern Waikato sub-region and includes: • Strategic context. • Demographic context. • Review of the aquatic network in Thames and Eastern Waikato. • Review of aquatic participation. • Summary of the engagement undertaken for this study. • Needs analysis which collates the findings and provides further considerations. • Summary and recommendations.
Hauraki District Sport and Active Recreation Facility Plan 2018 - 2028. Hauraki District Council	Adopted in August 2019, the purpose is to guide facility development and investment, ensuring a strategic approach to future provision. The plan refers to the proposed cross-boundary partnership project listed in the Waikato Regional Sports Facilities Plan 2017 for an indoor 25m community pool (potential Thames-Coromandel, Hauraki and/or Matamata Piako District Councils). The report highlights this may have cross-boundary implications for Hauraki.

DOCUMENT & OWNER	RELEVANT DETAIL
Waikato Regional Aquatic Facilities Plan 2017 Sport Waikato Prepared by GLG	Considers the need for aquatic provision across the Waikato region. Highlights a range of issues including a gap in the provision all-year provision in Thames-Coromandel and Hauraki District. The plan recommends development of additional 987m^2 of pool area to serve both Thames-Coromandel and Hauraki District undertaken through a partnership approach with a focus on meeting the needs of an aging population. Facility Design: All new or refurbished facilities should: • Prioritise flexible spaces to future proof facilities to meet the needs of an aging population. • Include learn to swim, warmer programme water and other income generating activities e.g. fitness and activity rooms • Careful consideration of the balance between competition / training and other aquatic users.
Moving Waikato, 2020 Sport Waikato	Vision: Everyone out there and active. Priorities: • Our People – focus on provision of quality opportunities that meet the needs of the people of our region. • Building Communities – focus on quality local delivery of play, active recreation, and sport experiences. • Regional Leadership – focus on regional and national partners working together to lead change and enhance outcomes. Focus area: Rangatahi (12-17 years), Tamariki (5-11 years) and Tamariki MoKōpū na (0-4 years).
Waikato Regional Active Spaces Plan 2021 Sport Waikato	The Waikato Regional Active Spaces Plan provides a high-level strategic framework for play, active recreation and sport facilities and spaces and places planning and optimisation across the region. Key principles for facility planning and provision: • Meet needs – meet an identified need and be fit-for-purpose. • Sustainable – requires consideration of the ongoing operating and maintenance costs of the facility and how these will be funded. • Collaborative – best outcomes are achieved when partnerships are developed with education, health, iwi, and/or the private sector. Increases the likelihood facilities are used to their full potential. • Integrated – sharing, creating multi-use facilities/hubs or co-location. • Flexible – designed to accommodate changing community profiles, trends and needs over time. • Inclusive – consider the needs or a wide range of the community, focusing on ethnic, financial and ability barriers. The process for developing facilities reflects the Sport New Zealand Sporting Facilities Framework six stages: concept, plan, design, build, operate and improve.

DOCUMENT & OWNER	RELEVANT DETAIL
Active New Zealand survey 2020-21 – Waikato Region Sport New Zealand / Sport Waikato	The Active New Zealand Survey provides insights on participation in sport and recreation activities. The following data was taken from the 2020-21 survey for Thames-Coromandel District Council: • 81% of adults over 18 years see physical activity as an essential part of their life, with 87% recognising being physically active is important for their mental health and wellbeing. • 34% of adults undertook swimming in the last 7 days, one of the top five activities in the district. This is distinctly different from other districts, where jogging or playing games featured highly. • For young people under 18 years, 94% of young people were physically active in the last 7 days but swimming did not feature in the top five activities. • However, swimming events like ocean swims were one of the top 5 activities for events for young people. • Key implications for providers include catering for differences in gender, ethnicity, and age, cater for a diverse range of motivations, provide exclusive offers, consider barriers and make it fun.

APPENDIX A
LONG-LIST SITE EVALUATION

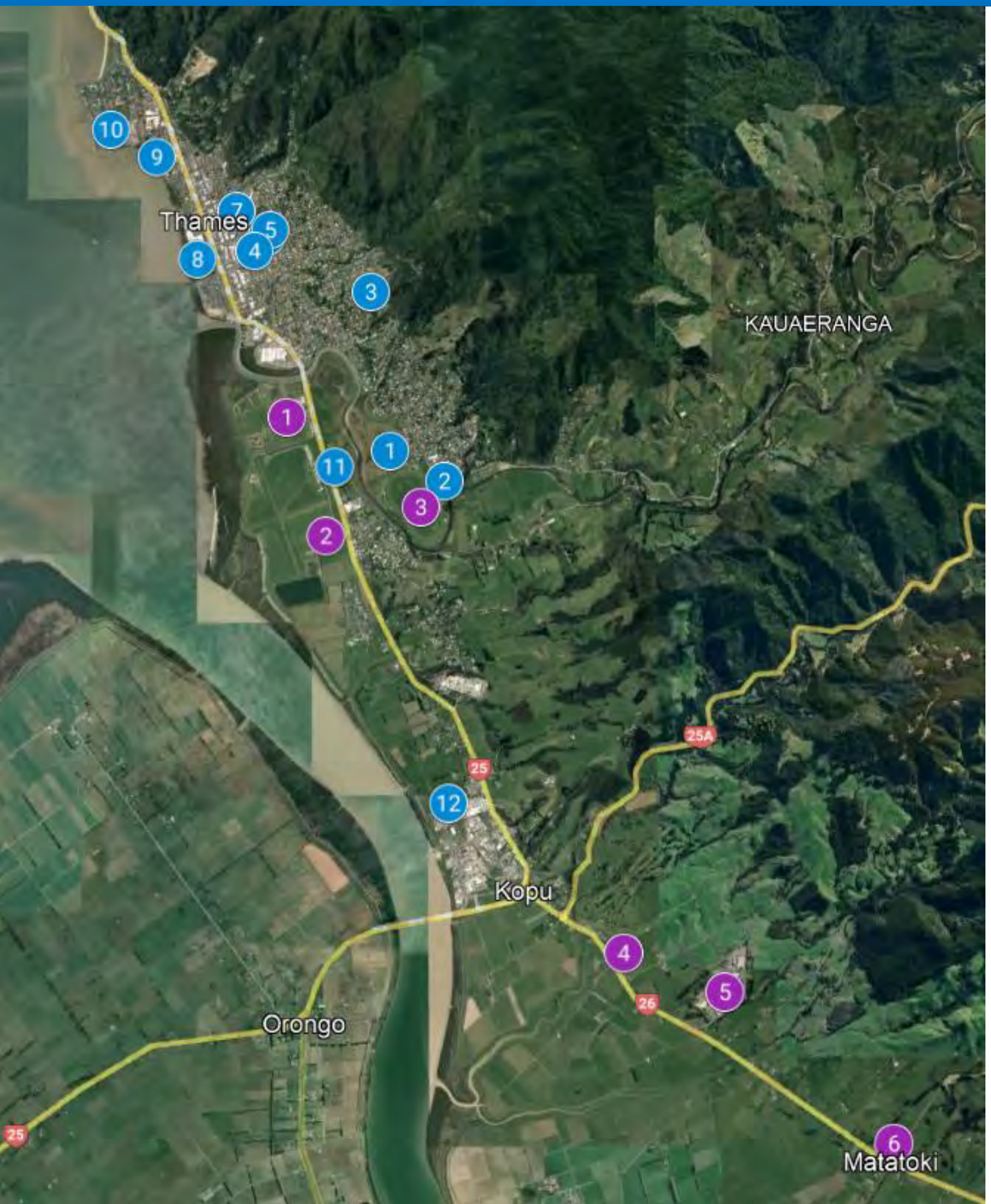
AQUATIC SITE ASSESSMENT CRITERIA & SCORING

FATAL FLAWS	AQUATIC
Flood risk	Is the site susceptible to flooding now or in the future?
Site availability	Is the site available for development or is there any current or potential impediment such transfer/sale of the land or impending development for another purpose?
LONG-LIST CONSIDERATIONS	
Size	What is the size of the site and will it accommodate a local or regional sized facility?
Topography	Is the topography of the site suitable for aquatic facility development or will it require significant earthworks?
Land ownership	Who owns the site and how easy will it be develop an aquatic facility on the site?
Zoning	What is the site currently zoned for and what impact will this have on the consent process? (Noting that zoning can go through a process to be changed but this adds time and cost)
Local Catchment accessibility	How accessible is the site for local catchment to access?
Sub-regional catchment accessibility	How accessible is the site for a sub-regional catchment to access?
Visibility	How visible is the site to the community in terms of ease of finding?
Vehicle accessibility	How accessible is the site for vehicle access?
Walkable accessibility	How accessible is the site for walking / cycling access?
DETAILED SITE CONSIDERATIONS – FOR ASSESSMENT OF SHORTLISTED SITES ONLY	
Geotech	What is known about the underlying ground conditions and suitability for an aquatic facility? What is the potential for liquefaction or impact from high water table?
Practicality	Does the site enable design of practical aquatic facility or does it present significant constraints?
Cost implications	Does the site present any additional cost implications such as earthworks, access etc
Sustainability	Does the site offer any sustainability opportunities which will provide operational benefits.
Community perceptions	Are there particular known community perceptions around the site which will need to be managed?
Mana Whenua views	What Mana Whenua views on the site and will these have any constraints?

FATAL FLAWS	DESCRIPTION	SCORE
Extreme	Extreme issues in this criteria	Not considered further
Poor	Many issues which could pose significant constraints	2
Average	Average issues, can be managed	3
Good	Few issues, can be easily mitigated	4
Excellent	No issues that need to be managed	5

LONG LIST	DESCRIPTION	SCORE
Weak	Very weak delivery of this criteria, significant site concerns	1
Some	Some delivery against criteria, some concerns about the site	2
Average	Average delivery, neither strongly positive or negative for the site	3
Good	Good delivery against criteria, and very few concerns about the site	4
Excellent	Excellent delivery against criteria and no concerns about the site	5

SITES

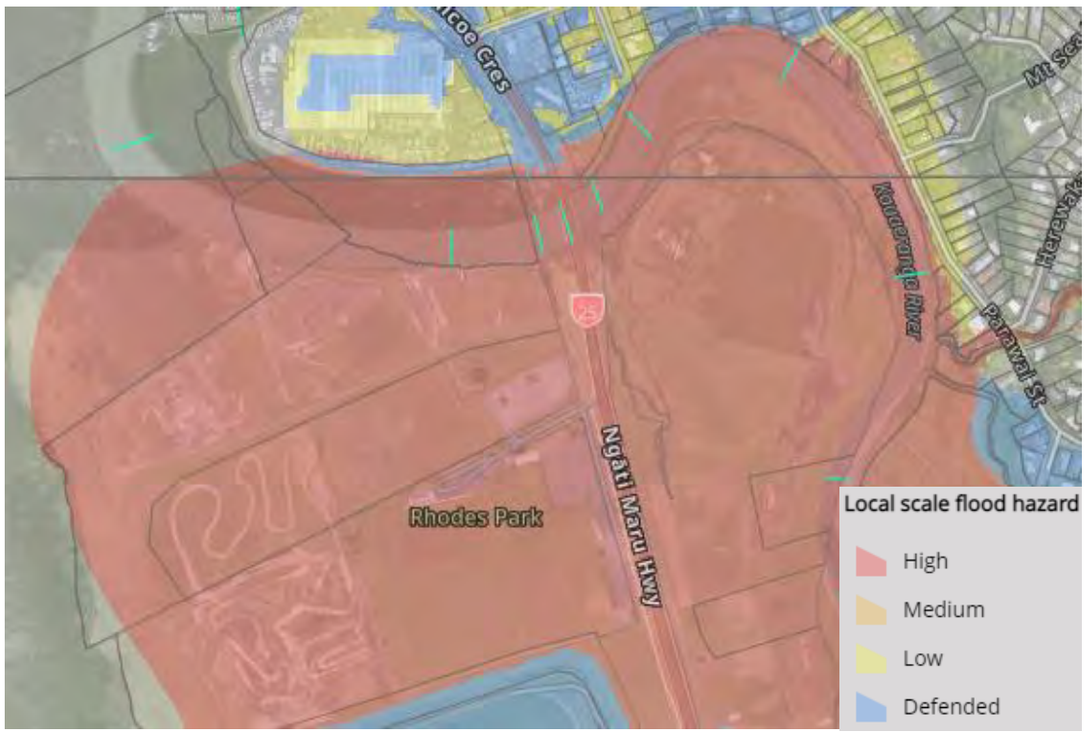


SPORT & AQUATIC SITES (PURPLE DOTS)
1. Rhodes Park
2. Airfield South / Maramarahi
3. Lower Racecourse (non-council)
4. Kōpū South: Wenzlick Block (private property identified in Spatial Plan)
5. Kōpū South: Ex-Carter Holt site (private property identified in Spatial Plan)
6. Matatoki site (private property identified in Spatial Plan)
AQUATIC SITES ONLY (BLUE DOTS)
1. Lowe Avenue Reserve
2. Upper Racecourse (non-council)
3. Hauraki Terrace Reserve
4. Thames High School – court site
5. Thames High School – pool site
6. Thames High School – Field site
7. Thames Bowling Club (non-council)
8. Danby Field
9. Victoria Park
10. Burke Street Reserve
11. Pony Club Site
12. Kōpū Light Industrial (private property identified in Spatial Plan)

RHODES PARK

SITE AERIAL & DETAILS

FLOOD HAZARD (WAIKATO REGIONAL COUNCIL)



INITIAL SITE ASSESSMENT

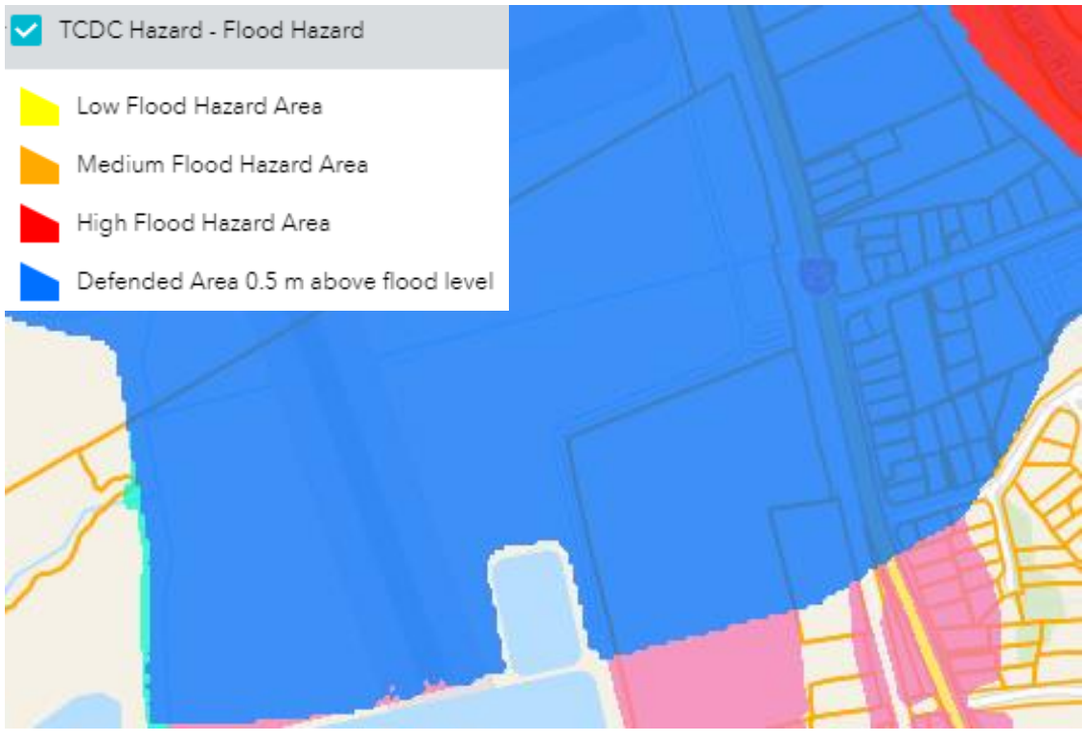
FATAL FLAWS		SCORE
Flood risk	Part of the flood management scheme. High risk of flooding at 20% AEP: 1 every 5 years. WRC & TCDC high risk flood hazard. Sits at 0 metres sea-level. Anticipated 10 years before threshold met before playing fields are unplayable	Extreme
Availability	Owned by TCDC but planning restrictions indicates aquatic development is highly unlikely.	Poor
LONG-LIST CONSIDERATIONS		
Size	NOT ASSESSED DUE TO THE FATAL FLAW (FLOOD RISK FROM RIVER AND COASTAL INUNDATION)	
Topography		
Ownership		
Zoning		
Local Catchment accessibility		
Sub-regional Catchment accessibility		
Visibility		
Vehicle accessibility		
Walkable accessibility		

CONCLUSION
While Rhodes Park is currently used for the sport park, the site is at high risk of ongoing flooding and coastal inundation. It would be inappropriate to develop an aquatic facility on this site due to this risk and is not possible given the planning constraints for the site. In addition, Waikato Regional Council will not support aquatic facility development on the site.
NOT RECOMMENDED FOR AQUATIC FACILITY DEVELOPMENT

AIRFIELD SOUTH / MARAMARAHI

SITE AERIAL & DETAILS

FLOOD HAZARD (TCDC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	Defended area, 0.5m above flood level. At risk of surface flooding and ponding. Coastal inundation risk at 1% AEP (1 in 100 years) at 0.4 m (overlapping stock-banks). Area will likely require pumping in the future.	Poor
Availability	Owned by TCDC and available for development. Presence of wahi tapu in and around the site may impact availability.	Poor
LONG-LIST CONSIDERATIONS		
Size	Large site sufficient for aquatic and sports, but could be inappropriate for development due to presence of wahi tapu.	3
Topography	Flat site but high water table may require additional mitigation measures (over entire area) - needs further investigation.	3
Ownership	Site owned by TCDC and available to develop. However, cultural issues may restrict development.	4
Zoning	Rural Lifestyle Zone, discretionary activity with requirements to build in coastal environment.	4
Local Catchment accessibility	On the outskirts of Thames residential means less accessible as a local facility.	3
Sub-regional Catchment accessibility	Proximity to Kopu means the site is more accessible to sub-regional catchment although will not serve entire sub-region.	3
Visibility	Prominent site	5
Vehicle accessibility	Excellent vehicle access from main road. 10 minute catchment covers all of Thames area	4
Walkable accessibility	Lower walkability from Thames. Has rail-trail fronting the site, 15 minute walk from Thames.	3
	TOTAL SCORE	36

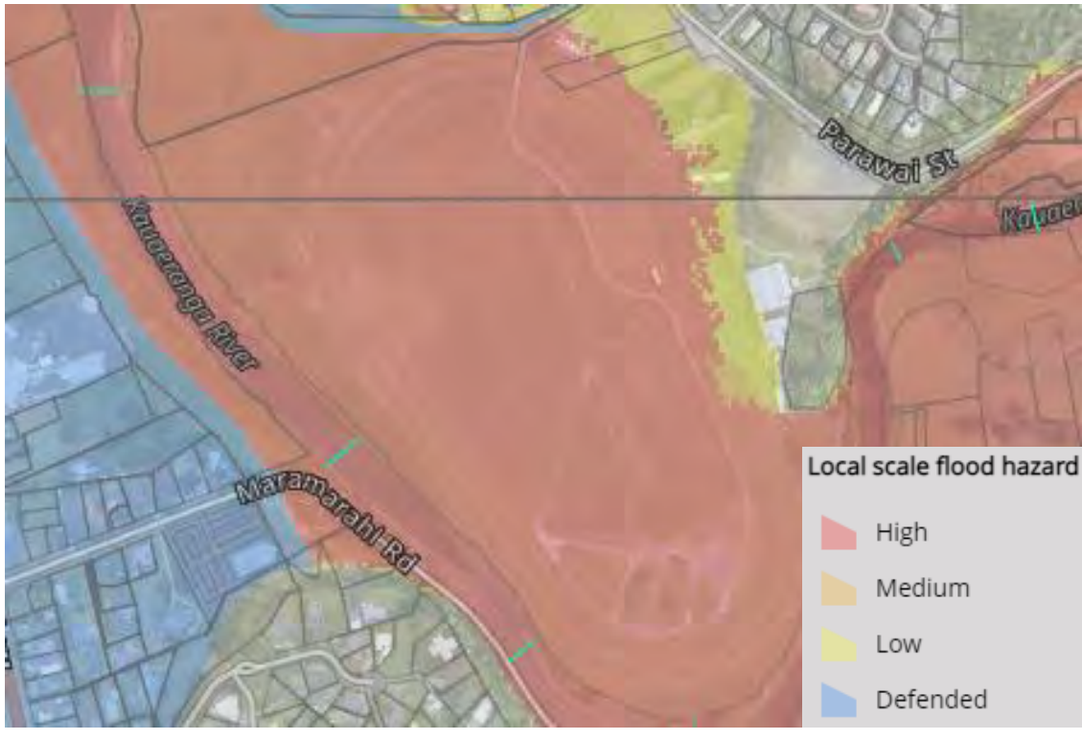
CONCLUSION

A potential site to consider for further investigation. It is large enough for development. There are two significant constraints being the presence of wahi tapu and therefore may be inappropriate for development and the suitability of the land for an aquatic facility. Both issues require further engagement and detailed investigation. However, the site could provide a compromise between local and sub-regional catchments **RECOMMEND TO CONSIDER FURTHER. UNDERTAKE IWI CONSULTATION TO UNDERSTAND APPROPRIATENESS FOR DEVELOPMENT**

RACECOURSE SITE – LOWER LEVEL

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)



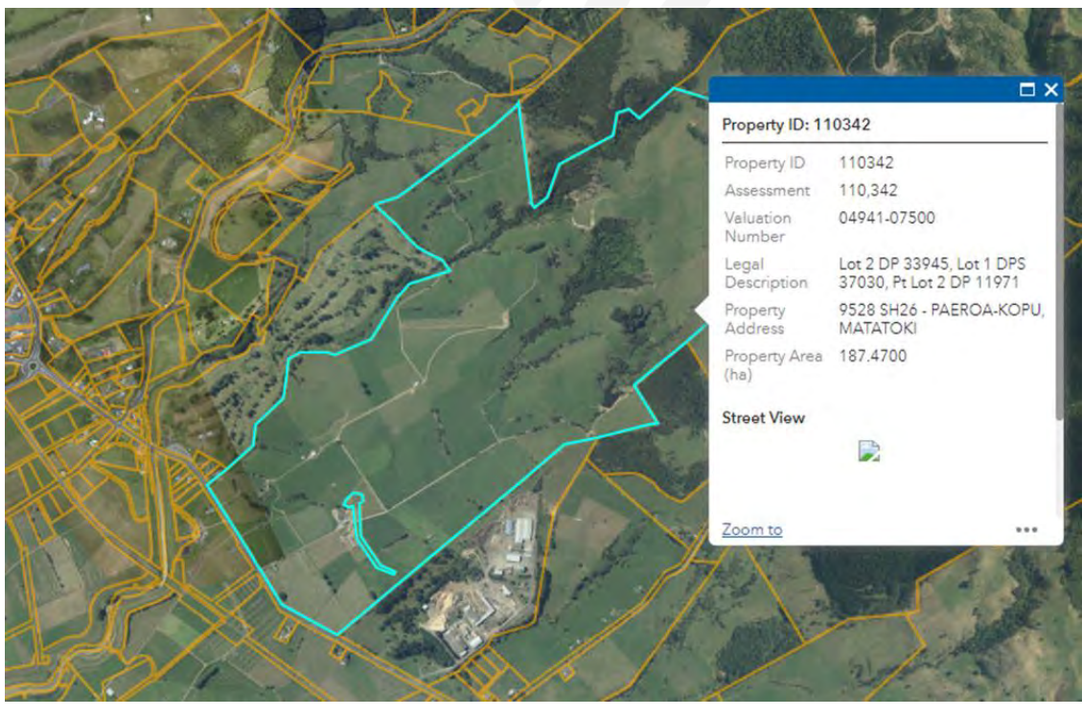
INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	Part of the flood management scheme. Lower portion has high risk of flooding at 20% AEP: 1 every 5 years. WRC & TCDC high flood risk. Sits at 0 metres sea-level. While further from the coast-line, there is likely to be ongoing challenges with the water-table. Any building would need to be situated on the upper level.	Poor
Availability	Owned by private society, but likely is available for development (with costs).	Average
LONG-LIST CONSIDERATIONS		
Size	Large site but buildings would have to be located on upper level to avoid flood risks.	4
Topography	Upper level where buildings would need to be located may have geotechnical issues. Needs further investigation.	2
Ownership	Owned privately and would need acquisition.	2
Zoning	Rural Zone, discretionary activity with requirements to build in coastal environment.	3
Local Catchment accessibility	On the outer area of Thames residential less accessible for a local aquatic facility.	3
Sub-regional Catchment accessibility	Would not serve the sub-regional catchment.	1
Visibility	Less prominent site and location.	2
Vehicle accessibility	Average with Parawai Road the only road. 10 minute catchment covers most of Thames.	3
Walkable accessibility	Average walkability. There is a path along Parawai Road to the gate of racecourse.	3
	TOTAL SCORE	28

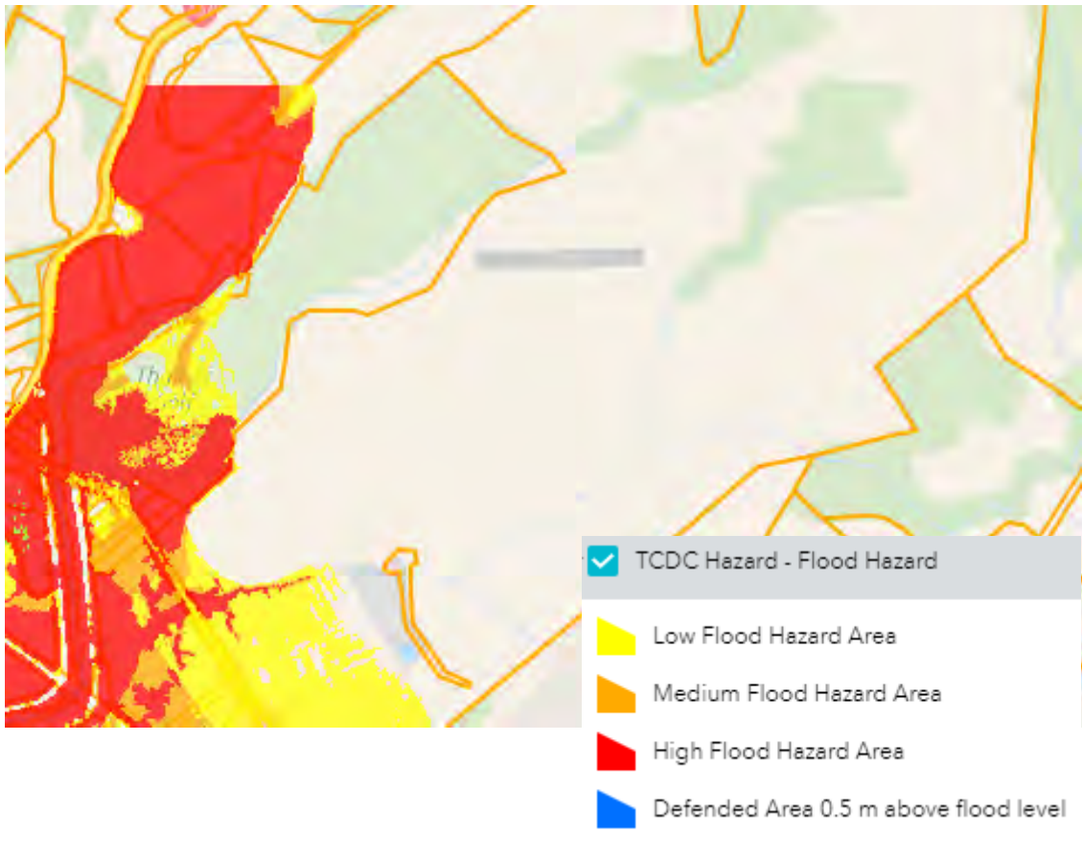
CONCLUSION
The site has significant compromises particularly around ongoing flood risk so buildings would need to be located on the upper level. The site would not serve either a local or sub-regional catchment well.
NOT RECOMMENDED FOR AQUATIC FACILITY DEVELOPMENT.

KŌPŪ SOUTH: WENZLICK BLOCK (PRIVATE PROPERTY)

SITE AERIAL & DETAILS



FLOOD HAZARD (TCDC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	The lower level and northern area of the site is risk from flooding from the Kirikiri Stream. There is a WRC Waipaturawa Stream Detention Dam on the site.	Good
Availability	Privately owned but has been identified for potential development in Thames and Surrounds Spatial Plan. Timelines may be a significant issue. Given the size of the site, it is likely to be identified for other developments particularly housing.	Poor
LONG-LIST CONSIDERATIONS		
Size	Large site sufficient for aquatic and sports.	5
Topography	Sloping site and potential contaminated site. Would need detailed investigation.	3
Ownership	Private ownership with possible acquisition required. Challenging timeline.	1
Zoning	Rural Zone. Discretionary activity or may be progressed as overall plan change.	2
Local Catchment accessibility	Beyond Thames residential area but still within the 10 minute drive catchment.	2
Sub-regional Catchment accessibility	Serves a sub-regional 30 minute drive-time catchment.	5
Visibility	Prominent site and potential benefit if there is wider development around the site.	4
Vehicle accessibility	Greater distance from Thames residential area, although still good access from main road. May require turning bay on state highway.	3
Walkable accessibility	Low walkability and unlikely to have pathway access unless through wider development.	1
	TOTAL SCORE	32

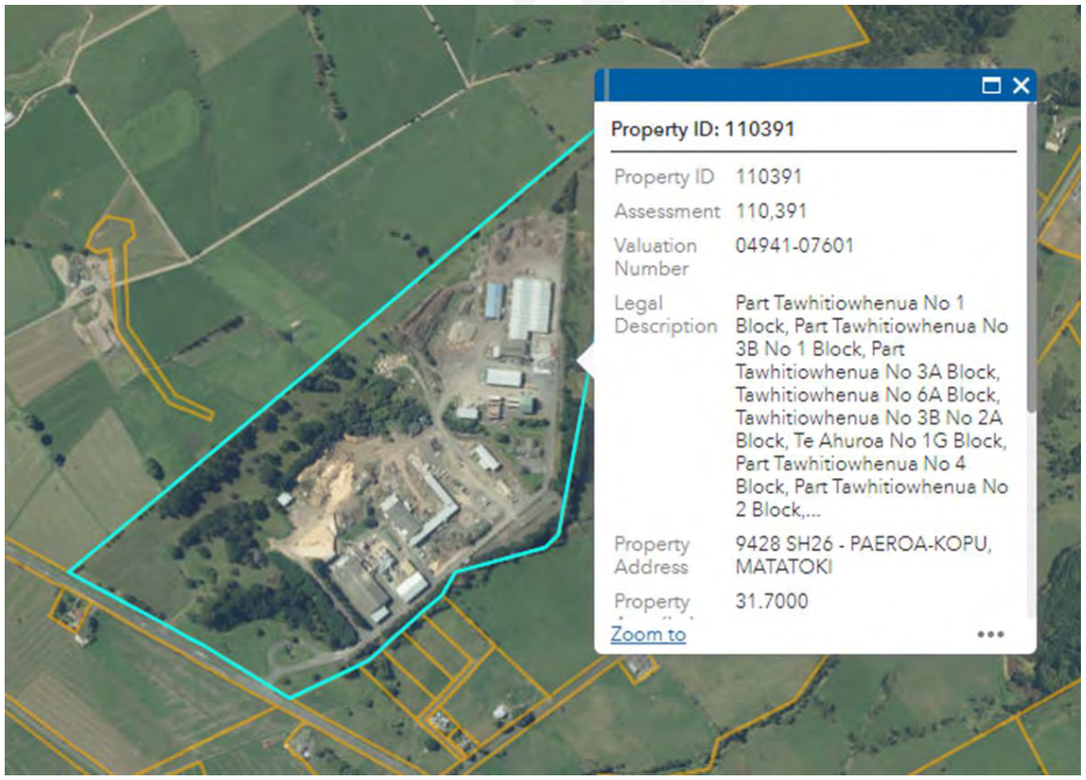
CONCLUSION

A potential site from a risk perspective, but the challenges are greater distance from Thames for local aquatic catchment and the timeline and cost for availability of the site. As the site is in private ownership, it is very unclear on the timeframes for potential availability for development. Given the timeframes for aquatic facility development this may be a significant issue. It is a good site for a sub-regional catchment and potential co-location with sport hub. Geotechnical issues will need to be investigated as the site is listed for potential contamination. Will need plan or zone change.

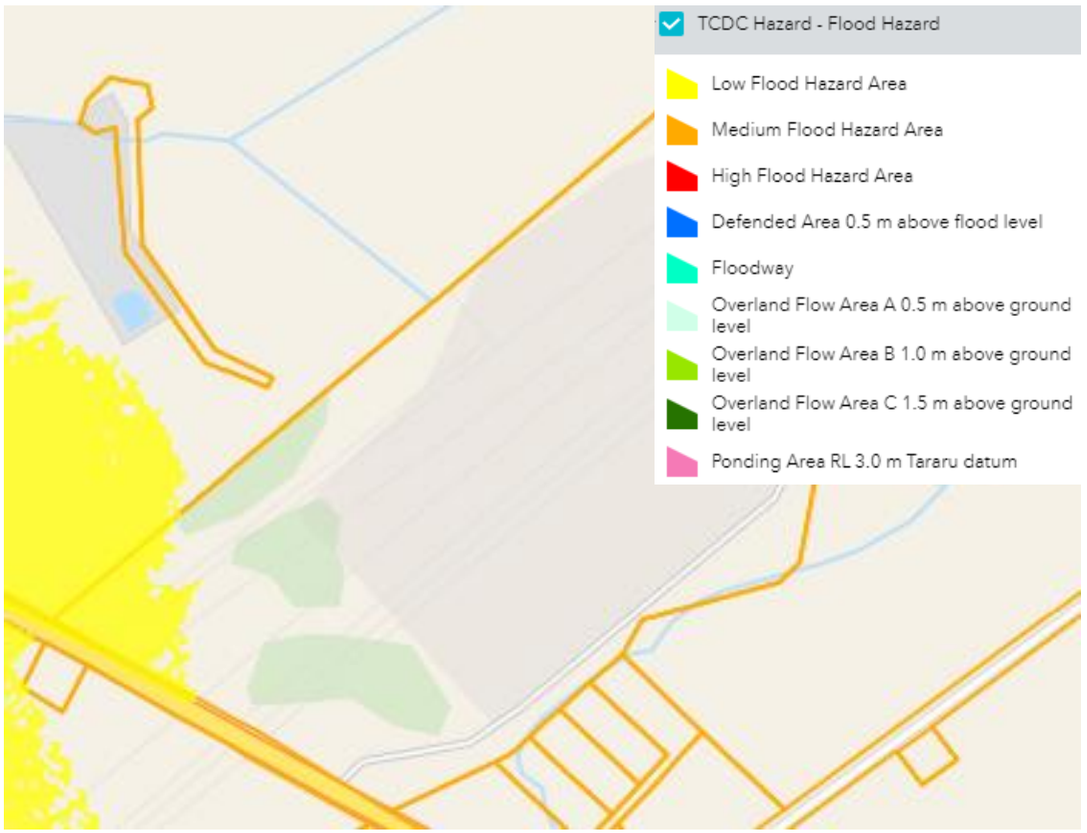
RECOMMEND TO CONSIDER FURTHER FOR SUB-REGIONAL AQUATIC. UNDERSTAND TIMEFRAMES FOR POTENTIAL DEVELOPMENT

KŌPŪ SOUTH: EX-CARTER HOLT SITE (PRIVATE PROPERTY)

SITE AERIAL & DETAILS



FLOOD HAZARD (TCDC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	There is very little flood-risk for the site.	Excellent
Availability	Privately owned but has been identified for potential development in Thames and Surrounds Spatial Plan, although likely industrial. Timelines may be an issue.	Poor
LONG-LIST CONSIDERATIONS		
Size	Large site but configuration may be a challenge. Need to understand what land would be available for development.	5
Topography	Mostly flat site but potential contaminated site. Would need detailed investigation.	3
Ownership	Private ownership. Would need to understand acquisition or development opportunities.	1
Zoning	Industrial Zone. Will require plan change.	2
Local Catchment accessibility	Beyond Thames residential area and 10 minute drive-time for local catchment.	2
Sub-regional Catchment accessibility	Serves a sub-regional 30 minute drive-time catchment.	5
Visibility	Pretty visible site depending on development location.	4
Vehicle accessibility	Greater distance from Thames residential area, although still good access from main road. May require turning bay on state highway.	3
Walkable accessibility	Low walkability and unlikely to have pathway access through wider development.	1
	TOTAL SCORE	32

CONCLUSION
A good site from a risk perspective, but the challenges are the greater distance from Thames residential area to serve a local aquatic catchment and the timeline and cost for availability of the site. The site is better for a sub-regional catchment. **RECOMMEND TO CONSIDER FURTHER FOR SUB-REGIONAL AQUATIC. UNDERSTAND TIMEFRAMES FOR POTENTIAL DEVELOPMENT**

MATATOKI SITE

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	There is a small flood-risk for the site, but minimal.	Excellent
Availability	Privately owned but has been identified for potential development in Thames and Surrounds Spatial Plan. Timelines may be the significant issue.	Poor
LONG-LIST CONSIDERATIONS		
Size	Large site but configuration may be a challenge. Most of the site likely to be required for sport/ aquatic development due to configuration.	3
Topography	Mostly flat with some undulations.	4
Ownership	Private ownership with possible acquisition required. Challenging timeline.	1
Zoning	Rural Zone. Discretionary activity or may be progressed as overall plan change.	2
Local Catchment accessibility	Significantly beyond the Thames residential area to serve a local catchment.	1
Sub-regional Catchment accessibility	Serves a sub-regional 30 minute drive-time catchment, although not as good to the west.	4
Visibility	Much less prominent site.	1
Vehicle accessibility	Greater distance from Thames residential area, although still good access from main road. 10 min catchment does not cover all of Thames.	2
Walkable accessibility	Low walkability and unlikely to have pathway access through wider development.	1
	TOTAL SCORE	26

CONCLUSION
A good site from a risk perspective, but the challenges are the much greater distance from the Thames residential area for a local aquatic catchment and the timeline and cost for the availability of the site. While it would serve a sub-regional aquatic catchment, it is not as accessible to the western side of the catchment. With little development around the site, the visibility and accessibility is not as good as other sites.
NOT RECOMMENDED, BUT MAY NEED TO REVISIT IF OTHER SITES ARE NOT FEASIBLE.

LOWE AVENUE RESERVE

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	While the site is defended from river flooding, there is flooding risk associated with the site from run-off from the hills (sitting at the base of the hill).	Poor
Availability	Owned by TCDC but Council has confirmed land will be sold for housing	Extreme
LONG-LIST CONSIDERATIONS		
Size	NOT ASSESSED DUE TO THE FATAL FLAW (SITE AVAILABILITY)	
Topography		
Ownership		
Zoning		
Local Catchment accessibility		
Sub-regional Catchment accessibility		
Visibility		
Vehicle accessibility		
Walkable accessibility		
	TOTAL SCORE	

CONCLUSION
Council has confirmed the site is to be sold for housing.
NOT RECOMMENDED.

RACECOURSE SITE – UPPER LEVEL

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

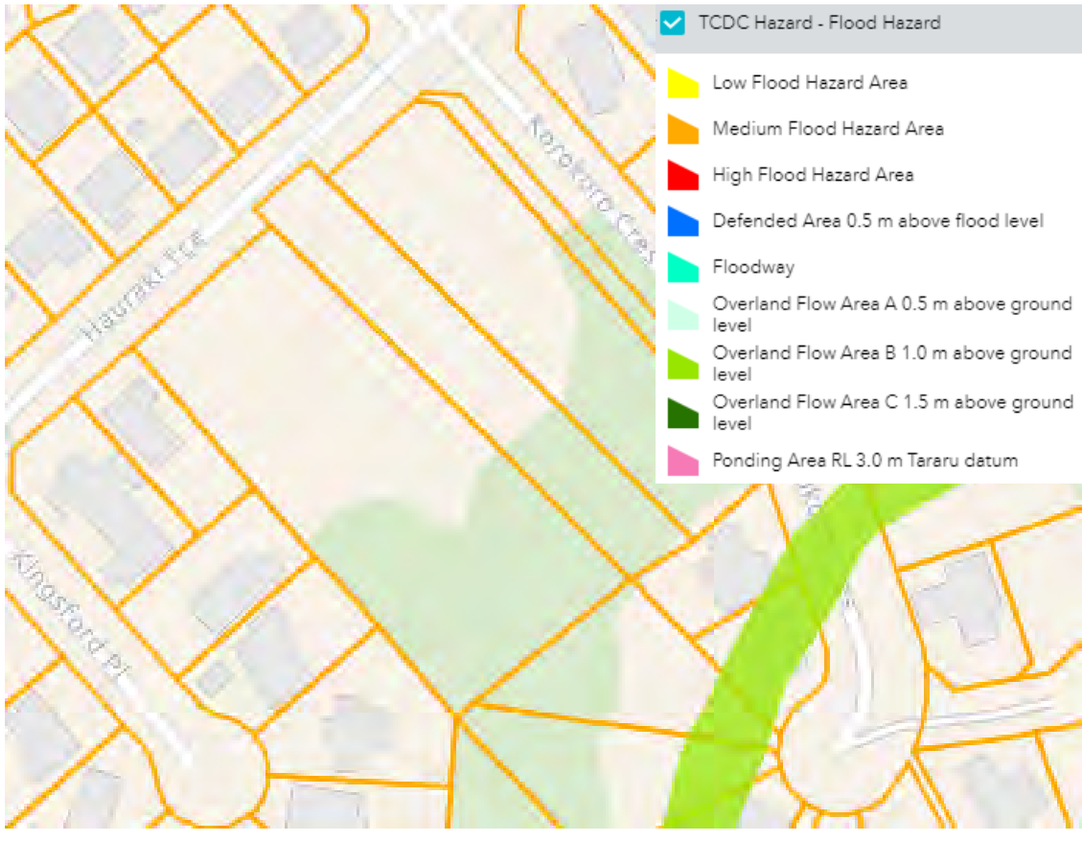
FATAL FLAWS		SCORE
Flood risk	The upper site has no flood risk.	Excellent
Availability	Owned by private society, but likely is available for development (with costs).	Average
LONG-LIST CONSIDERATIONS		
Size	Sufficient size for local aquatic facility but could not accommodate larger facility.	4
Topography	Mostly flat but Geotech would need to be undertaken as it appears to be a fill site.	2
Ownership	Owned privately and would require a lease.	3
Zoning	Rural zone. Discretionary resource consent or plan change.	3
Local Catchment accessibility	Average location to serve the Thames community, but situated on the eastern side.	3
Sub-regional Catchment accessibility	Would not serve sub-regional catchment.	1
Visibility	Some road-side visibility (better than the lower area) but not in a very prominent location.	3
Vehicle accessibility	Average with Parawai Road the only road. 10 minute catchment covers most of Thames.	3
Walkable accessibility	Average walkability. There is a path along Parawai Road to the gate of racecourse but not to upper level (expense of additional pathways)	2
	TOTAL SCORE	32

CONCLUSION
The site appears to have lower risk and resilience issues but it is not strong in terms of serving the local catchment and would not serve the sub-regional catchment. There are concerns regarding the geo-tech and suitability for an aquatic facility.
RECOMMEND TO CONSIDER FURTHER FOR LOCAL AQUATIC PROVISION.

HAURAKI TERRACE RESERVE

SITE AERIAL & DETAILS

FLOOD HAZARD (TCDC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

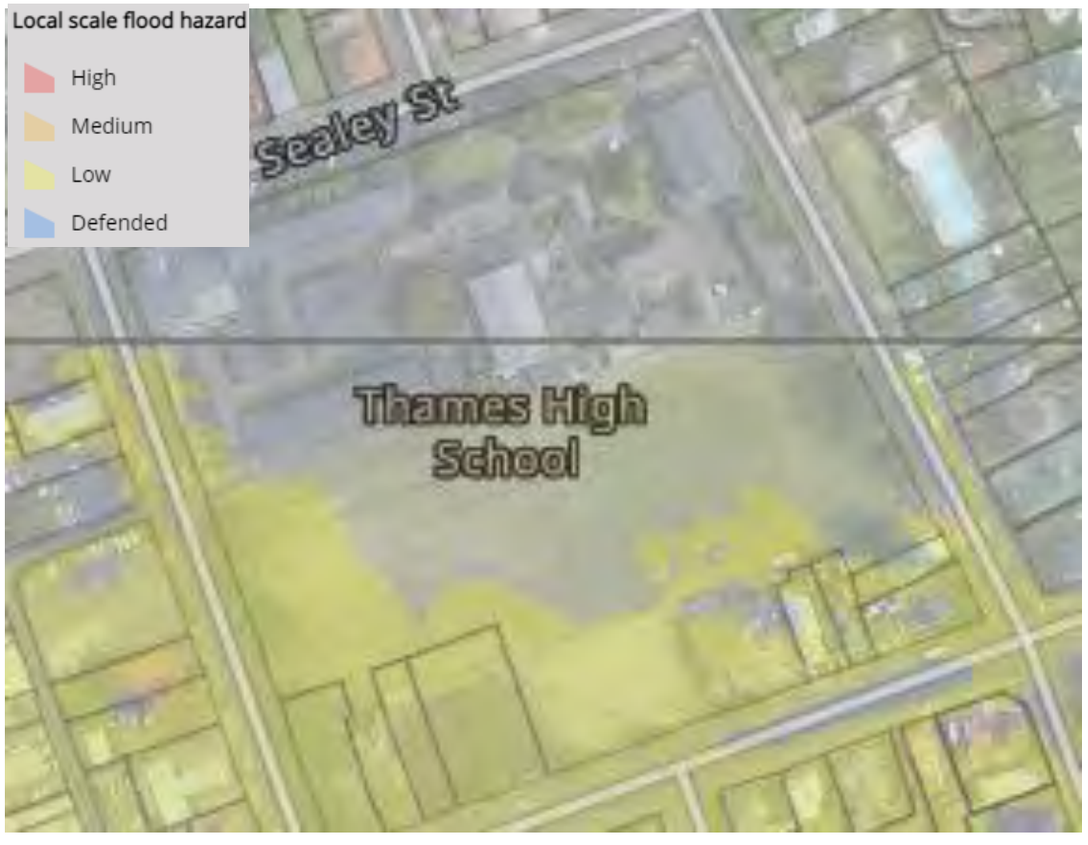
FATAL FLAWS		SCORE
Flood risk	Not identified as a flood risk. There is some over-land flow areas to the rear of the site.	Excellent
Availability	Council-owned.	Excellent
LONG-LIST CONSIDERATIONS		
Size	Sufficient size for local aquatic facility but could not accommodate larger facility. This would need to be tested to confirm.	2
Topography	Gently sloping site which appears suitable. However, Geotech would need to be determined due to the proximity to the hills.	4
Ownership	Council owned site. However, would need to discuss whether open-space is available for development.	5
Zoning	Recreation Passive zone. Permitted activity although need to manage standards, which may be a challenge with the size of the site. Given the more residential area, would need to consider potential impacts.	3
Local Catchment accessibility	Good central location for the local catchment.	4
Sub-regional Catchment accessibility	Would not serve sub-regional catchment.	1
Visibility	Less prominent in Thames located on the hill area of Thames, although on a bus-route.	2
Vehicle accessibility	Average to serve the local catchment. Multiple road access-ways which can be accessed from north and south of Thames.	3
Walkable accessibility	Average walkability for immediate residential areas although up a hill (but on bus route).	3
	TOTAL SCORE	37

CONCLUSION
A stronger site to consider for a local aquatic facility. There are limited flood issues although Geotech of the site needs to be considered. The site may not be large enough and would not serve a sub-regional.
RECOMMEND TO CONSIDER FURTHER FOR LOCAL AQUATIC PROVISION.

THAMES HIGH SCHOOL – COURT SITE

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

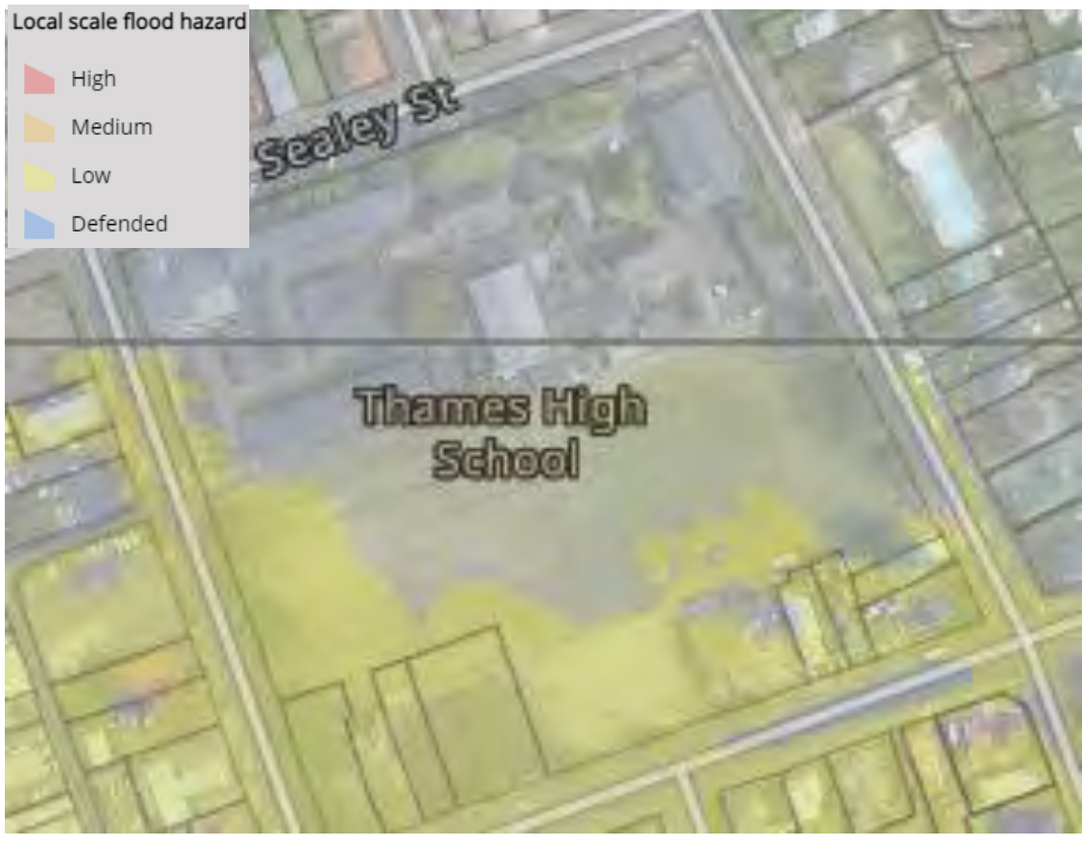
FATAL FLAWS		SCORE
Flood risk	Both WRC and TCDC mapping identified the courts area at some risk from flooding, due to overland flow area.	Average
Availability	School site and therefore needs BOT / MOE approval. May impact on School Caretaker property (subject to layout). The School has indicated potential plan for an artificial turf development on courts. Aquatic may not be a school priority.	Average
LONG-LIST CONSIDERATIONS		
Size	Sufficient size for local aquatic facility but may be tight to accommodate a larger sub-regional facility.	4
Topography	Flat site which appears suitable.	5
Ownership	School owned site. Would need to be partnership development.	3
Zoning	Underlying Extra Density Residential zone. Designated by MOE. Development would need to adhere to Outline Plan.	4
Local Catchment accessibility	Excellent central location for the local catchment.	5
Sub-regional Catchment accessibility	Does not serve sub-regional catchment but is well located in Thames	2
Visibility	High prominence in Thames.	5
Vehicle accessibility	Easy access with multiple road-access routes and well located to serve the local catchment.	5
Walkable accessibility	Excellent walkability for majority of local catchment.	5
	TOTAL SCORE	44

CONCLUSION
A good site to consider, but needs discussions with school on the potential for development. There are some flood issues with site which would need further consideration to understand the risk. Needs further discussion with Thames High School.
RECOMMEND TO CONSIDER FURTHER FOR LOCAL AQUATIC PROVISION.

THAMES HIGH SCHOOL – POOL SITE

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

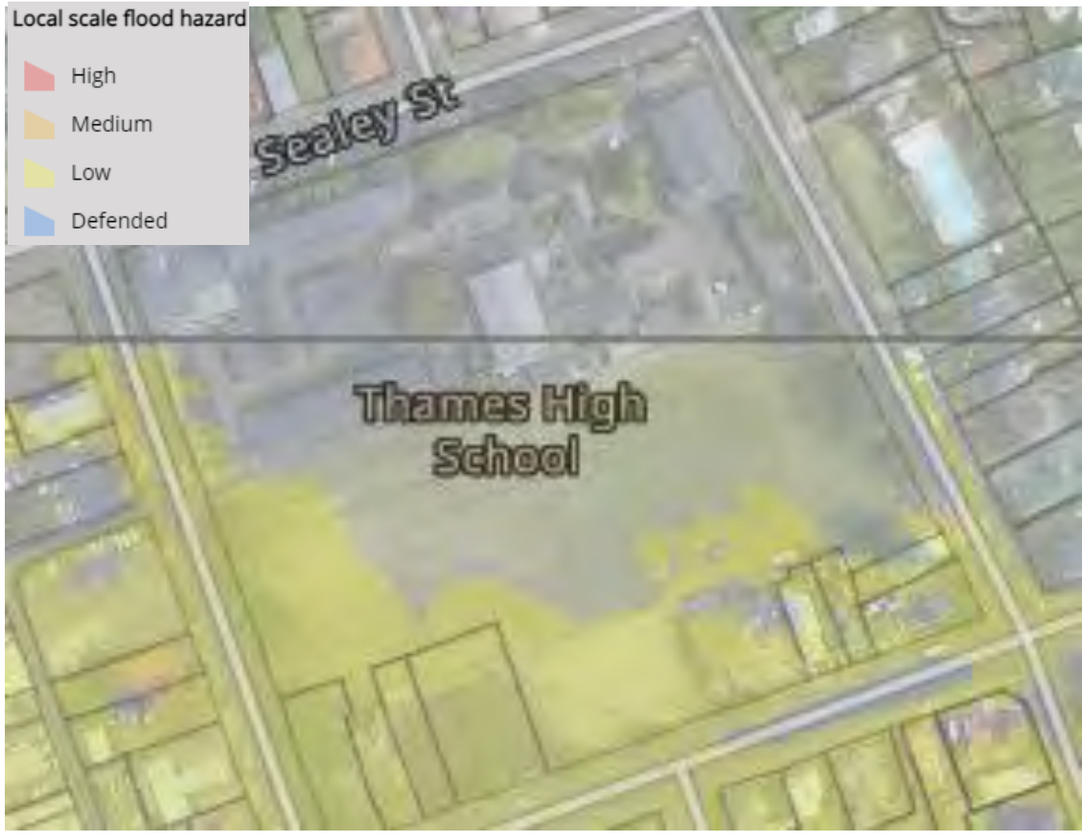
FATAL FLAWS		SCORE
Flood risk	Flooding mapping does not identify any flood risks for this site.	Good
Availability	School site and therefore needs BOT / MOE approval. Likely also needs purchase of 1-2 neighbouring properties in order to provide sufficient size.	Average
LONG-LIST CONSIDERATIONS		
Size	The size is tight for local aquatic facility and likely to need acquisition of properties to provide sufficient foot-print.	2
Topography	Gently sloping site which would need some earthworks but appears suitable.	3
Ownership	School owned site. Would need to be partnership development. Likely to also need acquisition of private properties to make a site large enough.	3
Zoning	Recreation Passive Zone and Residential zone (neighbouring properties). Designated by MOE. Development would need adherence to Outline Plan and discretionary consent.	3
Local Catchment accessibility	Excellent central location for the local catchment.	5
Sub-regional Catchment accessibility	Does not serve sub-regional catchment but is well located in Thames.	2
Visibility	High prominence in Thames.	4
Vehicle accessibility	Easy access with multiple road-access routes and well located to serve the local catchment.	4
Walkable accessibility	Excellent walkability for majority of local catchment.	5
	TOTAL SCORE	38

CONCLUSION
A good site but the size may be too small and need additional acquisition to make feasible. Other sites on the school may be better to pursue but subject to discussions with the School. **NOT RECOMMENDED, BUT MAY NEED TO REVISIT IF OTHER SITES ARE NOT FEASIBLE.**

THAMES HIGH SCHOOL – NEXT TO INDOOR COURTS

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	Distance from the overland flow therefore less flooding risks for this site.	Good
Availability	School site and therefore needs BOT / MOE approval. Area does not appear to be heavily used and therefore may be available.	Average
LONG-LIST CONSIDERATIONS		
Size	The size may be tight for local aquatic facility and needs to be investigated further to ensure does not impact on the playing fields.	3
Topography	Flat site which appears suitable.	5
Ownership	School owned site. Would need to be partnership development.	3
Zoning	Underlying Extra Density Residential zone. Designated by MOE. Development would need to adhere to Outline Plan.	4
Local Catchment accessibility	Excellent central location for the local catchment.	5
Sub-regional Catchment accessibility	Does not serve sub-regional catchment but is well located in Thames	2
Visibility	High prominence in Thames.	5
Vehicle accessibility	Easy access with multiple road-access routes and well located to serve the local catchment.	4
Walkable accessibility	Excellent walkability for majority of local catchment.	5
	TOTAL SCORE	43

CONCLUSION
Potentially a good site but the size to accommodate aquatic facility would need to be assessed. There is a possible advantage to allow for joint operation (and therefore efficiencies) with the indoor court facility. Needs further discussion with Thames High School.
RECOMMEND TO CONSIDER FURTHER FOR LOCAL AQUATIC PROVISION.

THAMES BOWLING CLUB

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

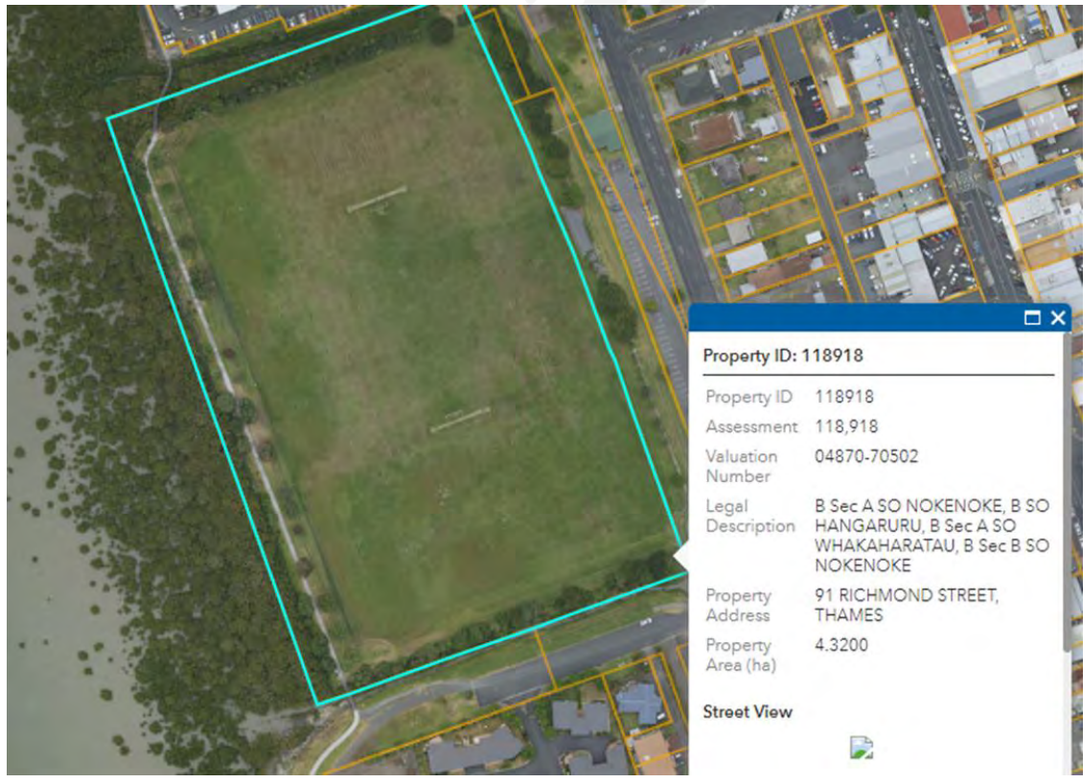
INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	WRC Flood assessment does not identify any flood risks. TCDC identifies overland flow area 0.5m above ground level. Site is well known for good flood resilience.	Excellent
Availability	Owned and occupied by the Bowling Club. Highly unlikely the site is available for development. Would only be achievable through multi-level development.	Poor
LONG-LIST CONSIDERATIONS		
Size	It would be difficult to accommodate aquatic facility and bowling greens. Multi-level development would be required.	1
Topography	Flat site suitable for development	5
Ownership	Owned by Thames Bowling Club. Highly unlikely the site is available for development	1
Zoning	Active Recreation Zone. Aquatic facility likely to be a restricted discretionary activity.	3
Local Catchment accessibility	Excellent central location for the local catchment.	5
Sub-regional Catchment accessibility	Does not serve sub-regional catchment but is well located in Thames	2
Visibility	High prominence in Thames.	5
Vehicle accessibility	Easy access with multiple road-access routes and well located to serve the local catchment.	4
Walkable accessibility	Excellent walkability for majority of local catchment.	5
	TOTAL SCORE	38

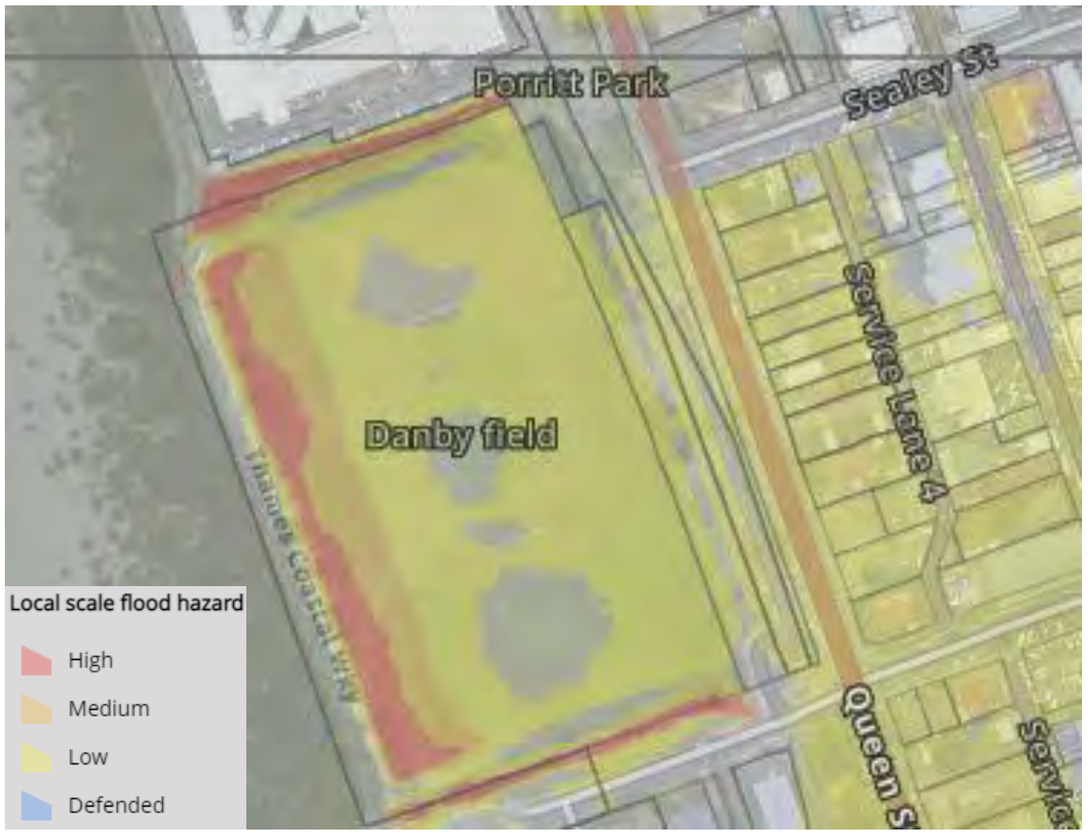
CONCLUSION
This is a strong site from most variables. However, as the site is owned by the Thames Bowling Club and there is no indication the Club wish to relinquish the site, it unlikely to be available for development. There could be opportunity for a multi-outcome development involving aquatic, housing and bowls but this would need some indication of interest from the Club to be considered.
NOT RECOMMENDED, UNLESS THE THAMES BOWLING CLUB INDICATE DEVELOPMENT MAY BE CONSIDERED.

DANBY FIELD

SITE AERIAL & DETAILS



FLOOD HAZARD (WRC FLOOD HAZARD)



INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	WRC & TCDC identified flood risks. Site is known to have significant ponding issues. While it is a defended site and likely to be protected from coastal inundation, this is unlikely to address the ponding issues without additional infrastructure investment.	Extreme
Availability	School owned site. Unclear on the future of the site. Part of the site is under treaty claim.	Poor
LONG-LIST CONSIDERATIONS		
Size	NOT ASSESSED DUE TO FATAL FLAW DUE TO FLOOD RISK	
Topography		
Ownership		
Zoning		
Local Catchment accessibility		
Sub-regional Catchment accessibility		
Visibility		
Vehicle accessibility		
Walkable accessibility		
	TOTAL SCORE	

CONCLUSION
While this site has previously been considered for an aquatic facility, the flood and resilience risks are too significant to consider aquatic provision.
NOT RECOMMENDED.

VICTORIA PARK

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	WRC & TCDC identified low flood risks. Site is also subject to coastal inundation. Potential coastal protection may reduce the park area.	Poor
Availability	Council owned site but there is very limited space for aquatic facility development.	Poor
LONG-LIST CONSIDERATIONS		
Size	The size is very tight and unlikely to accommodate an aquatic facility.	1
Topography	Flat site which appears suitable, although the large trees, root systems and other facilities may constrain the development potential.	2
Ownership	Council owned site but development may impact on other facilities.	4
Zoning	Active Recreation Zone. Aquatic facility likely to be a restricted discretionary activity. Development would also need to consider Shoreline Management Plan and heritage sites on the Park. All may constrain development site.	3
Local Catchment accessibility	Situated in the north of the town, would serve some of the local catchment.	3
Sub-regional Catchment accessibility	Would not serve the sub-regional catchment.	1
Visibility	The site has limited visibility due to placement in the town. An advantage is the clustering of other sport and recreation facilities.	2
Vehicle accessibility	Multiple road connections means vehicle access is good for the local catchment.	4
Walkable accessibility	Flat access for northern areas in the town.	4
	TOTAL SCORE	28

CONCLUSION
While this site has previously been considered, the risks around flood risk, the limited size, the constraints around trees, heritage features and other facilities would limit the development potential.
NOT RECOMMENDED.

BURKE STREET RESERVE

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

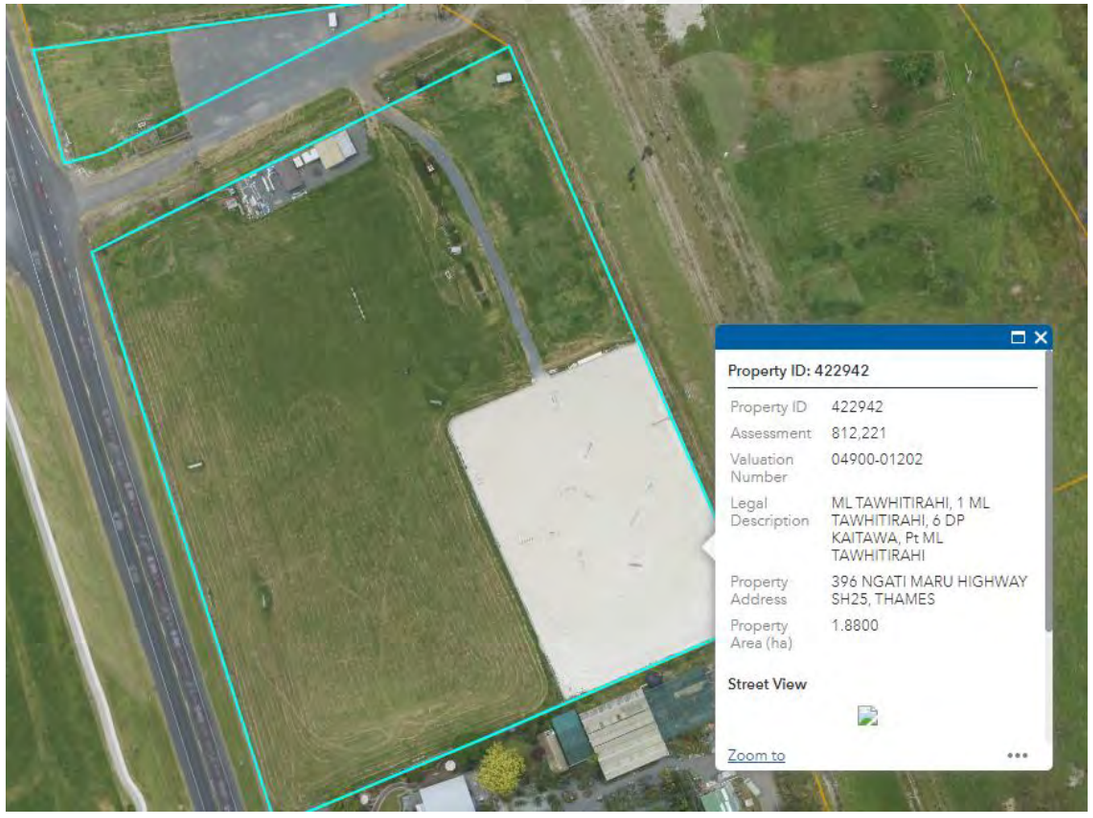
INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	WRC & TCDC do not identify any flood risks as the site is a defended site. Shoreline Management Plan identifies future risks which would need to be built into the design,	Good
Availability	Council owned site. However the site is an ex-fill site which was recapped in 2004. There is potentially major time constraints on development which need to be confirmed.	Poor
LONG-LIST CONSIDERATIONS		
Size	Sufficient size to accommodate an aquatic facility and retain other activities.	4
Topography	Land-fill recapped in 2004 and may not be available for development in the short-term.	1
Ownership	Council owned site, unlikely to be a constraint.	5
Zoning	Recreation Zone. Aquatic facility discretionary activity. Development would also need to consider Shoreline Management Plan which may constrain development.	4
Local Catchment accessibility	Situated in the north of the town, would serve some of the local catchment.	3
Sub-regional Catchment accessibility	Would not serve the sub-regional catchment.	1
Visibility	The site has average visibility.	3
Vehicle accessibility	Multiple road connections means vehicle access is good for the local catchment.	3
Walkable accessibility	Flat access for northern areas in the town.	4
	TOTAL SCORE	34

CONCLUSION
This site has previously been considered for an aquatic facility. However, the site is not available for development due to recent capping of the landfill. Situated in the North of Thames, it would not serve a sub-regional catchment.
NOT RECOMMENDED.

PONY CLUB SITE

SITE AERIAL & DETAILS



FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	Defended site but still at risk of ponding and flooding due to proximity to flood management scheme.	Poor
Availability	Council owned site however currently occupied by Pony Club. Site was gifted for development of pensioner housing therefore may not be available for development as an aquatic facility.	Poor
LONG-LIST CONSIDERATIONS		
Size	Small site might be constrained for aquatic facility.	2
Topography	Flat site which appears suitable.	4
Ownership	Council owned site but likely to displace current pony club.	4
Zoning	Rural Zone. Discretionary activity.	3
Local Catchment accessibility	Situated in the south of the town, would serve the local catchment.	3
Sub-regional Catchment accessibility	Proximity to Kopu means the site is more accessible to sub-regional catchment although will not serve entire sub-region.	3
Visibility	Prominent site.	5
Vehicle accessibility	Excellent vehicle access from main road. 10 minute catchment covers all of Thames area	4
Walkable accessibility	Lower walkability from Thames. Would need a crossing over state highway to rail-trail (unlikely).	2
	TOTAL SCORE	34

CONCLUSION
This site is quite small and is still at some risk of flooding due to proximity to flood management scheme. The site is likely to not be available for development due to how the site was acquired by Council.
NOT RECOMMENDED.

KŌPŪ LIGHT INDUSTRIAL SITE (PRIVATE PROPERTY)

SITE AERIAL & DETAILS

FLOOD HAZARD (WRC FLOOD HAZARD)

INITIAL SITE ASSESSMENT

FATAL FLAWS		SCORE
Flood risk	Defended site and current data does not indicate any flood risks. Future coastal inundation will need to be considered, particularly impact on underlying water table.	Good
Availability	Privately owned site therefore may not be available for development.	Poor
LONG-LIST CONSIDERATIONS		
Size	Large site which would be suitable for aquatic facility.	4
Topography	Flat site which appears suitable. May have contamination due to industrial site.	4
Ownership	Private ownership. Probably acquisition required.	1
Zoning	Industrial Zone. Likely to require plan change.	1
Local Catchment accessibility	On the outskirts of Thames residential means less accessible as a local facility.	2
Sub-regional Catchment accessibility	Proximity to Kōpū means the site is more accessible to sub-regional catchment although will not serve entire sub-region.	4
Visibility	The site has some prominence on the main road but this would depend on having road-frontage.	3
Vehicle accessibility	Busy section of main highway may make traffic management more challenging. May need rear access for feasibility.	2
Walkable accessibility	Limited walkability to site.	1
	TOTAL SCORE	28

CONCLUSION
The site is currently utilised as an industrial site but may be available for development. The ownership, zoning and walkability are the most significant constraints. If the site was available then this could be a site to consider further.
NOT RECOMMENDED, BUT MAY NEED TO REVISIT IF OTHER SITES ARE NOT FEASIBLE.

APPENDIX B
PRELIMINARY DESIGNS

OPTION 1 - THAMES HIGH SCHOOL ALL INDOOR

Legend
1. Lane Pool, 25 x 7 lane , 1.4-2m deep
2. Spa pool
3. Programmes Pool 20 x 8, 1.3m deep
4. Learn to Swim Pool, 10x8, 0.9 deep
5. Splash Pad
6. Toddlers Pool 300mm deep
7. Entrance Lobby
8. Reception
9. LTS Office
10. Administration Offices
11. Marshalling Room
12. Birthday Party Room
13. Staffroom and Staff Change
14. Changerooms (inc Family & Accessible Change
15. PWS Plantroom
16. Chlorine Room
17. Outdoor Heat Pump, AHU Yard
18. Storage
19. MSB
20. Outdoor Yard

Water Areas

Lane Pool	462m2
Spa	23m2
Programmes	160m2 (plus ramp 23m2)
LTS Pool	80m2
Splashpad	60m2
Toddlers Pool	15m2
Total	**800m2**

Gross Floor Area

Total GFA = 2429m2
(compares with 2685m2 GFA for Sk 3108 A-8 Lane Pool Option)

Thames High School Site-Local Pool
Sk 10-10 A
Revision C -Reduced 7 Lane Option
1:200 @ A1

ARCHITECTURE HDT

OPTION 1A - THAMES HIGH SCHOOL OUTDOOR 25M POOL

Legend
1. Lane Pool, 25 x 7 lane , 1.4-2m deep
2. Spa pool
3. Programmes Pool 20 x 8, 1.3m deep
4. Learn to Swim Pool, 10x8, 0.9 deep
5. Splash Pad
6. Toddlers Pool 300mm deep
7. Entrance Lobby
8. Reception
9. LTS Office
10. Administration Offices
11. Marshalling Room
12. Birthday Party Room
13. Staffroom and Staff Change
14. Changerooms (inc Family & Accessible Change
15. PWS Plantroom
16. Chlorine Room
17. Outdoor Heat Pump, AHU Yard
18. Storage
19. MSB
20. Outdoor Yard

Water Areas

Lane Pool	462m2
Spa	23m2
Programmes	160m2 (plus ramp 23m2)
LTS Pool	80m2
Splashpad	60m2
Toddlers Pool	15m2
Total	**800m2**

Gross Floor Area

Total GFA = 1787m2
(compares with 2685m2 GFA for Sk 3108 A-8 Lane Pool Option)

Thames High School Site-Local Pool
Sk 10-10 B
Revision D -Outdoor Lane Pool Option
1:200 @ A1

ARCHITECTURE HDT

OPTION 2 - UPPER THAMES RACECOURSE

Water Areas	
Lane Pool	465m2
Spa	20m2
Programmes/LTS	267m2
Leisure Pool	60m2
Toddlers Pool	15m2
Total	827m2

Total GFA	2750m2

Sub-Regional Facility
Race course site
Sk2711 A
1:200 @ A1

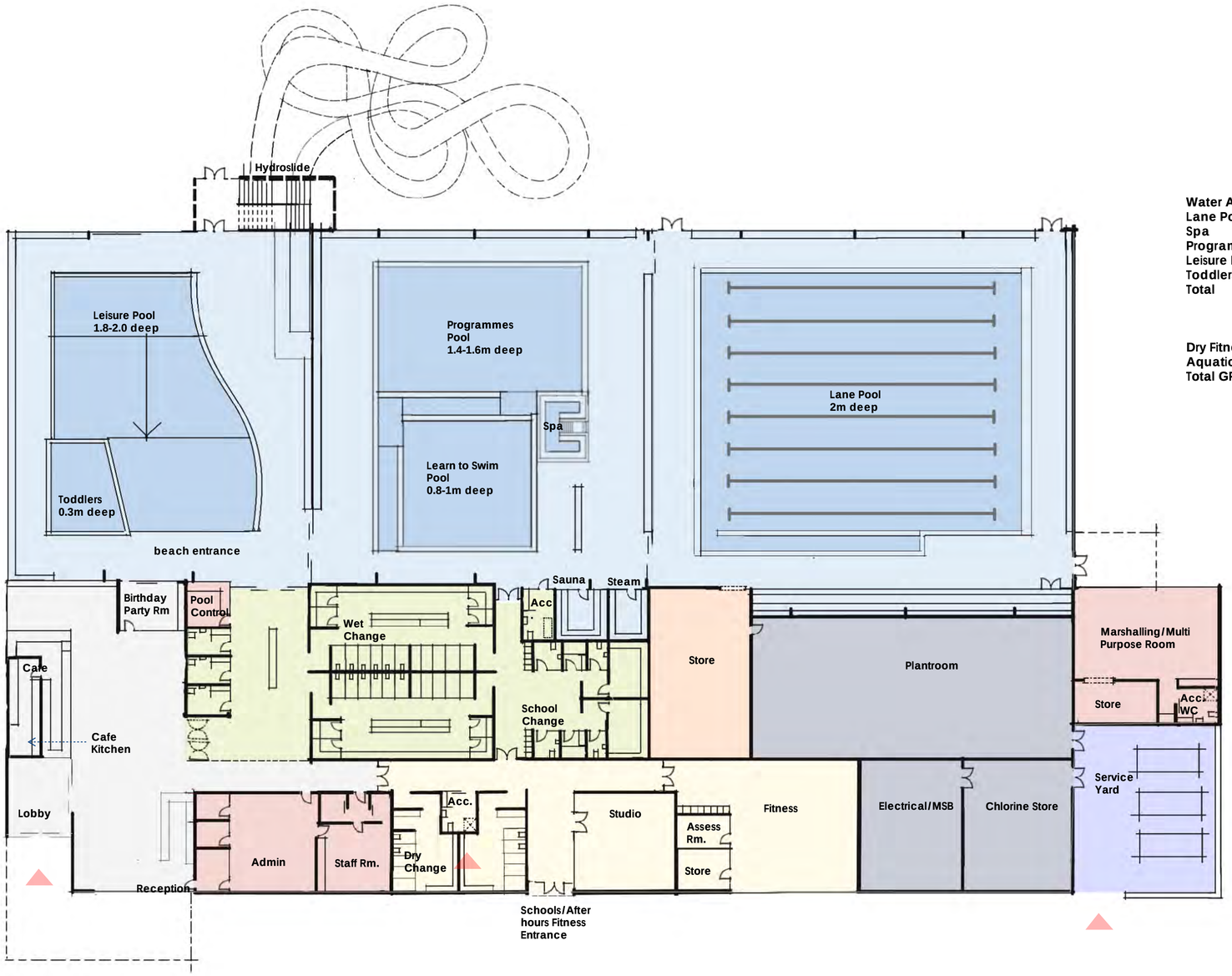
HDT

OPTION 3 - KŌPŪ SOUTH: EX-CARTER HOLT SITE

Sub-Regional Facility
Carter Holt Harvey site
Sk 2109 B rev C
1:200 @ A1

HDT

OPTION 3 - KŌPŪ SOUTH: EX-CARTER HOLT SITE



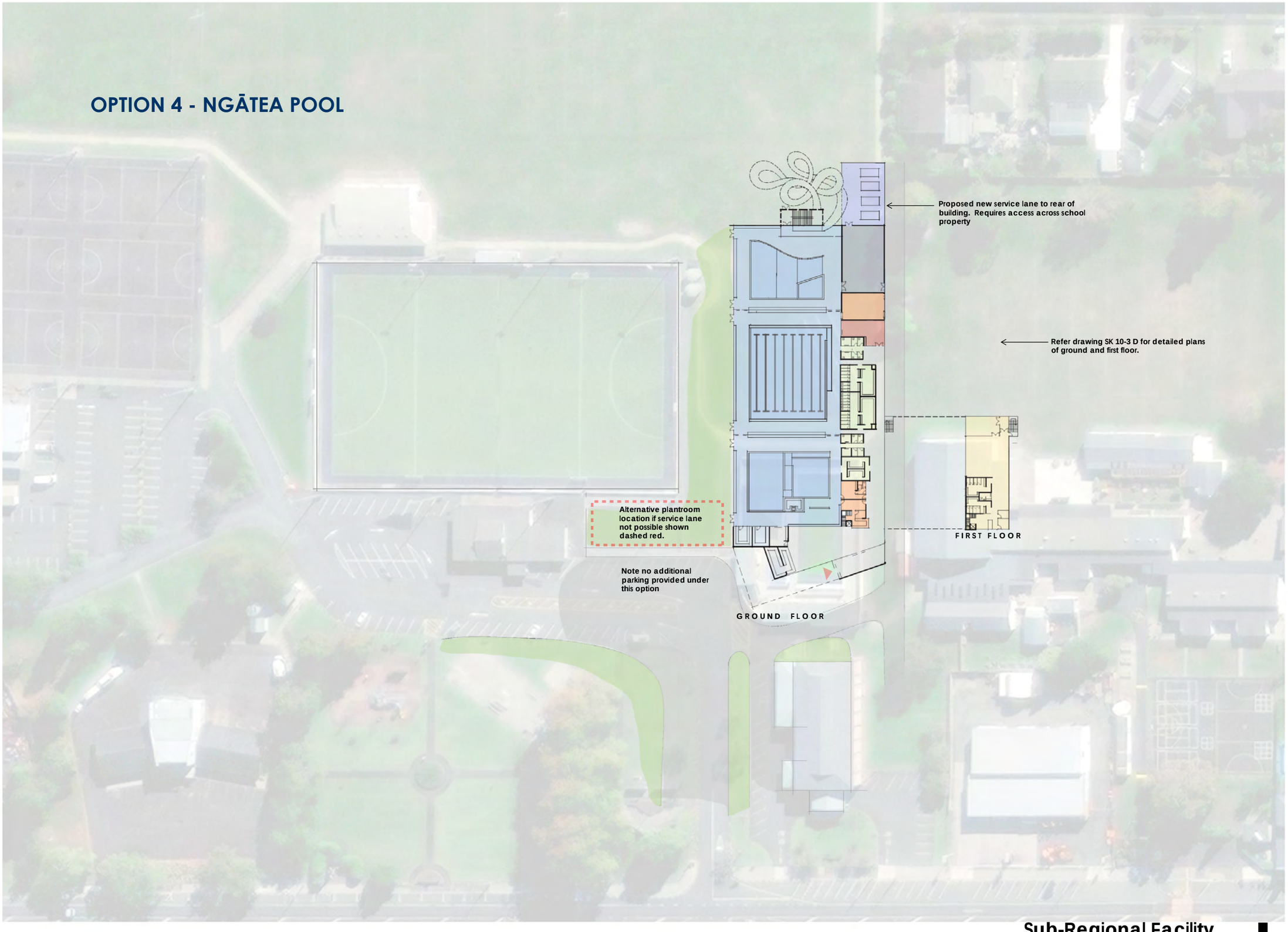
Water Areas	
Lane Pool	528m2
Spa	15m2
Programmes/LTS	300 m2
Leisure Pool	231m2
Toddlers Pool	35m2
Total	1109m2

Dry Fitness	376m2
Aquatic	3969m2
Total GFA	4345m2

Sub-Regional Facility
Carter Holt Harvey site
Sk 2109 B rev C
1:200 @ A1

HDT

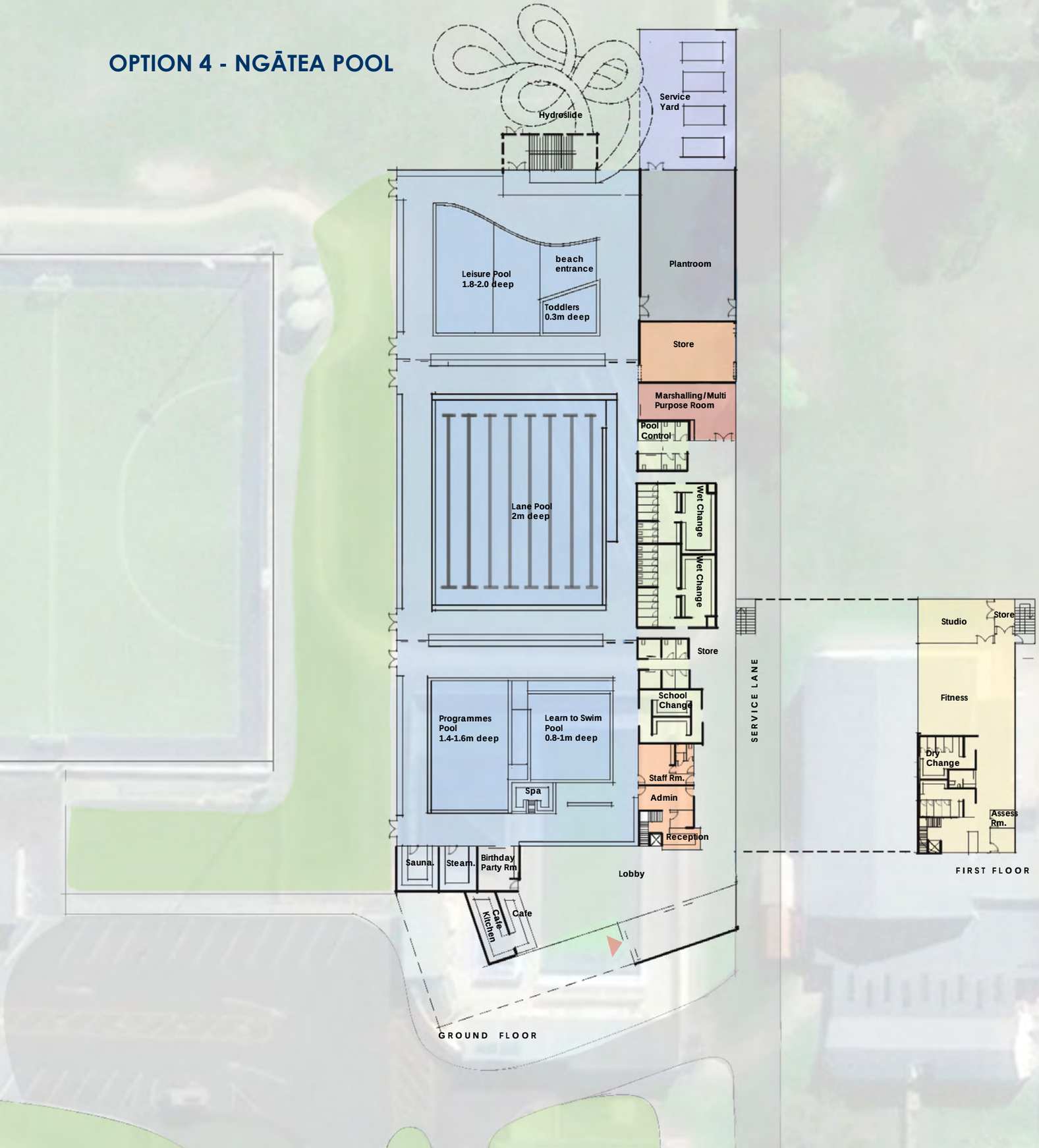
OPTION 4 - NGĀTEA POOL



Sub-Regional Facility
Ngatea site
Sk 10-3C 1:1000 @ A3

HDT

OPTION 4 - NGĀTEA POOL



Water Areas	
Lane Pool	552m2
Spa	16m2
Programmes/LTS	305m2
Leisure Pool	215m2
Toddlers Pool	33m2
Total	1121m2

Ground Floor	3907m2
First Floor Fitness	370m2
Total GFA	4277m2

Sub-Regional Facility
Ngatea site
Sk 10-3D
1:500 @ A3

HDT

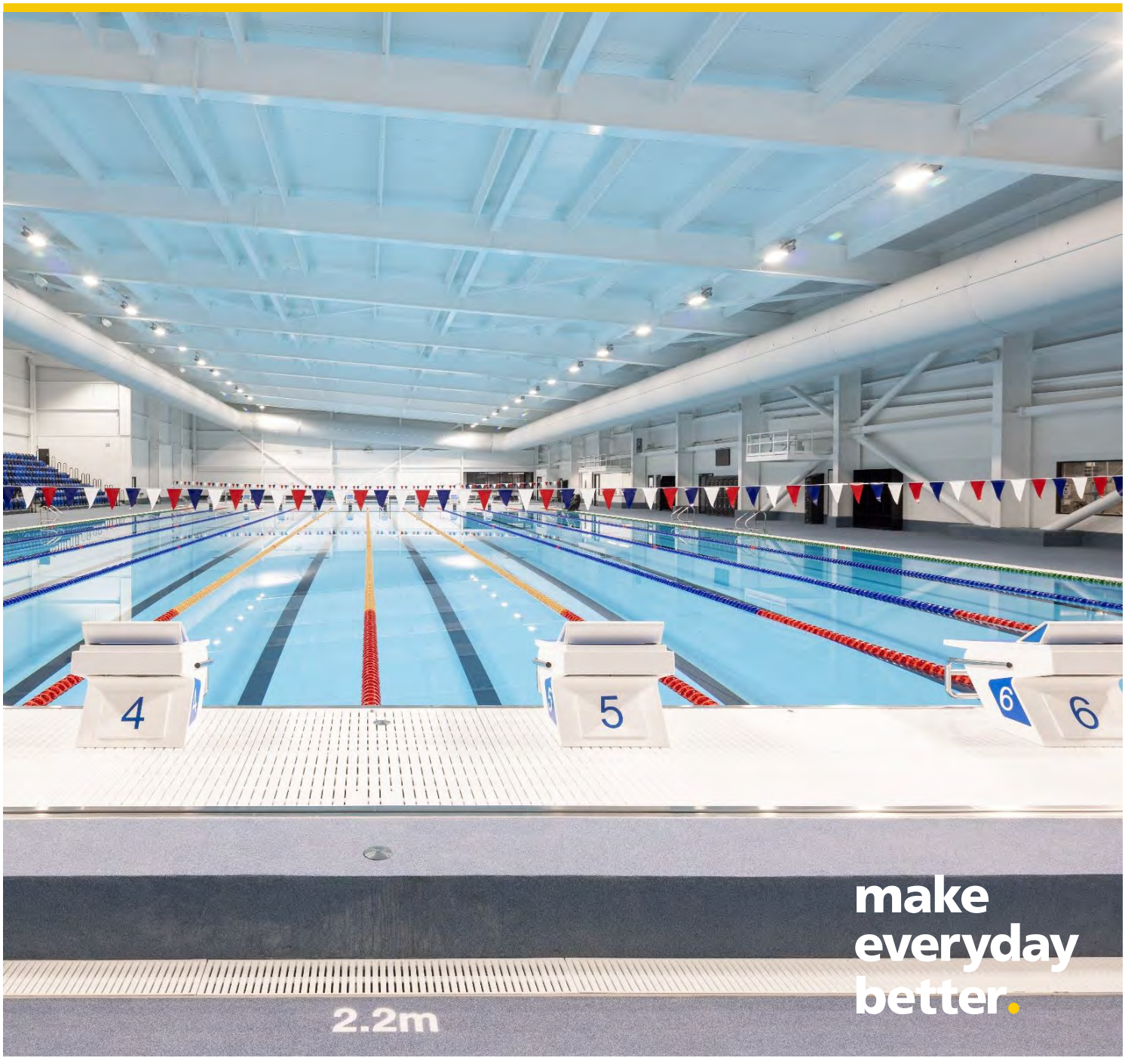
APPENDIX C TECHNICAL ASSESSMENT

Thames Aquatic and Sports Hub Feasibility

Thames High School Site

Prepared for Visitor Solutions
Prepared by Beca Limited

6 December 2023

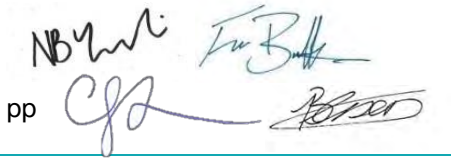
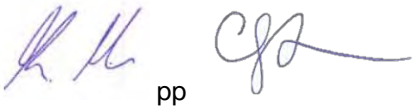
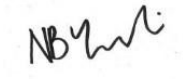


Contents

Revision History

Revision Nº	Prepared By	Description	Date
A	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen	For Client Review	08/09/2023
B	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen	Final	06/12/2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen		06/12/2023
Reviewed by	Kiran Hira Ken Read Ailsa Fisher		06/12/2023
Approved by	Nick Yannakis		06/12/2023
on behalf of	Beca Limited		

Executive Summary

Two sites were considered for the local aquatic facility located at the Thames High School Site, a preferred site on Richmond Street as well as an alternative site on Rolleston Street.

As per high level advice from a TCDC duty planner, the proposed facility most closely aligns with the District Plan definition of ‘Formal Recreation’ and ‘Community Facility’. They also noted that where these activities are not provided for by the Proposed District Plan, the rules for ‘Activities not provided for in the Plan’ will apply. There are several activities that exceed the permitted activity requirements that will need to be worked through a resource consent process.

Should the facility be established within the Ministry of Education’s (MoE) designation, written approval from MoE (as the Requiring Authority) would be necessary.

The greatest geohazard risk identified is that of seismicity causing liquefaction and softening of the near surface soils for both sites. The nearest available information suggests this may be limited to relatively shallow depths of soils. It is likely that these risks may be mitigated/managed by suitable foundation design or localised ground improvement.

The preferred site is located in an overland flood path and is required to have the finished floor level 0.5m above the existing ground. There is sufficient infrastructure to service the facility without major upgrades.

The operational costs for an all-indoor facility as well as having the main pool outside have both been estimated. Based on the estimates the outdoor pool option has a small increase in operational cost.

Overview

Visitor Solutions are undertaking a feasibility study and business case on behalf of Thames-Coromandel District Council (TCDC) for possible sites for aquatic and sport facilities in Thames.

The existing Thames Centennial Pool is located on an urupa (burial ground) and an agreement between Ngāti Maru and Thames-Coromandel District Council has been reached to relocate the facility by 2027 and the land will be returned to Ngāti Maru. The 50-year-old facility would also have needed investment to address its condition and extend the life of the facility.

Other issues, including the under-supply of all-year aquatic facilities in the wider Waikato region and increasing flood risks to the Rhodes Park sports facility, have led to the exploration of a combined facility that serves either local or sub-regional needs.

There are currently five sites that are being considered for the facility:

- Thames High School
- Ex-Carter Holt Harvey site
- Wenzlick Block
- Ngatea
- Upper Thames Racecourse

This report forms part of the business case and feasibility assessment for the local aquatic facility at the Thames High School Site. This report is intended to identify feasibility considerations associated with the proposed site from a Building Services, Civil Infrastructure, Geotechnical Engineering and Planning perspective.

The facility proposed for the Thames High School site is a local aquatic facility adjacent to the sports fields. The preferred site is located at 300 Richmond Street, Thames. There is an alternative site option across Rolleston Street, adjacent the school.

Figure 0-1: Proposed Site Location (Source: TCDC Property Maps)

1 Planning

1.1 Resource Management Consideration

The purpose of this desk-top assessment is to provide a high-level (feasibility study) planning scope in relation to potential site locations to accommodate the proposed local aquatic facility. The assessment:

- Identifies the relevant planning zones and overlays that apply under district and regional plans
- Summarises the likely consent requirements to enable the construction and operation of the project under district and regional plans
- Provide recommendations for progressing the resource consent process.

1.2 Thames District Plan (proposed) Zoning, Overlays, and District Plan Notations

The Thames-Coromandel District is currently operating under both Operative and Proposed District Plans. Although still subject to appeal in selected parts, the Proposed District Plan (PDP) (Appeals Version – 28 July 2023) is the current plan being used. Accordingly, the PDP has been considered for this investigation.

As per high level advice from a TCDC duty planner, the proposed facility most closely aligns with the District Plan definition of 'Formal Recreation' and 'Community Facility'. They also noted that where these activities are not provided for by the PDP, the rules for 'Activities not provided for in the Plan' will apply.

The PDP defines 'Formal Recreation' and 'Community Facility' as:

Formal Recreation *means a facility specifically designed for an organised sport(s) and/or other organised recreational activity. This does not restrict more casual sports and other recreation activities from using the facility. It may be for profit. Examples of formal recreation include:*

- *Ball court, Sports field*
- *BMX/cycle track, skate park*
- *Observation stands and player and spectator infrastructure.*

Community Facility *means a building and surrounding area, not otherwise defined in the Plan, where the primary purpose is to provide a community service(s). It includes the regular and occasional activities for which the facility is designed or planned, that occur in the facility.*

- *The service may be profit or non-profit*
- *The activity may occur inside and/or outside the building, but the core of the activity is in the building*
- *The service may be exclusive to members*
- *It may include a public amenity.*

Community facility may include, but is not limited to:

- *Group gatherings (e.g. church, religious centre, hall, clubroom)*
- *Education (e.g. school, adult education, kura kaupapa, kohanga reo, library)*
- *Health services (e.g. health centre, hospital)*
- *Recreation (e.g. indoor multi-purpose recreation hall, coastguard building, lifesaving stand)*
- *Emergency services (e.g. police, fire or ambulance services).*

It is considered the proposed activity better aligns with the definition of 'Community Facility' and this should be confirmed with a TCDC Consent Planner. However, for the purposes of this assessment, both activities have been considered.

1.2.1 The Site

The site is located in downtown Thames and there are two potential locations for the proposed facility. The first location (Preferred) sits on a section of the Thames High School property between the sports field and Richmond Street. The second location (Alternative) is situated across the road, adjacent to Thames High School. This location comprises the school's pool and two neighbouring residential properties. The site location options, and their respective zones are shown in Figure 1-1 below.

Figure 1-1: Site 1 Location Options, Planning Overlays and Features (Source: TCDC Planning Maps)

Thames High School has four identified Historic Heritage items and has outlined Curtilage areas to the north of the preferred site, not directly in the vicinity of the proposed location. There have been no Archaeological sites identified within the vicinity of the site[1]. The Ministry of Education has a designation over both location options.

The planning notations applicable to the site are outlined in Table 1-1 below.

Table 1-1: PDP planning notations

Thames-Coromandel District Plan	
Zone	Preferred - Extra Density Residential Zone (school) Alternative - Residential Zone and Recreation Passive Zone (Other property)
Overlays	• Historic Heritage Items and Curtilage – within the property/school, but not directly on the proposed site location (pink x's in Figure 1). • Flood Hazard Area - Overland flow area A 0.5m above ground level (affecting Option 1)
Designations	• Designation MOE 18 (Ministry of Education) Designation over the sites 1 and 2 (for Education purposes).
Features	None identified within the site.

Should the facility be established within the Ministry of Education's (MoE) designation, written approval from MoE (as the Requiring Authority) would be necessary.

[1] As per website - New Zealand Archaeological Association https://nzarchaeology.org/

The relevant District Plan rules for undertaking the proposed activity in the zones applicable to the site are outlined in Table 1-2 below. The table outlines the permitted standards for development in the zones and provides comments on likely consent triggers.

Table 1-2: PDP rules assessment

Provision	Activity Status	Comment
Section 44 – Extra Density Residential Zone		
Section 44.7 - Rule 25 - Community and Formal Recreation facilities	**Discretionary Activity**	Community and Formal Recreation facilities within the Extra Density Residential Zone triggers the need for land use consent as a **Discretionary activity** under the PDP.
Section 44.4 - Rule 5A - Earthworks Standards as outlined in Rule 5A Table 1 of the TCDP.	**Permitted Activity**	In this zone, earthworks are restricted to a volume of 250m^3 over an area of 250m^2 per year. The maximum height of cut/fill is 1.5m and the maximum duration of work in a calendar year is 3 months. Given its size, the earthworks required for the proposed facility are expected to exceed these limits and therefore would likely require resource consent for a **Restricted Discretionary Activity**.
Section 44.9 - Table 4 - General Bulk and Location Standards.	**Permitted Activity**	The most relevant permitted bulk and location requirements are outlined below: • Maximum site coverage - 45% • Setbacks - front yard 3m and side/rear yard of the site 1.5m • Maximum building height is 8m • Height in relation to boundary of 3m & 45°. The exceedance of these permitted standards will trigger the need for resource consent as a **Restricted Discretionary Activity**.
Section 54 – Residential Zone		
Section 54.6 Rule 24 - Community and Formal Recreation facilities	**Discretionary Activity**	Community and Formal Recreation facilities within the Extra Density Residential Zone triggers the need for land use consent as a **Discretionary activity** under the PDP.
Section 54.4 - Rule 5A - Earthworks Standards as outlined in Rule 5A Table 1 of the TCDP.	**Permitted Activity**	In this zone, earthworks are restricted to a volume of 250m^3 over an area of 250m^2 per year. The maximum height of cut/fill is 1.5m and the maximum duration of work in a calendar year is 3 months. Given its size, the earthworks required for the proposed facility are expected to exceed these limits and therefore would likely require resource consent for a **Restricted Discretionary Activity**.
Section 54.8 - Table 4 - General Bulk and Location Standards.	**Permitted Activity**	The most relevant bulk and location requirements for development in this zone are outlined below: • Maximum site coverage - 35% • Setbacks - front yard 3m and side/rear yard of the site 1.5m, • Maximum building height is 8m. • Height in relation to boundary of 3m & 45°

Provision	Activity Status	Comment
		Should the facility exceed these standards, resource consent will be required as a **Restricted Discretionary Activity**.
Section 53 – Recreation Passive Zone		
Section 53.4 Rule 3 - Community facility	**Permitted Activity**	A community facility within the Recreation Passive Zone is a permitted activity as required by the PDP, provided the structure(s) do not exceed the relevant bulk and location standards, and the structure has a gross floor area of less than 250m². Given the size of the proposed facility, it is not expected to comply with these permitted standards and would likely trigger the need for land use consent as a **Restricted Discretionary Activity**.
Section 53.5 Rule 16 - Formal Recreation	**Discretionary activity**	A formal recreation facility is a **Discretionary Activity** in this zone.
Section 53.4 - Rule 8A - Earthworks Standards as outlined in Rule 8A Table 1 of the TCDP.	**Permitted Activity**	In this zone, there are no limits on the volume and area of earthworks, provided it complies with the general district plan standards and is not within a Kauri hygiene area. If the permitted earthworks standards cannot be met, resource consent for a **Restricted Discretionary Activity** would be required.
Section 53.7 - Table 4 - General Bulk and Location Standards. Refer to Appendix A of this report - Table 7 for the full Assessment Standards, Matters and Criteria.	**Permitted Activity**	The most relevant bulk and location requirements for development in this zone are outlined below: • Maximum reserve coverage - 15% • Setbacks - front yard and side/rear yard of the entire reserve is 5m • Maximum building height is 6m • Height in relation to boundary of 2m & 45°. As the proposed structure is anticipated to cover more than 15% of the site area and exceed 6m in height, resource consent would likely be required as a **Restricted Discretionary Activity.**
Section 34 – Natural Hazards		
Section 34.9 - Rule 2 Any other activity in a Flood Hazard Area	**Restricted Discretionary Activity**	Community and recreational facilities in a Flood Hazard Area require resource consent as a **Restricted Discretionary Activity**.
Section 34.11 - Rule 10 Earthworks in a Natural Hazard Overlay	**Permitted Activity**	The consent status for earthworks depends on the status of the building itself. Accordingly, earthworks in a Flood Hazard area will require resource consent as **Restricted Discretionary** or **Discretionary Activity**.
Section 39 – Transport (applies to all zones)		
Section 39.2 Rules 5 & 6 Vehicle access, parking, loading, and manoeuvring	**Permitted Activity**	For community and recreation activities, the PDP requires a parking ratio of 1 car park per 25m² gross floor area, a minimum of two bicycle parks, and disabled parking. The plan also outlines when an Integrated Transport Assessment (ITA) is required, which is determined by the expected vehicle movements and the order of the road from which access is gained.

Provision	Activity Status	Comment
		If these standards are not met, resource consent will be required as a **Restricted Discretionary Activity.** Regardless of the consent requirements, an ITA may be required to support the wider resource consent application.

1.3 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) is a national set of standards and rules that apply to specific activities on certain 'pieces of land' that have or are more likely than not have had elevated levels of contaminants.

Whether the NESCS is relevant or not can be informed through a Preliminary Site Investigation (PSI), undertaken by a contaminated land specialist, who reviews information such as records from TCDC/WRC, historical aerial photography, and a site walkover. Further detailed site investigations (DSI) (e.g. soil sampling and testing) may be required to corroborate the findings of the PSI.

If the NESCS is deemed relevant, resource consent requirements may be triggered depending on the extent of soil disturbance and/or in the instance of a change in land use, whether the PSI concludes it is highly unlikely that there is a risk to human health if the activity is undertaken. The PSI may require that a DSI is undertaken to confirm the risk of an activity to human health.

1.4 Waikato Regional Plan

The following matters will need to be considered in relation to the Waikato Regional Plan (WRP) in order to facilitate the development (these are dependent on the location of the activities onsite and final design):

1.4.1 Bulk Earthworks

The WRP outlines permitted activity standards for soil disturbance in the region. The standards are largely focused on managing erosion sediment control. There are also rules regarding encroachment of the groundwater table depending on the scale of excavations. If the earthworks of the proposed facility do not comply with the permitted activity standards of the WRP, resource consent would be required.

1.4.2 Stormwater Discharge to Water and Land

Depending on the method of stormwater discharge from the site, the WRP outlines permitted activity standards for discharging stormwater to land and water. These standards seek to minimise sediment and contaminant laden runoff. If the permitted standards for stormwater disposal are not met, resource consent will be required.

1.4.3 Water Takes

Such facilities may require the water take from ground and/or surface water resources. The WRP outlines permitted standards for ground and surface water takes. These standards are largely dependent on the volume of extraction and managing adverse effects on ground and surface water quality. Should surface or groundwater extraction be required for the operation of the facility, and the water take does not comply with the permitted standards, resource consent would be required.

1.4.4 Geothermal Resources

Geothermal water can be used to heat aquatic facilities and the WRP provides permitted standards for the extraction and reinjection of geothermal resources. If geothermal resources are utilised for the facility, and the extraction and reinjection do not meet the permitted limits, resource consent will be required.

1.4.5 Contaminated Land

As well as the NESCS, the WRP also have rules in relation to undertaking activities on contaminated sites. A contaminated land investigation (PSI and possible subsequent DSI) is required to inform the consenting requirements in relation to WRP contaminated land provisions.

1.5 Authorising the Use

In consideration of the respective zoning rules and the planning investigation undertaken in this report, resource consent would likely be required for a discretionary activity under the PDP provisions to establish the proposed facility onsite.

Should it be determined that the activity is innominate under the PDP definitions, and it is considered as 'Activities not provided for in the Plan', resource consent would be required for a non-complying activity. Resource consent applications for non-complying activities need to be considered under Section 104D of the Resource Management Act 1991 (RMA) which is otherwise known as the 'gateway test'. A consent authority can only grant such a resource consent if they are satisfied that the adverse effects will be (no more than) minor or the activity is not contrary to the relevant objectives and policies of the plan.

Whilst it is considered the activity most closely aligns with 'Community Facilities' (and therefore would not fall under the 'Activities not provided for in the Plan'), it is recommended this interpretation is confirmed with TCDC.

Resource consent may also be needed from TCDC under the NESCS pending further investigations.

While the potential regional plan provisions have been noted, it is recommended that the specific consent requirements be revisited when the necessary information is available.

An alternative pathway would be to consider serving a Notice of Requirement (NoR) to designate the land for a specific purpose by TCDC. This could be an appropriate pathway if (for example):

- There is an interest in protecting the land in the interim whilst maintaining flexibility in relation to timeframes for design and/or development; or
- There is a desire to stage the works (and thus avoid multiple resource consent processes with TCDC); or
- The facility is proposed on land not owned by the requiring authority and the designation provides a basis for the subsequent acquisition of land needed for the works. This is of relevance for location Option 2, which includes private property.

Despite no archaeological sites being identified, it is recommended that an Archaeological Authority is obtained from Heritage New Zealand Pouhere Taonga to provide for the accidental discovery of archaeological finds during the earthworks stage of the project.

1.6 Specialist Inputs

As part of an application process, technical investigations will be required to understand the potential effects of the project and can help to inform the design and operation of the facility.

Technical inputs to support an application may include:

- Planning (to provide further planning advice, and prepare the overarching application)
- Civil engineering (e.g. three waters infrastructure, earthworks and minimum floor levels, and flood assessment)

- Transport assessment (access, parking, and traffic assessment)
- Landscape and visual assessment (provide guidance on built form and assess effects of built form and natural character)
- Contaminated land investigation (PSI and possible DSI per Section 2.2)
- Geotechnical assessment (to inform civil engineering)
- Noise and vibration investigation (to consider noise and vibration during construction and operation),
- Archaeological investigation (to advise regarding an Archaeological Authority)
- Cultural impact assessment (should mana whenua identify this as necessary to inform a cultural effect assessment).

1.7 Stakeholder Engagement

Table 1-3 sets out the suggested parties that could be consulted during the course of the project.

Table 1-3: Parties suggested for Stakeholder engagement.

Stakeholder	Why	When
Mana whenua	Only tangata whenua can assess cultural effects including input into environmental effects from a māori perspective.	Commence pre-lodgement and continue over the course of the project. It would be advised to consider including an iwi representative as part of a project steering group or similar.
Ministry of Education (MOE)	Approval from MOE will be required to establish a non-education purpose activity on their designation.	Early in the due diligence process, as their approval is critical for securing the rights to develop this site.
Neighbours	It could be expected that the neighbours adjoin the site will have concerns regarding traffic generated by the facility and the effects of bulk and location rule infringements.	Pre-lodgement via letter drop then phone call/meeting.
TCDC economic development	Likely supporter of the project who can help to facilitate processes internally and externally.	ASAP.
TCDC regulatory	Consent authority to process district council consents and/or other RMA matters.	Pre-lodgement meeting before seeking resource consent.
WRC regulatory	Consent authority to process regional council consent application.	Pre-lodgement meeting before seeking resource consent from WRC.
Community	As it will be a community facility, it would be valuable to create public interest and support from the local community.	Pre-lodgement via website / social media. Potential to use interactive website such as www.seekbeak.com and AI tools to give and receive feedback.

1.8 Conclusion

This scoping study has described the planning context of the site located largely within the boundaries of Thames High School, which has been identified as a potential location for developing a local aquatic facility. Planning approval(s) will be required to enable the development of the site.

Both pathways will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource management process.

2 Geotechnical

2.1 Geotechnical Considerations

The purpose of this desk-top assessment is to provide a high-level geotechnical comment in relation to the proposed local Thames Aquatic facility. The scope of work has comprised:

- A desk study comprising the following:
  - Review of published geological information
  - Review of publicly available Historic Aerial Photos
  - Review of published historical maps
  - Groundwater Information from Waikato Regional Council (WRC) web site
  - Information from Thames Coromandel District Council (TCDC) web site
- A review of potential geotechnical constraints on development
- Preparation of this report.

2.2 Site Locations

2.2.1 Preferred Site

The preferred site is currently occupied by Thames High School outdoor asphalted courts, with a small storage shed located in the middle of the courts along Richmond Street.

The site is located on flat terrace with a gradually increasing slope towards the east of the site.

2.2.1 Alternative Site

The alternative site is currently occupied by car park, an outdoor lane pool and a residential house.

The site slopes from east to west and has been terraced by a series of low retaining walls.

The lowest terrace is used for car parking and the upper terrace for the swimming pool. The house is located at the northern end of the site.

2.3 Desk Study

2.3.1 Geological Information

Published Geological Maps

The published geology (Townsend et al., 2008) indicates that the following:

- The preferred site overlies two different geological formations, Holocene River deposits and Middle to Late Pleistocene “River and hill slope deposits”.
- The alternative site overlies Middle to Late Pleistocene “River and hill slope deposits”.

A basic description of each formation shown in Table 2-1:

Table 2-1: Published Geology – School Sites.

Name	Description
Holocene river deposits	Alluvial gravel, sand, silt, mud and clay with local peat.
Middle to Late Pleistocene “River and hill slope deposits”	Pumiceous sand, silt, mud and clay with interbedded gravel and peat.

New Zealand Geotechnical Database (NZGD)

Previous geotechnical investigation records by Tonkin and Taylor in 2014 for developments around the school are available on the NZGD (Cone Penetrometer Tests, CPTs and Hand Augers, HAs).

Preferred Site

The preferred site is located approximately 75m south of the closest geotechnical investigation.

The CPTs and HAs encountered layers of interbedded stiff silt and loose sand for the top 2.5m underlain by loose to medium dense sand to a depth of 5m. This was in turn underlain by firm silt/clayey silt to a depth of 10m.

Groundwater was encountered between 0.5 and 0.7m bgl (below ground level).

Alternative Site

The alternative site had one CPT and two hand augers performed in the carpark section of the site, however all of these exploratory holes terminated at <1m depth with groundwater not encountered. The CPT provides limited useful information however the HAs show up to 200mm of topsoil followed by a silt fill with some gravel to at least 0.9m bgl, beneath which it is expected to have a similar profile to the preferred site.

Active Faults Database

The nearest mapped known active fault shown on the GNS Active Faults Database is the northwest striking Kerepehi Fault located approximately 10km to the southwest of both site.

No faults are mapped as passing directly through the proposed site locations and as such the risk of direct fault rupture is considered low.

2.3.2 Historic Aerial Photographs

We have reviewed publicly available historic aerial photography (www.Retrolens.co.nz and Google Earth Pro).

Preferred Site

The earliest available photograph from 1944 shows the eastern half of the preferred site was being used as residential housing with the western half being an open field. The western half was developed to sports courts by the 1961 photograph, with the housing removed on the eastern half between 1965 and 1968 and left as an open field. The courts were then extended between 1973 and 1980 to cover the open field, leaving the whole site covered by courts.

No changes were observed for the preferred site since 1980.

Alternative Site

The earliest available photograph from 1944 shows the south eastern half of the alternative site used as a pool and the northern section occupied by a residential dwelling both of which have remained to the present day.

The south western half of the site however has gone through significant changes throughout the same period of time, between the years of 1944 and 1961 this section was being used as sports courts, being removed between 1973 and 1980 and replaced with three structures. The northernmost structure was then removed between 1980 and 1983 and the remaining two being removed between 1987 and 1994 leaving the southwestern half of the site bare, until it was replaced with a carpark between 2012 and 2019.

2.3.3 Historic Maps and Plans

Historic maps and plans (www.mapspast.org.nz) were checked for relevant information to the sites.

Preferred Site

The maps show that between 1949 and 1979, the western half of the preferred site as undeveloped, with the eastern half remaining occupied by possible housing over this period.

In the 1989 and 1999 maps, the site is displayed as occupied by housing and courts, with the 2009 and 2019 map showing no indication of the courts at the site.

Alternative Site

For the alternative site the maps show the site as occupied by the pool and housing, from 1949 until 2019.

2.3.4 Waikato Regional Council (WRC) Data

The Waikato Regional Council Hazards Portal (waikatoregion.maps.arcgis.com) indicates that the proposed sites have a rating of "possible" for liquefaction.

The Waikato Regional Council Groundwater map (waikatomaps.waikatoregion.govt.nz) shows the location of bores across the region.

One bore located nearby (Bore 60_358) drilled to a depth of 33.5m shows clay with alternative peat between 0 and 3m and again at 13.8m and 21.5m bgl, with sands in between these layers.

Preferred Site

The preferred site is located approximately 160m to the south of Bore 60_358.

Alternative Site

The alternative site is located approximately 200m to the east of Bore 60_358.

2.3.5 Thames Coromandel District Council (TCDC) Data

TCDC map data (tcdc.maps.arcgis.com) was checked for relevant geotechnical hazard information pertaining to the site. No geohazards are shown for the site.

Preferred Site

The preferred site was noted to be in both the TCDC Hazard and Regional Scale Flood Hazard risk areas.

Alternative Site

The alternative site was not located in either flood risk areas, located along the edge of the Regional Scale Flood Hazard risk area.

2.4 Potential Geohazards

The potential geohazards assessed are summarised in Table 2-2, the geohazards for both sites are expected to be similar due to their proximity and similar underlying geological formations.

Unless stated the risk ratings apply to both sites.

Some hazards are discussed further in the sections below.

Table 2-2: Potential Geohazards Summary

Geohazard	Risk	Comment
Fault rupture	Low	See Section 2.1.3
Liquefaction	High	See Section 1.4.1
Expansive soils (Shrink/swell Potential of Soils)	Low/Medium	See Section 1.4.2
Soft ground / non engineered fill	Preferred Site:Low/Medium Alternative Site: High	See Section 1.4.3
Slope instability	Very low/Medium	See Section 1.4.4
Contaminated land	Low/Medium	See Section 1.4.5

2.4.1 Liquefaction

The geotechnical investigations in and around the school indicated the top 2.5m of both sites may comprise interbedded stiff cohesive silt/clay materials and loose sands. These materials are considered potentially susceptible to cyclic softening and liquefaction respectively.

Regional groundwater beneath the preferred site is expected to be approximately 0.5m below site level and approximately 1.0m below site level for the alternative site resulting in a significant thickness of potentially susceptible soils beneath the site.

Based on the current information reviewed and site observation we consider that the risk of potentially damaging liquefaction effects is high.

Site specific investigation and assessment recommended to confirm the liquefaction hazard.

Due to a combination of the terraced levels, the slopes on site and potentially high risk of liquefaction the alternative site is also expected to have a potential risk of lateral spread.

It is likely that site specific foundation design will be required for both sites, possibly requiring ground improvement or piling to the underlying clay soils.

2.4.2 Shrink/Swell Potential of Soils

Preferred Site

The preferred site is expected to be underlain by interbedded stiff sandy clays and silts, and loose sandy soils of Holocene river deposits.

Low plasticity silty soils are expected to be low risk, however some of the clays may be potentially expansive.

The risk of expansive soils is therefore considered to be low to medium. However, this can be easily addressed by standard construction practices.

Alternative Site

The alternative site is expected to be underlain by interbedded stiff sandy clays and silts, and loose sandy soils of Middle to Late Pleistocene "River and hill slope deposits”.

Low plasticity silty soils are expected to be low risk, however some of the clays may be potentially expansive.

The risk of expansive soils is therefore considered to be low to medium. However, this can be easily addressed by standard construction practices.

2.4.3 Soft Ground/Non-engineered Fill

No near surface soft ground (less than 25kPa) or organic soils (except topsoil) were encountered in the nearby geotechnical investigation, however there is the possibility of near surface peats and soft soils in the alluvial soils.

Preferred Site

Some areas of non-engineered fill, and possible relict foundations may be anticipated beneath the western section of the preferred site where houses were previously located.

Near surface cohesive soils (clays) and granular soils (sands) are anticipated to be stiff and loose respectively.

Alternative Site

Non-engineered fill is expected beneath the carpark area, and possible relict foundations beneath the former structures.

Near surface cohesive soils (clays) and granular soils (sands) are anticipated to be stiff and loose respectively.

2.4.4 Slope Instability

Preferred Site

The preferred site is located on flat ground and the resulting risk of slope instability is very low.

Alternative Site

The alternative site is located on two terraced levels with retaining walls, with the northern section being an exposed slope. With these contributing factors and the observed slope angle the risk of slope instability for the site is medium but can be managed by suitable engineering measures.

2.4.5 Contaminated Land

Preferred Site

The preferred site is located on playing fields and school grounds where fertilisers and herbicides may have been used.

There is also risk of demolition debris from the former buildings over part of both sites being present in the soils. This could potentially give rise to metals and asbestos contamination.

Alternative Site

There is evidence that the alternative site was in part occupied by now demolished ‘structures’ of unknown usage. There is therefore a risk of soil contamination from demolition materials, old foundations and from unknown activities.

We recommend that an environmental specialist be consulted to confirm the status of both sites with respect to the National Environmental Standard (NES) for potentially contaminated land.

2.5 Conclusions and Recommendations

The greatest geohazard risk identified is that of seismicity causing liquefaction and softening of the near surface soils for both sites. The nearest available information suggests this may be limited to relatively shallow depths of soils.

It is likely that these risks may be mitigated/managed by suitable foundation design or localised ground improvement.

Similarly, the low/medium risks identified for expansive soils and soft compressible soils may also be mitigated by suitable foundation design or localised ground improvement.

The medium slope instability risk identified for the alternative site can be managed by conventional engineering measures such as retaining walls.

Non-engineered fill on the alternative site may need to be undercut or removed as part of any development.

All these risks can be quantified by appropriate ground investigation.

The potential for contaminated land needs to be assessed by a specialist. The most significant potential effect should contaminated soils be present may be increased costs to dispose of unsuitable soils on excavation.

3 Civil Infrastructure

3.1 Civil Infrastructure Considerations

This section provides high-level considerations for the civil infrastructure requirements for the 'local' aquatic facility option proposed. The following infrastructure is considered:

- Stormwater
- Wastewater
- Water Supply
- Power
- Communications.

3.2 Stormwater

3.2.1 Preferred Site

Due to the known high water table at the site, approximately 0.5m below ground level, stormwater discharge via soakage is not a viable option for the site. The high water table also limits the use of underground tanks, for stormwater attenuation for example, due to buoyancy created from the water table.

The current site is predominantly covered with impervious asphalt tennis courts, so it may be possible to maintain or reduce the amount of impervious surface post-development which would remove the need for stormwater attenuation. If attenuation were to be required this would likely need to be done above ground, either from above ground rainwater tanks fed from the facility roof or pond/raingardens.

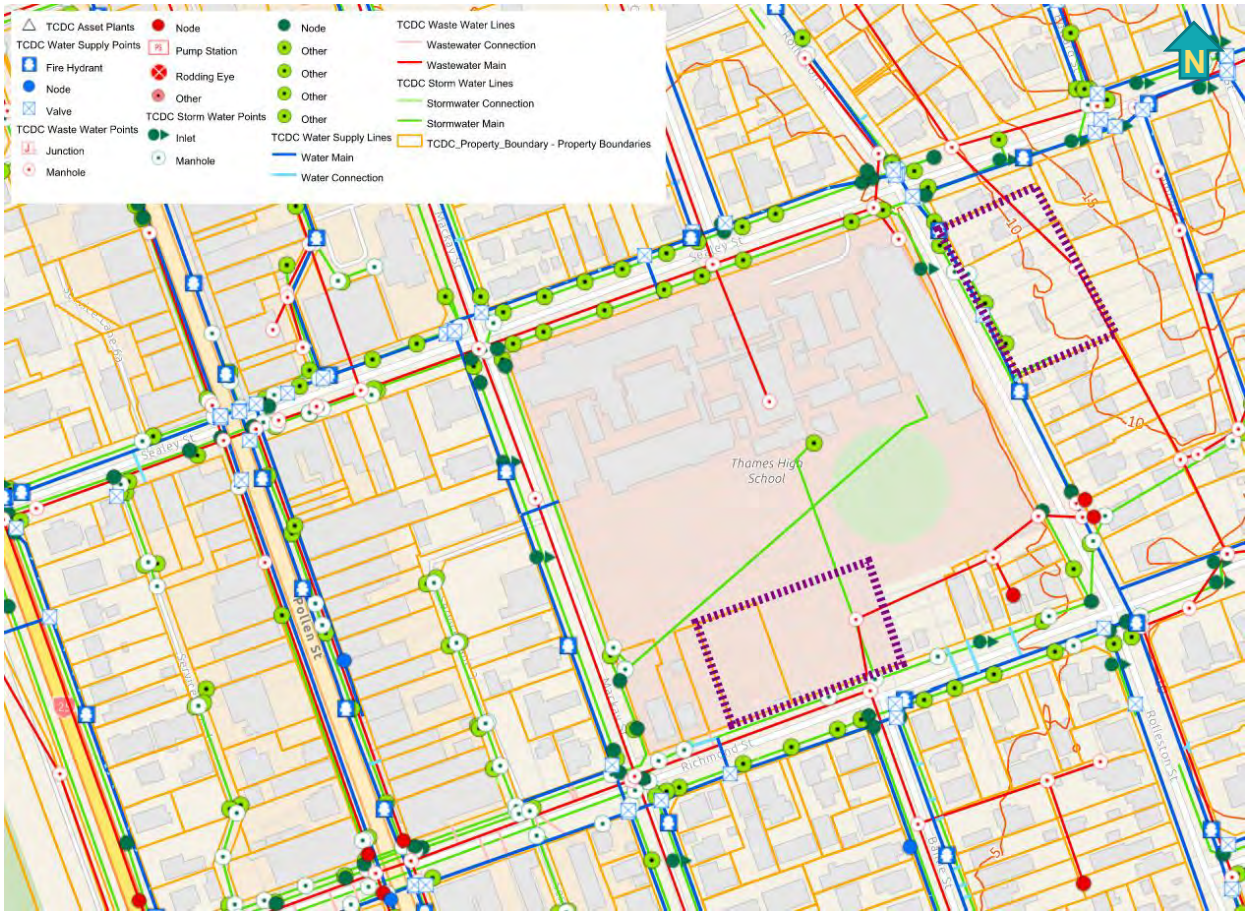


Figure 3-1: TCDC 3 Water GIS

There is a Ø600mm concrete gravity stormwater main that runs southwest along the north side of Richmond Street, as shown in Figure 3-1, which runs to its ultimate discharge point at the coast. The proposed development could discharge stormwater runoff to this stormwater main as the existing site currently does.

A Ø225mm concrete gravity stormwater main from the high school campus runs through the site to Richmond Street. This existing stormwater line will likely need to be relocated to along the eastern site boundary if the facility building footprint is over or within 3 metres of the line.

Stormwater runoff from carparking of the new facility will require stormwater treatment to TCDC standards, this could be provided though raingardens, swales, propriety treatment devices or a combination of these.

The site is located within the 'Overland Flow Area A 0.5m above ground level' zone as show in Figure 3-2 from the TCDC Flood Hazard Map. As a result, flood modelling will be required to assess the effect of the new facility on surrounding properties and to determine a suitable finished floor level.

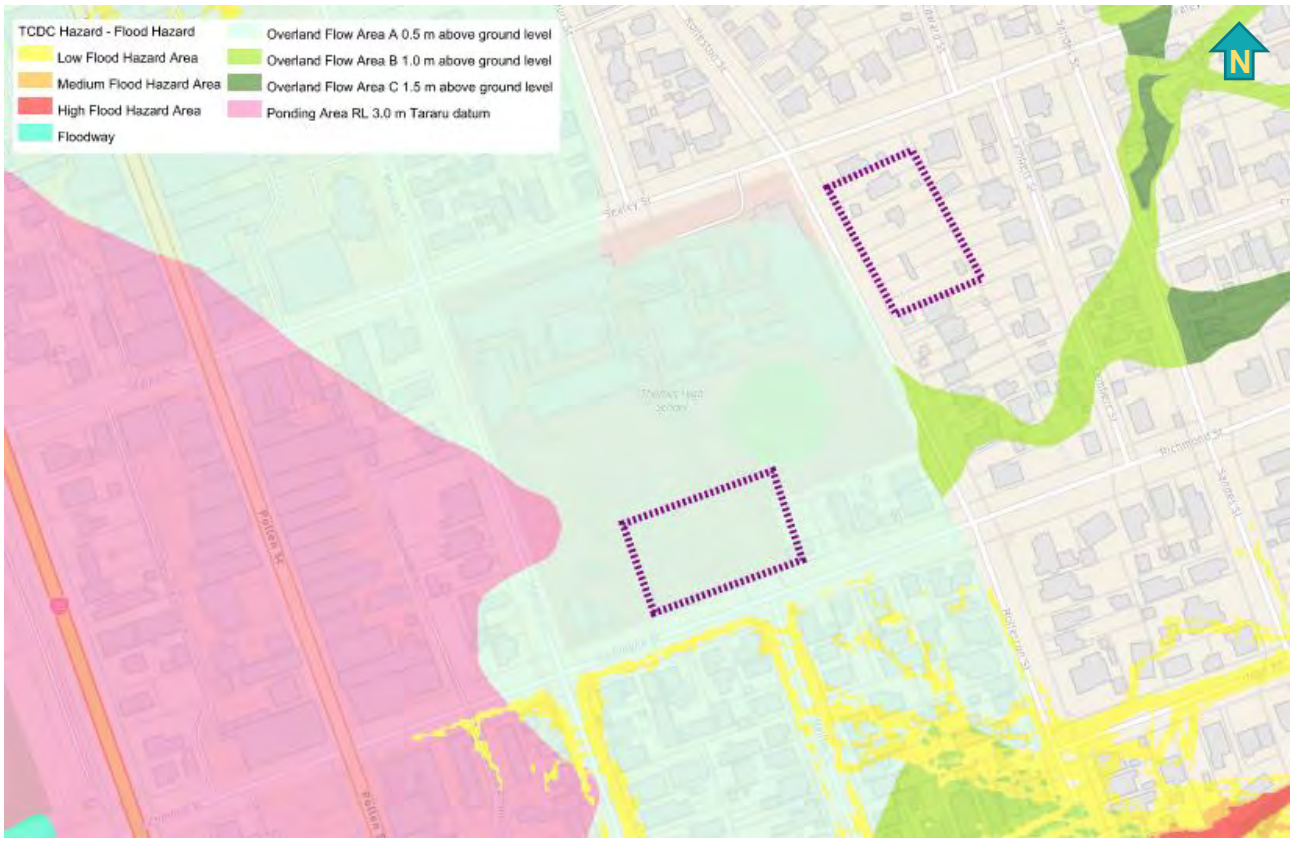


Figure 3-2: TCDC Flood Hazard Map

3.2.2 Alternative Site

The site is currently serviced by a Ø300mm concrete gravity stormwater main running northwest along the east side of Rolleston Street. This main is then connected to a Ø600mm concrete gravity stormwater that runs south west down Sealey Street to its ultimate discharge point at the coast.

The alternative site currently has a high impervious surface coverage due to a newly constructed carpark (not shown on Figure 3-1 as not updated yet on TCDC GIS)), however as this is a recently constructed carpark it is likely to have some form of stormwater attenuation as the site was previously a grassed area and would have had to match the pre-development flows to meet TCDC standards. If this is the case the site will require stormwater attenuation to match pre-development peak stormwater runoff flows. As a high ground water table will also be an issue at this site, attenuation would likely need to be done above ground, either from above ground rainwater tanks fed from the facility roof or pond/raingardens.

Stormwater runoff from carparking of the new facility will require stormwater treatment to TCDC standards, this could be provided though raingardens, swales, propriety treatment devices or a combination of these.

The alternative site is outside of any flood hazard zoning, as shown in Figure 3-2, so would not require flood modelling.

3.3 Wastewater

3.3.1 Preferred Site

From TCDC's publicly available assets map, shown in Figure 3-1. A Ø150mm gravity wastewater main from the north east of the runs through the site to Richmond Street. This existing wastewater line will likely need to be relocated to along the eastern site boundary if the facility building footprint is over or within 3 metres of the line.

A Ø150mm gravity wastewater main runs southwest along the north side of Richmond Street, the proposed development will be able to connect to this main. An agreement with TCDC will need to be reached on a maximum discharge rate to wastewater system for activities such as pool draining.

3.3.2 Alternative Site

From TCDC's publicly available assets map, shown in Figure 3-1.

A Ø300mm gravity wastewater main runs north west along the rear boundary of the site, the proposed development will be able to connect to this main. The building footprint will need to stay outside of the wastewater mains easement as this main will not be easily relocated as the line runs through private properties.

An agreement with TCDC will need to be reached on a maximum discharge rate to wastewater system from activities such as pool draining.

3.4 Water Supply

3.4.1 Preferred Site

A Ø100mm PE water supply main runs along the south side of Richmond Street, the site can be connected to this main via new connection across Richmond Street. Discussions with TCDC will be required to assess the current capacity of the network to meet the water demands of the facility, water storage for both supply and fire fighting may be required if there is insufficient existing network capacity.

3.4.2 Alternative Site

A Ø150mm water supply main runs along the east side of Rolleston Street, the site can be connected to this main via new connection across the adjacent footpath. Discussions with TCDC will be required to assess the current capacity of the network to meet the water demands of the facility, water storage for both supply and fire fighting may be required if there is insufficient existing network capacity.

3.5 Power

3.5.1 Preferred Site

From PowerCo network information received through a Before You Dig enquiry, as shown in Figure 3-3, the preferred site is adjacent to a 11kV underground HV cable running along the north side of Richmond Street. Discussions will be required with PowerCo to see if a connection to this HV line via a new 750kVA transformer will provide the facility the required power supply.

Figure 3-3: PowerCo Network GIS Data

3.5.2 Alternative Site

At the north-eastern corner of the alternative site, there is a transformer on Rolleston Street, as shown in Figure 3-4. This Transformer supplies the high school across the road. Discussions with PowerCo will be needed to see if the existing transformer has capacity however with a 750kVA transformer required it is likely it requires an upgrade or new separate transformer onsite.

Figure 3-4: PowerCo Transformer on Rolleston Street

3.6 Communications

From the Chorus communications network plans provided through a Before You Dig enquiry, as shown in Figure 3-5, both the preferred and alternative sites are adjected to their networks. Coordination will be required with Chorus to connect the sites.

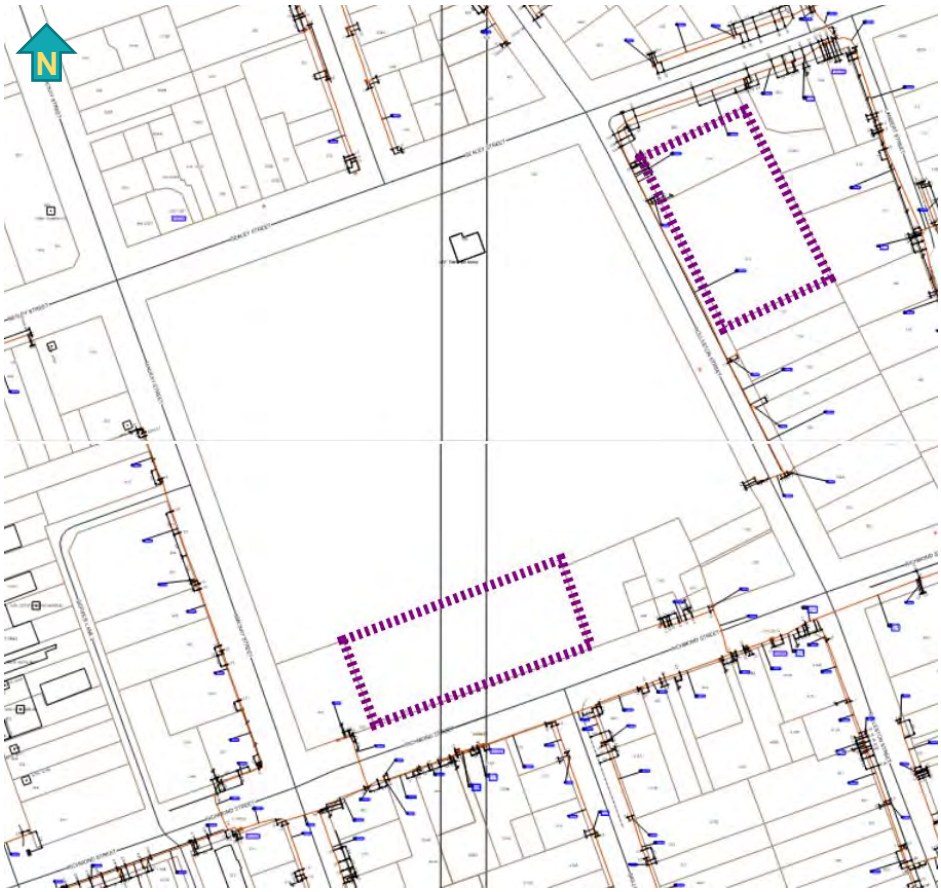


Figure 3-55: Chorus Communication Network Plans

4 Building Services

4.1 Building Service Considerations

The purpose of this desktop assessment is to provide high-level considerations around the building services requirements for the 'local aquatic' facility option proposed for the existing Thames High School site. While there are two location options including the preferred location on Richmond Street and the alternative location on Rolleston Street (opposite the Jack Mclean Community Recreation Centre), the facility building service requirements will not change between the two sites. The assessment will consider the following:

- Operational costs for heating, cooling, general electricity, water, and chemical costs.
- Service connection requirements for electricity, water, and sewer.

Additionally, to reduce capital cost an option for an outdoor 25m Pool has been considered.

4.2 Facility Area Schedule (Indoor 25m Pool Option)

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 1650m² complete with:
  - 25m Lane Pool – 750m³
  - Programme/Warm Water Pool – 300m³
  - Spa Pool - 25m³
  - Learn to Swim Pool – 100m³
  - Leisure/toddlers pool including toys and equipment – 60m³
- Front of house 780m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Pool Store/Plant Area.

4.3 Estimated Operational Cost (Indoor 25m Pool Option)

Table 4-1: Operational Cost Summary (Indoor 25m Pool Option)

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	1650	$140,000 pa	$140,000 pa	$30,000 pa	$25,000 pa
Front of House	780	$15,000 pa	$15,000 pa		-
Total	**2700**	**$155,000 pa**	**$155,000 pa**	**$30,000 pa**	**$25,000 pa**

Table 4-1 summarises the operational costs associated with the electricity, water, and chemical with the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% RH average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.

- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1/L of 1% chlorine.

4.4 Facility Area Schedule (Outdoor 25m Pool Option)

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 850m² complete with:
  - Programme/Warm Water Pool – 300m³
  - Spa Pool - 25m³
  - Learn to Swim Pool – 100m³
  - Leisure/toddlers pool including toys and equipment – 60m³
- Outdoor Pool Area complete with:
  - 25m Lane Pool – 750m³
- Front of house 780m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Pool Store/Plant Area.

4.5 Estimated Operational Cost (Outdoor 25m Pool Option)

Table 4-2: Outdoor Cost Summary (Outdoor 25m Pool Option)

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	850	$85,000 pa	$70,000 pa	$30,000 pa	$30,000 pa
Outdoor Pool	-	$70,000 pa	$15,000 pa		
Front of House	780	$15,000 pa	$60,000 pa		
Total	**2700**	**$170,000 pa**	**$145,000 pa**	**$30,000 pa**	**$30,000 pa**

Table 4-2 summarises the operational costs associated with the electricity, water, and chemical with the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% RH average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Outdoor pool is covered for 12 hours a day.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.
- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1/L of 1% chlorine.

4.6 Site Energy Opportunities

There are no immediate opportunities for the site to share or recovery energy from any adjacent sites/ facilities. If the aquatic facility set up a central energy plant, there may however be opportunity for either the high school or recreation centre to utilise the aquatic centre's efficient heating and cooling plant.

4.7 Electrical Site Infrastructure

It is expected that a new dedicated 750kVA transformer is required to serve the site power requirements.

4.8 Site Water Infrastructure

The size and flow of the water connection will dictate the fill time for the pools. A minimum 63OD mains water connection is recommended for operations of the facility off the mains water supply (i.e. no water storage requirements onsite). Larger connections can be explored if suitable infrastructure enables faster filling time.

4.9 Site Wastewater Infrastructure

The wastewater connections will need to be explored in detail with the three waters team. A minimum 5l/s connection is generally required for general operations of the facility. Attenuation tanks will be required to attenuate the pool water filtration backwash water flow as well as considerations to emptying of the pools for maintenance.

Thames Aquatic and Sports Hub Feasibility

Upper Thames Racecourse

Prepared for Visitor Solutions
Prepared by Beca Limited

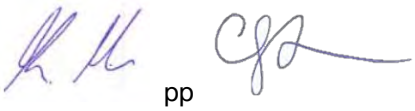
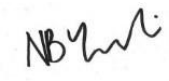
6 December 2023

Contents

Revision History

Revision Nº	Prepared By	Description	Date
A	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen	For Client Review	06/12/2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen		06/12/2023
Reviewed by	Kiran Hira Ken Read Ailsa Fisher	 pp	06/12/2023
Approved by	Nick Yannakis		06/12/2023
on behalf of	Beca Limited		

Executive Summary

The facility proposed for the Upper Thames Racecourse site is a local aquatic facility. The site is located on Kauaeranga Valley Road.

As per high level advice from a TCDC duty planner, the proposed facility most closely aligns with the District Plan definition of ‘Formal Recreation’ and ‘Community Facility’. They also noted that where these activities are not provided for by the Proposed District Plan, the rules for ‘Activities not provided for in the Plan’ will apply. The site is listed currently as a Rural Zone and the Proposed District Plan outlines a number of rules for establishing a ‘Community Facility’ in the Rural Zone and will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource management process.

The closest publicly available geotechnical investigation data is approximately 250m to the northeast of the proposed site and approximately 10m below the site level and is therefore not considered to be relevant to the site. Detailed site investigations will be required to understand the existing ground and identify the hazards for the site. Based on other information such as historic site pictures, the greatest potential geohazards identified are those of seismicity causing liquefaction and lateral spreading of slopes beneath the site, static slope stability caused by over steepened slopes, and the expected non-engineered fill found on site particularly close to the crest of slopes. It is likely that these risks may be mitigated/managed by suitable foundation design, localised ground improvement or adopting suitable setbacks from the slope crests.

The proposed site sits just outside of all three waters area of service from TCDC, including stormwater, wastewater, and domestic water. There is infrastructure approximately 130m to the Northwest of the site that would need to be worked through with the council for approval. Attenuation for all three services may be required onsite. Further geotechnical investigations would allow for understanding of existing ground material and whether discharge to land is an option.

The operational costs for an all-indoor facility as well as having the main pool outside have both been estimated. Based on the estimates the outdoor pool option has a small increase in operational cost.

Overview

Visitor Solutions are undertaking a feasibility study and business case on behalf of Thames-Coromandel District Council (TCDC) for possible sites for aquatic and sport facilities in Thames.

The existing Thames Centennial Pool is located on an urupa (burial ground) and an agreement between Ngāti Maru and Thames-Coromandel District Council has been reached to relocate the facility by 2027 and the land will be returned to Ngāti Maru. The 50-year-old facility would also have needed investment to address its condition and extend the life of the facility.

Other issues, including the under-supply of all-year aquatic facilities in the wider Waikato region and increasing flood risks to the Rhodes Park sports facility, have led to the exploration of a combined facility that serves either local or sub-regional needs.

There are currently five sites that are being considered for the facility:

- Thames High School
- Ex-Carter Holt Harvey site
- Wenzlick Block
- Ngatea
- Upper Thames Racecourse

This report forms part of the business case and feasibility assessment for the local aquatic facility at the Upper Thames Racecourse. This report is intended to identify feasibility considerations associated with the proposed site from a Building Services, Civil Infrastructure, Geotechnical Engineering and Planning perspective.

It is proposed to build adjacent to the existing Upper Thames Racecourse on Kauaeranga Valley Road.

Figure 0-1: Proposed Site Location (Source: TCDC Property Maps)

1 Planning

The purpose of this desk-top assessment is to provide a high-level planning scope (feasibility study) of a vacant section of the Upper Thames Racecourse site for accommodating a new local aquatic facility. The assessment:

- Identifies the relevant planning zones and notations that apply to the site under the district and regional plans,
- Summarises the likely consent requirements to enable the construction and operation of the facility under the district and regional plans, and
- Provide recommendations for progressing the resource consent process.

1.1 Thames District Plan (proposed) Zoning, Overlays, and District Plan Notations

The Thames-Coromandel District is currently operating under both Operative and Proposed District Plans. Although still subject to appeal (in part), the Proposed District Plan (PDP) (Appeals Version - October 2021) is the current plan being used. Accordingly, the PDP has been considered for this assessment.

The PDP provisions relate to specified activities in the different District Plan zones. The proposed facility most closely aligns with the District Plan definition of 'Community Facility'. The PDP defines a 'Community Facility' as:

Community Facility *means a building and surrounding area, not otherwise defined in the Plan, where the primary purpose is to provide a community service(s). It includes the regular and occasional activities for which the facility is designed or planned, that occur in the facility.*

- *The service may be profit or non-profit*
- *The activity may occur inside and/or outside the building, but the core of the activity is in the building*
- *The service may be exclusive to members*
- *It may include a public amenity.*

Community facility may include, but is not limited to:

- *Group gatherings (e.g. church, religious centre, hall, clubroom)*
- *Education (e.g. school, adult education, kura kaupapa, kohanga reo, library)*
- *Health services (e.g. health centre, hospital)*
- *Recreation (e.g. indoor multi-purpose recreation hall, coastguard building, lifesaving stand)*
- *Emergency services (e.g. police, fire or ambulance services).*

1.1.1 The Site

The site is located in the settlement of Thames and is subject to the PDP. The site earmarked for the new aquatic facility comprises a vacant parcel of land that forms part of the larger Upper Thames Racecourse property. Accessed to site is gained straight from Kauaeranga Valley Road. The site is surrounded by residential development in the north, the Kauaeranga River to the east, and racecourse facilities to the south and west.

The site is located in the 'Rural Zone'. The site location (red outline), its zoning and overlay areas are shown in Figure 1-1 below.

While the low lying areas of the wider racecourse property are subject to the low (yellow), medium (orange) and High (red) Flood Hazard Areas and the Coastal Environment (dark blue line) provisions of the PDP (refer Figure 1-1, the site itself is not affected by any of the District Plan overlays.

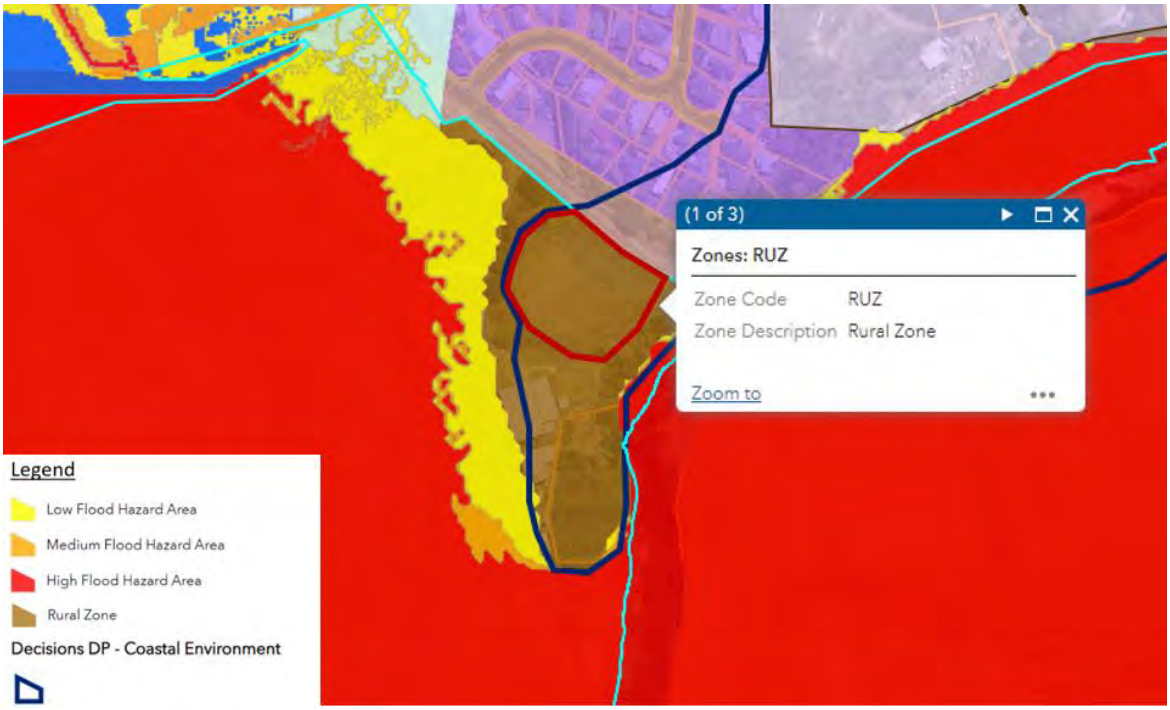


Figure 1-1: Site Zoning and Flood Hazard Overlays (Source: TCDC Planning Maps)

1.1.2 Archaeology

An archaeological site search[1] has revealed that there are recorded archaeological sites present on the wider racecourse property and along Kauaeranga Valley Road. The recorded site (T12/242) on the property closest to the area earmarked for the aquatic facility is identified as a midden/oven site. The archaeological sites are shown in Figure 1-2 below.

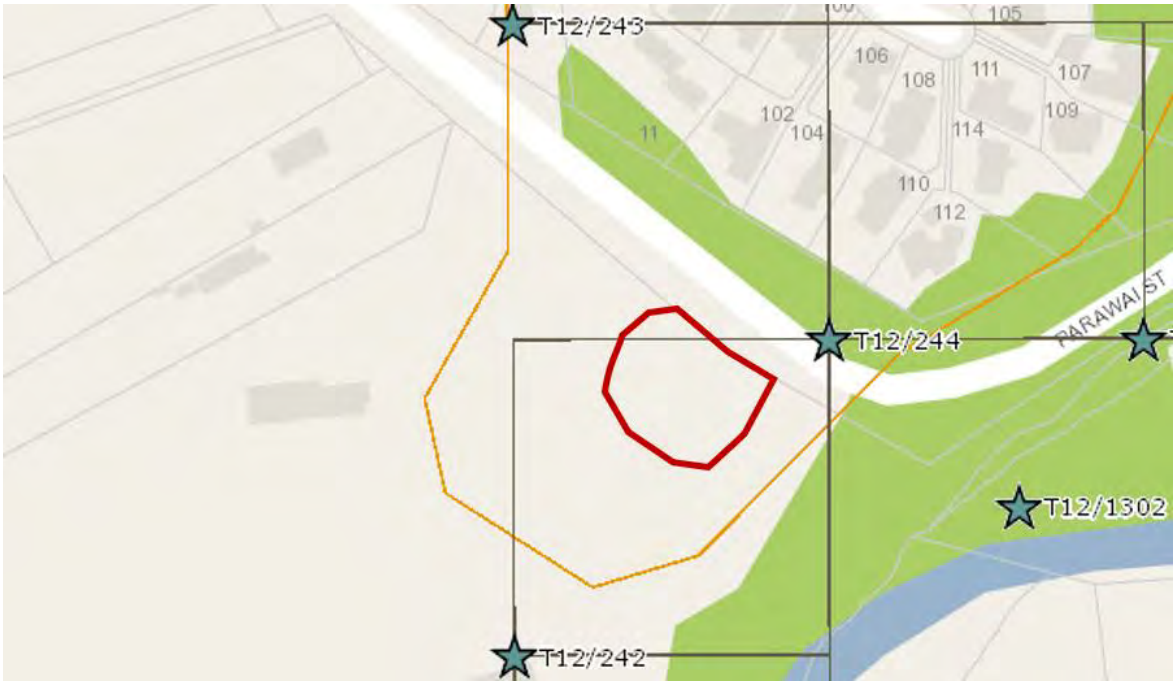


Figure 1-2: Recorded archaeological sites in the area (Source: nzarchaeology.maps)

[1] New Zealand Archaeological Association website: https://archsite.eaglegis.co.nz/NZAAPublic

1.1.3 PDP Rules Assessment

The relevant PDP rules for establishing a community facility in the rural zone are provided in Table 1-1 below. The table outlines the permitted standards for development in the zone and provides comments on likely resource consent triggers.

Table 1-1 - PDP Rules Assessment

Provision	Activity Status	Comment
Section 46 - Rural Zone		
Section 56.6 Rule 31 - Community Facility	**Discretionary Activity**	Establishing a community facility in the rural zone requires land use consent as a **Discretionary Activity.** This is subject to compliance with the bulk and location standards provided in Section 56.8 of the PDP, outlined below.
Section 56.8 - Table 5 - Bulk and Location Standards.	**Discretionary Activity**	The bulk and location requirements for buildings and structures associated with a community facility in the rural zone are: • Maximum site coverage - 10%, • Building setbacks - front yard is 15m from a road boundary, • Maximum building height - 8m, • Height in relation to boundary of 2m & 45°, • Max lux level (lighting) at any point beyond the site is 1 lux. The current concept plan indicates the building could be within the 15m setback from the road boundary. Noncompliance with the bulk and location standards would trigger the need for resource consent as a Non-complying Activity.
Section 56.6 Rule 7 - Standards for earthworks in the Rural Zone.	**Permitted Activity**	In the rural zone, the following earthworks thresholds apply: • Maximum volume per site: 2,500m³, • Maximum area per site: 1ha, • Maximum cut/fill height: 5m, and • Duration: works do not exceed a 3-month period per calendar year. If the earthworks required for the proposed facility will exceed the permitted limits outlined above, resource consent would be required as a **Restricted Discretionary Activity**.
Section 34 - Natural Hazards		
Section 34.9 - Rule 2 Any other activity in a Flood Hazard Area (FHA)	**Restricted Discretionary Activity**	As it is not specified in Section 39.4 of the District Plan, a community facility in an FHA require resource consent as a **Restricted Discretionary Activity**. While the concept plan shows the building outside of the FHAs, it is close the boundary and will need to be considered for further building design.
Section 34.11 - Rule 10 Earthworks in a Natural Hazard Overlay	**Permitted Activity**	Earthworks that are permitted, a controlled or restricted discretionary activity in the underlying zone retains its status subject to it being outside a “High” FHA.

Provision	Activity Status	Comment
		If the required earthworks will not comply with these standards, resource consent will be required as a **Discretionary Activity**.
Section 39 - Transport		
Section 39.2 Rules 5 & 6 Vehicle access, parking, loading, and manoeuvring	**Permitted Activity**	For water-based community facilities, the PDP requires a parking ratio of 1 car park per 25m² gross floor area, a minimum of two bicycle parks, and disabled parking. The plan also outlines when an Integrated Transport Assessment (ITA) is required, which is determined by the expected vehicle movements and the status of the road from which access is gained. Kauaeranga Valley Road is identified as a rural collector. Along a rural collector road, a transport assessment is required for activities that generate movements ranging between 101-250 ECU per day. If these permitted activity standards are not met, resource consent will be required as a **Restricted Discretionary Activity.** Regardless of the consent requirements under this rule, an ITA may be required to support the wider resource consent application.

1.2 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) is a national set of standards and rules that apply to specific activities on certain 'pieces of land' that have or are more likely than not have had elevated levels of contaminants.

Whether the NESCS is relevant or not can be informed through a Preliminary Site Investigation (PSI), undertaken by a contaminated land specialist, who reviews information such as records from TCDC/WRC, historical aerial photography, and a site walkover. Further detailed site investigation (DSI) (e.g., soil sampling and testing) may be required to corroborate the findings of the PSI.

If the NESCS is deemed relevant, resource consent requirements may be triggered depending on the extent of soil disturbance and/or in the instance of a change in land use, whether the PSI concludes it is unlikely that there is a risk to human health if the activity is undertaken. The PSI may require that a DSI is undertaken to confirm the risk of an activity to human health.

1.3 Waikato Regional Plan

The following matters will need to be considered in relation to the Waikato Regional Plan (WRP) in order to facilitate the proposed development (these are dependent on the location of the activities onsite and final design):

1.3.1 Bulk Earthworks

The WRP outlines permitted activity standards for soil disturbance in the region. The standards are largely focused on managing erosion sediment control and setbacks from earthworks areas. There are also rules regarding encroachment of the groundwater table depending on the scale of excavation that is needed. If the earthworks for the proposed facility do not comply with the permitted activity standards of the WRP, resource consent would be required.

1.3.2 Stormwater Discharge to Water and Land

As outlined in Section 3.2 (Civil engineering chapter) of this report, the site does not have an existing stormwater disposal arrangement, and stormwater currently runs overland toward the Kauaeranga River. There are a number of options for stormwater disposal, including extending the Council reticulation, discharging stormwater to land soakage, or establishing a new outlet to discharge to the Kauaeranga River.

Depending on the method of stormwater management to be used, the WRP outlines permitted activity standards for discharging stormwater to land and water. These standards seek to minimise sediment and contaminant-laden runoff. If the permitted standards for stormwater disposal are not met, resource consent will be required.

1.3.3 Water Takes

Aquatic facilities may require a water take from ground and/or surface water resources. The WRP outlines permitted standards for ground and surface water takes. These standards are largely dependent on the volume of extraction and managing adverse effects on ground and surface water quality. Should surface or groundwater extraction be required for the operation of the aquatic facility, and the water take does not comply with the permitted standards of the WRP, resource consent would be required.

1.3.4 Geothermal Resources

Geothermal water could be used as a heat source and the WRP provides permitted standards for the extraction and reinjection of geothermal resources. If geothermal resources are utilised for the facility, and the extraction and reinjection do not meet the permitted limits, resource consent will be required.

1.3.5 Contaminated Land

In addition to the NESCS, the WRP also includes rules in relation to undertaking activities on contaminated sites. A contaminated land investigation (PSI and possible subsequent DSI) is required to inform the consenting requirements in relation to WRP contaminated land provisions.

1.4 Authorising the Use

Having considered the planning investigation undertaken in this section of the report, land use consent for establishing the proposed aquatic facility onsite would be required as (at a minimum) a discretionary activity under the PDP provisions. If compliance with the discretionary activity bulk and location requirements are not achieved, resource consent would be triggered as a non-complying activity overall.

Resource consent may also be required from TCDC under the NESCS provisions pending further contaminated land investigations.

While this assessment outlines the relevant regional plan provisions, it is recommended that the specific consent requirements be revisited when the necessary information is made available.

An alternative pathway for establishing the use onsite (in respect to PDP triggers) would be to consider serving a Notice of Requirement (NoR) to designate the land for a specific purpose by TCDC. This could be an appropriate pathway if (for example):

- There is an interest in protecting the land in the interim, whilst maintaining flexibility in relation to timeframes for design and/or development; or
- There is a desire to stage the works (and thus avoid multiple resource consent processes with TCDC); or
- The facility is proposed on land not owned by the requiring authority and the designation provides a basis for the subsequent acquisition of land needed for the works.

As the property contains a recorded archaeological site, it is recommended that an Archaeological Authority is obtained from Heritage New Zealand Pouhere Taonga (HNZPT) to provide for the accidental discovery of archaeological finds during the earthworks stage of the project.

1.5 Specialist Investigation

As part of the resource consenting process, technical investigations will be required to understand the potential effects of the project and inform the design and operation of the aquatic facility.

Technical inputs to support the resource consent process may include:

- Planning, (to provide further planning advice, and prepare the overarching application),
- Civil engineering (e.g, three waters infrastructure, earthworks, minimum floor levels, flood assessment),
- Transport assessment (access, parking, and possible TIA),
- Landscape and visual assessment (provide guidance on built form and assess effects of built form and natural character of the land use change),
- Contaminated land investigation (PSI and possible DSI),
- Geotechnical assessment (to inform civil engineering),
- Archaeological investigation (to advise regarding an Archaeological Authority), and
- Cultural Impact Assessment (should Mana Whenua identify this as necessary to inform a cultural effect assessment as part of a resource consent application).

1.6 Stakeholder Engagement

The following table sets out the suggested parties that could be consulted during the course of the project.

Table 1-2: Parties suggested for Stakeholder engagement.

Stakeholder	Why	When
Tangata whenua	It is understood that part of the wider site is identified as Urupa and only tangata whenua can assess environmental effects from a Māori perspective.	Commence pre-lodgement and continue over the course of the project.
TCDC regulatory	Consent authority to process district council consents and/or other RMA matters.	Pre-lodgement meeting before seeking resource consent.
WRC regulatory	Consent authority to process regional council consent application.	Pre-lodgement meeting before seeking resource consent from WRC.
Neighbours	Neighbours (particularly the residential properties across the road) may have concerns regarding traffic, and noise effects from the facility.	Pre-lodgement via letter drop then phone call/meeting.
Community	As this will be a community facility, it would be valuable to create public interest and support from the local community.	Pre-lodgement via workshops, and ongoing via website/social media.

1.7 Conclusion

The assessment (scoping study) provided in the section of the report has described the planning context of the site for accommodating a new local aquatic facility. Planning approval(s) from TCDC and WDC will be required to enable the development onsite.

The resource consent process will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource consenting process.

2 Geotechnical

2.1 Geotechnical Considerations

The purpose of this desk-top assessment is to provide high-level geotechnical commentary in relation to the proposed local Thames Aquatic facility. The scope of work has comprised:

- A desk study comprising the following:
  - Review of published geological information.
  - Review of publicly available Historic Aerial Photographs.
  - Review of published historical maps.
  - Groundwater Information from Waikato Regional Council (WRC) web site
  - Information from Thames Coromandel District Council (TCDC) web site
- A review of potential geotechnical constraints on development
- Preparation of this report.

2.2 Site Location

The site is located at the crest of a small hill overlooking the Kauaeranga River and the Thames Racecourse. The site is accessible from the north and north-east via Kauaeranga Valley Road, with an access track to the racecourse running along the site's eastern boundary.

The site is located on a small generally flat terrace with steep surrounding slopes down to the east, west and north and upwards towards the north of the site.

2.3 Desk Study

2.3.1 Geological Information

Published Geological Information

The published geology (Townsend et al., 2008) indicates that the site overlies the Holocene River deposits. To the north lies Middle to Late Pleistocene 'River and hill slope deposits', with Waiwawa Subgroup andesite and dacite shown to the east of the site.

Basic descriptions of these formations are given in Table 2-1:

Table 2-1: Published Geology – Upper Racecourse Site.

Geological Formation	Description
Holocene river deposits	Alluvial gravel, sand, silt, mud and clay with local peat.
Middle to Late Pleistocene 'River and hill slope deposits'	Pumiceous sand, silt, mud and clay with interbedded gravel and peat.
Waiwawa Subgroup andesite and dacite (Coromandel Group)	Andesite, dacite and rhyodacite flows and domes with intercalated tuff, tuff breccia and volcaniclastic sediments. Local, non-welded, dacite, pumice-rich ignimbrite.

Ground Model

The geomorphology of the site and adjacent landforms suggest that the site may be underlain by either the Middle to Late Pleistocene River and Hill slope deposits, or possibly Waiwawa Subgroup andesite and dacite. The steep side slopes beneath parts of the site and adjacent landforms suggest the latter soil types may be more likely.

Groundwater

Groundwater is expected to be close to the adjacent river level approximately 10m below the main site level.

New Zealand Geotechnical Database (NZGD)

The closest publicly available geotechnical investigation data is approximately 250m to the northeast of the proposed site and approximately 10m below the site level and is therefore not considered to be relevant to the site.

Active Faults Database

The nearest mapped known active fault shown on the GNS Active Faults Database is the northwest striking Kerepehi Fault located approximately 10km to the southwest of the site.

No faults are mapped as passing directly through the proposed site locations and as such the risk of direct fault rupture is considered low.

2.3.2 Historic Aerial Photographs

We have reviewed publicly available historic aerial photography (www.Retrolens.co.nz and Google Earth Pro).

The earliest available photograph from 1944 shows the site as a hill with the crest located in the centre of the site, the eastern boundary track ran near the base of the slope through dense vegetation.

The next available photograph was taken in 1961 and shows the site had been levelled, the eastern boundary track was also been widened, it remained at a lower level to the site and connected to a new service road constructed up the southern slope to the crest, presumed to be constructed using fill. During the same period Kauaeranga Valley Road appears to have been widened, with vegetation cleared on both sides of the road. With the vegetation cleared the potential remnants of a historical slip on the eastern slope are visible.

Between 1973 and 1980 there appears to be some slope instability on the eastern slope cutting into the previously level area of the site, potentially further aggravation of the slip visible in 1961.

Between 1983 and 1994 the site level appears to have been further reduced to become level with the Kauaeranga Valley Road, the site was also enlarged to the north and east and now included the eastern boundary track. The service road up the southern slope was filled in during this period extending the site southward as well. Vegetation spread across the site was removed during this period leaving only trees along the north-western slope and at the base of the new south-eastern slope.

Between 1994 and the current day the site appears to have potentially had more fill placed along the north-western slope. The site appears to be used as a storage yard for roading contractors. Hard cover has been spread across the flat area of the site with temporary storage of gravel, pipework and electricity poles.

Cut/Fill Summary

The initial work of reducing the site level occurred between 1944 and 1961 which reduced the level of the site and built a track up the southern slope presumed to be by filling.

The next period of cutting/filling for the site occurred between 1983 and 1994 which further reduced the level of the site bringing it to level with Kauaeranga Valley Road, extending the site using fill to the northeast, south and west, covering the track up the southern slope.

Fill may also have been placed on the site as slip debris sourced locally or from Kauaeranga Valley Road

2.3.3 Historic Maps and Plans

Historic maps and plans (www.mapspast.org.nz) were checked for relevant information to the sites.

The maps show nothing of note between 1939 and 1949.

On the 1959 map a service road is shown running along the eastern and south-eastern boundaries of the proposed site to the racecourse.

On the 1989 map contours were introduced which properly delineate the proposed site at 20m R.L., which is different to the level shown on the TCDC Maps (tcdc.maps.arcgis.com) which show the site at a level of 15m R.L. and may be indicative of the amount the site has been cut over the years.

Finally in the 2009 map the service road to the racecourse was removed with no further changes noted in successive maps.

2.3.4 Waikato Regional Council (WRC) Data

The Waikato Regional Council Hazards Portal (waikatoregion.maps.arcgis.com) indicates that the proposed site has a rating of "possible" for liquefaction.

The Waikato Regional Council Groundwater map (waikatomaps.waikatoregion.govt.nz) shows the location of bores across the region. There were no bores within 500m of the site which would provide relevant information to the site.

2.3.5 Thames Coromandel District Council (TCDC) Data

TCDC map data (tcdc.maps.arcgis.com) was checked for relevant geotechnical hazard information pertaining to the site. No geohazards are shown for the site.

The site is on the edge of the TCDC Hazard and in the Regional Scale Flood Hazard risk areas, however when checking the WRC hazard portal (waikatoregion.maps.arcgis.com) the site is excluded from the flood hazard area.

2.4 Potential Geohazards

The potential geohazards assessed are summarised in Table 2-2.

These hazards are discussed further in the sections below.

Table 2-2: Potential Geohazards Summary

Geohazard	Risk	Comment
Fault rupture	Low	See Section 2.1.3
Liquefaction	Low/Medium	See Section 2.4.1
Expansive soils (Shrink/swell Potential of Soils)	Low/Medium	See Section 2.4.2
Soft ground / non engineered fill	High	See Section 2.4.3
Slope instability	Medium	See Section 2.4.4
Contaminated land	Low/Medium	See Section 2.4.5

2.4.1 Liquefaction

Due to the lack of relevant geotechnical investigation data in and around the site, this liquefaction assessment is speculative.

Holocene river deposits of alluvial gravel, sands, silts if present may be susceptible to liquefaction and cyclic softening respectively. Groundwater is expected to be 10m below ground level offering some protection from settlement effects, however lateral spread may be a significant risk.

However, due to the steeply sided geomorphology it is expected that the site geology is potentially either Late Pleistocene 'River and hill slope deposits' or more likely Waiwawa Subgroup andesite and dacite. If the latter liquefaction is not expected to be a significant risk.

The landform is unusual and there is an outside chance that it may be formed entirely or substantially from fill derived from initial construction of Kauaeranga Valley Road.

Based on the current information reviewed and site observation we consider that the risk of potentially damaging liquefaction effects is low to medium depending on the underlying geology.

Site specific investigation and assessment is required to confirm the geology and liquefaction hazard.

If liquefaction is likely then site specific foundation design will be required for the proposed site, possibly requiring ground improvement to reduce lateral spreading risks, or setbacks from the slope crests to be outside of areas affected.

2.4.2 Shrink/Swell Potential of Soils

If underlain by interbedded stiff sandy clays and silts, and loose sandy soils of the Holocene river deposits, or the pumiceous sand, silts and clays with gravel and peat of the Middle to Late Pleistocene soils the risk of expansive soils is consider to be low.

If underlain by weathered andesite, dacite and rhyodacite flows of the Waiwawa subgroup there is an increased risk of expansive soils being encountered.

The risk of expansive soils is therefore considered to be low to medium. However, this hazard can be easily addressed by standard construction practices.

2.4.3 Soft Ground/Non-engineered Fill

Near surface soft ground (less than 25kPa) or organic soils (except topsoil) is unlikely to be encountered on the site.

There is a high likelihood that non-engineered fill could potentially be found on site, especially towards the north-western, southern, and western edges/crests of the slopes.

Therefore, the overall risk of soft ground/non engineered fill is considered to be high.

2.4.4 Slope Instability

The proposed site is located above slopes with estimated gradients of up to 20 degrees which may in part be formed from materials pushed over the edge when the site level was cut down, or material placed during roading works.

There is also evidence of a historical slip on the 1961 image on the south-eastern slope which was reactivated between 1973 and 1980. However since 1980 the site level has been reduced removing some evidence of this slip.

It is considered unlikely that these slopes will have suitable levels of stability without adopting engineering measures.

The risk of slope instability is therefore considered to be medium but can be managed by suitable engineering measures or adopting a suitable set back from the crests of the slopes.

2.4.5 Contaminated Land

Due to the site potentially being used as a storage yard and a potential dumping ground for slip debris contamination associated with vehicle movement and parking may be anticipated such as hydrocarbons and heavy metals.

The risk of contaminated land is therefore considered to be low/medium.

We recommend that an environmental specialist be consulted to confirm the status of the site with respect to the National Environmental Standard (NES) for potentially contaminated land.

2.5 Conclusions and Recommendations

The greatest potential geohazards identified are those of seismicity causing liquefaction and lateral spreading of slopes beneath the site, static slope stability caused by oversteepened slopes and the expected non-engineered fill found on site particularly close to the crest of slopes.

It is likely that these risks may be mitigated/managed by suitable foundation design, localised ground improvement or adopting suitable setbacks from the slope crests.

Similarly, the low/medium risks identified for expansive soils and soft compressible soils may also be mitigated by suitable foundation design or localised ground improvement.

All these risks can be quantified by appropriate ground investigation.

The potential for contaminated land needs to be assessed by a specialist. The most significant potential effect should contaminated soils be present may be increased costs to dispose of unsuitable soils on excavation.

3 Civil Infrastructure

3.1 Civil Infrastructure Considerations

This section provides high-level considerations for the civil infrastructure requirements for the 'local' aquatic facility option proposed. The following infrastructure is considered:

- Stormwater
- Wastewater
- Water Supply
- Power
- Communications.

3.2 Stormwater

The proposed site sits just outside of all three waters area of service from TCDC, including stormwater, as shown below in Figure 3-1. The site currently does not have connection to either public or private stormwater networks, as shown in Figure 3-2, and stormwater runs overland to the southeast toward the Kauaeranga River.

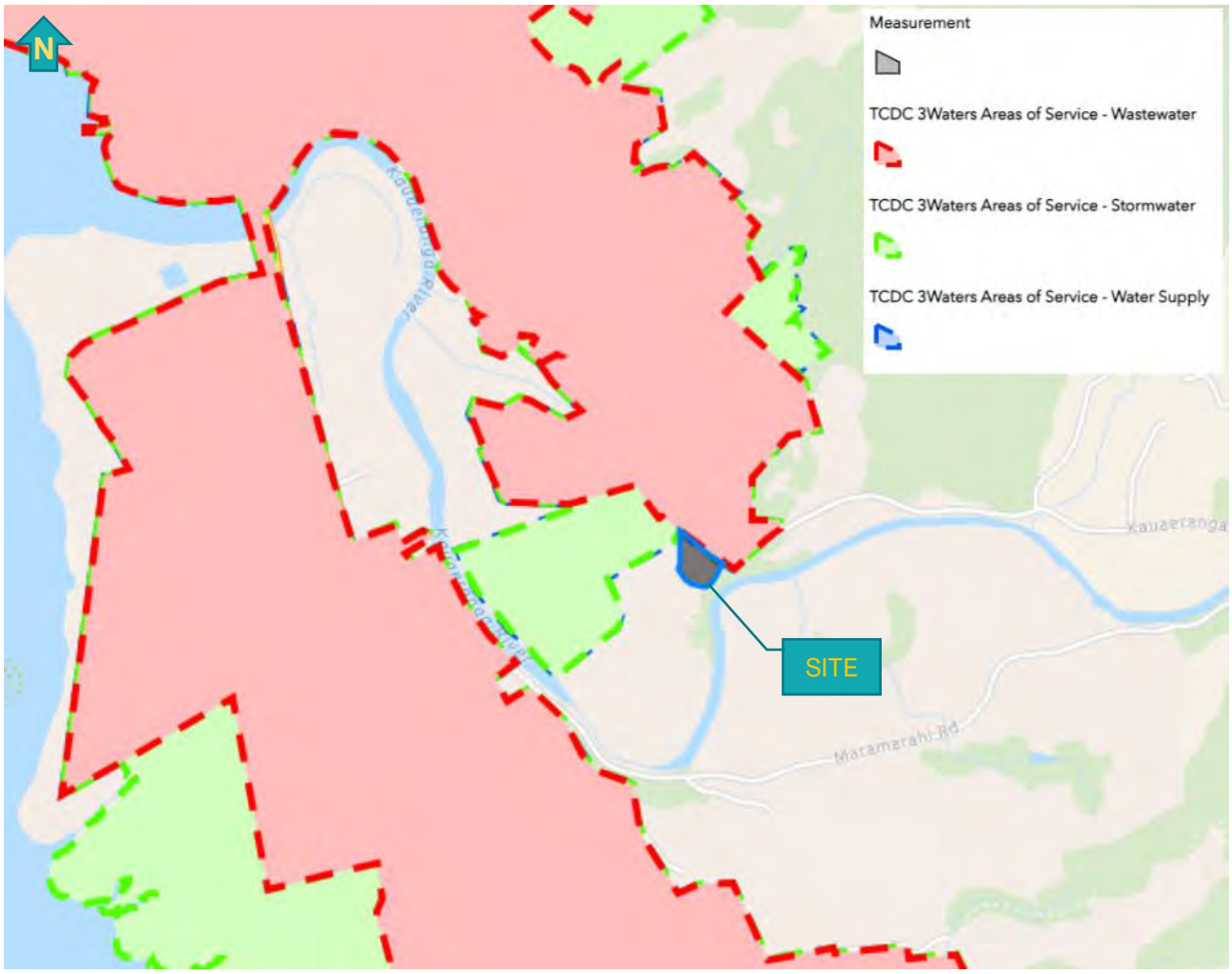


Figure 3-1: TCDC 3 Waters Areas of Service GIS

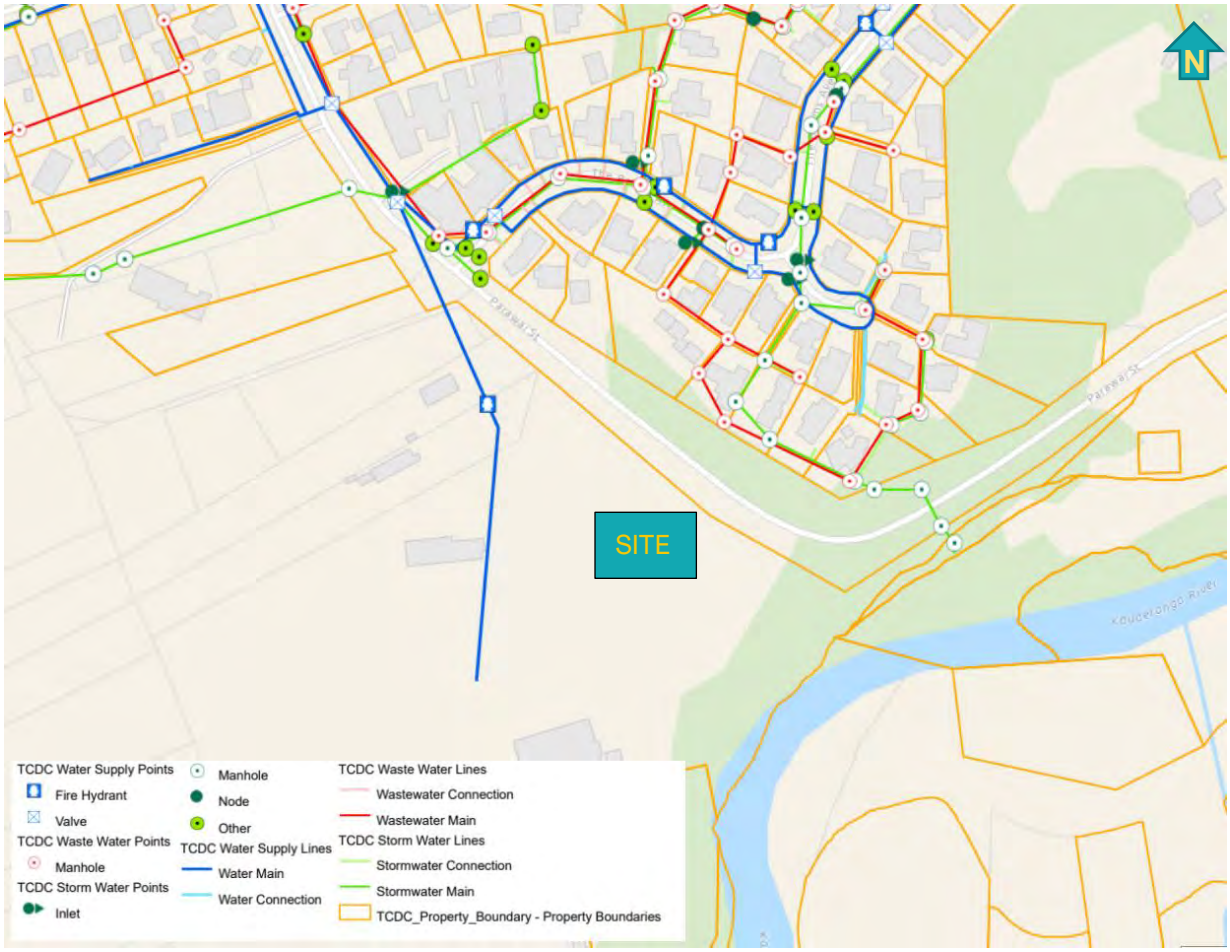


Figure 3-2: TCDC 3 Water GIS

There are four potential options for stormwater discharge for the proposed site:

- Connection to the existing Ø625mm council stormwater main on Parawai St to the northwest of the site, the connection point is approximately 130m from the site.
- Connection to the existing Ø375mm council stormwater main which discharges to Kauaeranga River to the east of the site, the connection point is approximately 90m from the site.
- A new stormwater main laid southeast to a new discharge point to the Kauaeranga River.
- Soakage to ground.

The two options of connection to existing council stormwater networks would require assessment of their current capacity and ability to handle addition stormwater runoff. If it were to be found from this assessment that one of these options would be viable, Council approval would be required.

The option of a new stormwater main laid to the southwest to a new discharge point at the Kauaeranga River would provide the best technical stormwater solution, however a number of approvals and consents would be required, refer to Planning Section 1.3.2 Stormwater Discharge to Water and Land of this report for details.

The current site is predominantly covered with a mix of pervious gravel and grassed areas, so it will be a requirement to attenuate stormwater flows from the site with the addition of impervious surfaces from the building roof and external hard surfacing. Attenuation could be achieved above ground, either from above ground rainwater tanks fed from the facility roof or pond/raingardens, or underground by stormwater tanks.

Stormwater runoff from carparking areas of the new facility will require stormwater treatment to TCDC standards, this could be provided though raingardens, swales, propriety treatment devices or a combination of these.

The site is located outside of any flood hazard areas, as shown in Figure 3-3, so would not be subject to any flood modelling requirements or flood mitigation design.

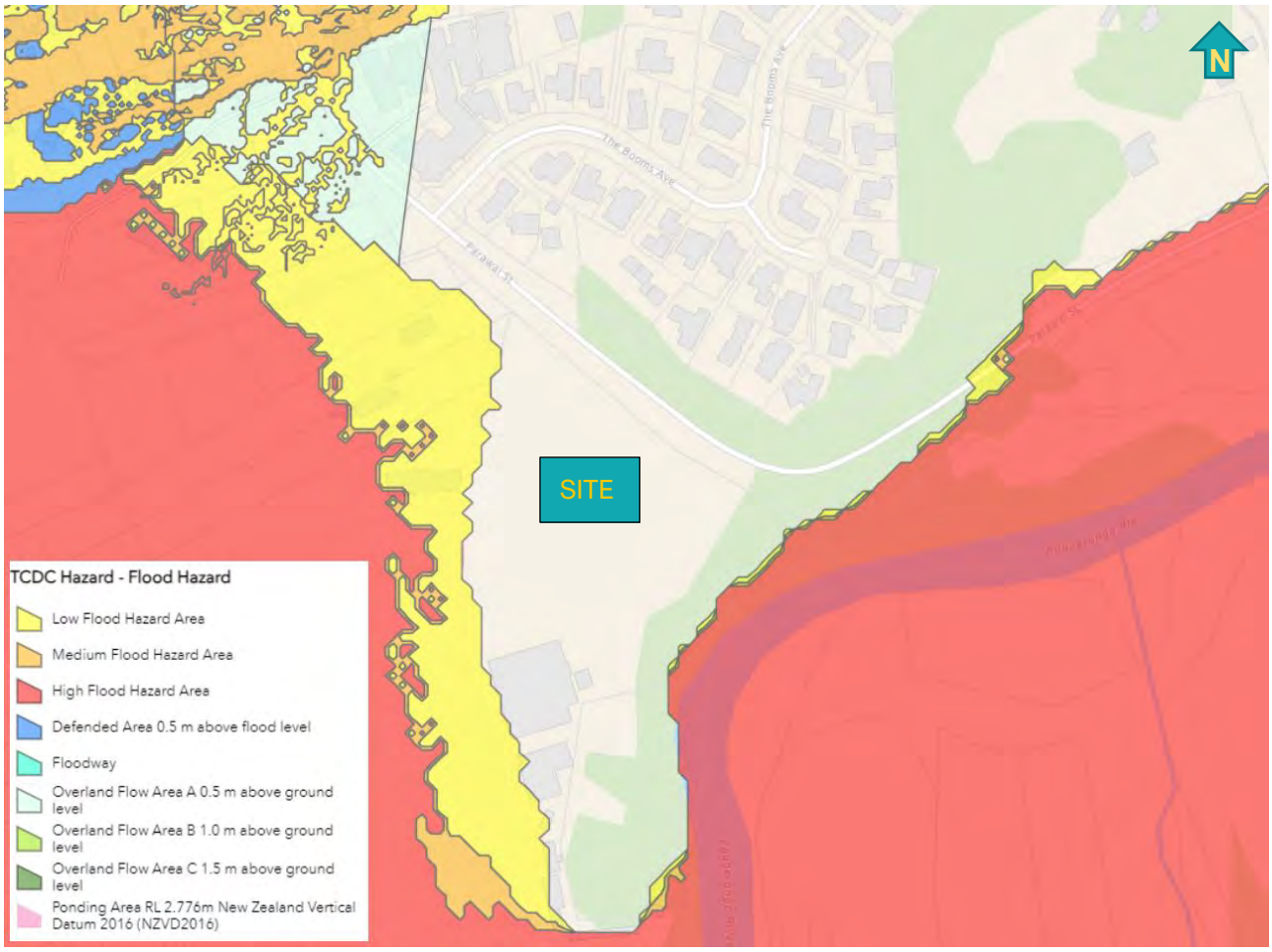


Figure 3-3: TCDC Flood Hazard Map

3.3 Wastewater

The proposed site sits just outside of all three waters area of service from TCDC, including wastewater, as shown in Figure 3-1.

From TCDC's publicly available assets map, shown in Figure 3-2, there is a Ø225mm council gravity wastewater main on Parawai St approximately 130m to the northwest of the site which could provide connection to the site. Approval from Council will be required to connect to this main and an agreement with TCDC will need to be reached on a maximum discharge rate to wastewater system for activities such as pool draining.

3.4 Water Supply

The proposed site sits just outside of all three waters area of service from TCDC, including water supply, as shown in Figure 3-1.

A Ø100mm ACO modular stainless steel water supply main runs along the west side of the site, as shown in Figure 3-2, and could provide the site with a water supply connection. Discussions with TCDC will be required to assess the current capacity of the network to meet the water demands of the facility. Onsite water storage for both supply and fire fighting may be required if there is insufficient existing network capacity.

3.5 Power

From PowerCo network information received through a Before You Dig enquiry, as shown in Figure 3-4, the preferred site is adjacent to both underground and overhead HV cabling running along the south side of Kauaeranga Valley Road. Discussions will be required with PowerCo to see if a connection to this HV line via a new transformer will provide the facility the required power supply.

Figure 3-4: PowerCo Network GIS Data

3.6 Communications

From the Chorus communications network plans provided through a Before You Dig enquiry, as shown in Figure 3-5, the site is adjected to their network ducting running along the south side of Kauaeranga Valley Road. Coordination will be required with Chorus to connect the sites.

Figure 3-5: Chorus Communication Network Plans

4 Building Services

4.1 Building Service Considerations

The purpose of this desktop assessment is to provide high-level considerations around the building services requirements for the 'local aquatic' facility option proposed for the Upper Thames Racecourse. The assessment will consider the following:

- Operational costs for heating, cooling, general electricity, water, and chemical costs.
- Service connection requirements for electricity, water, and sewer.

Additionally, to reduce capital cost an option for an outdoor 25m Pool has been considered.

4.2 Facility Area Schedule (Indoor 25m Pool Option)

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 1650m² complete with:
  - 25m Lane Pool – 750m³
  - Programme/Warm Water Pool – 300m³
  - Spa Pool - 25m³
  - Learn to Swim Pool – 100m³
  - Leisure/toddlers pool including toys and equipment – 60m³
- Front of house 780m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Pool Store/Plant Area.

4.3 Estimated Operational Cost (Indoor 25m Pool Option)

Table 4-1: Operational Cost Summary (Indoor 25m Pool Option)

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	1650	$140,000 pa	$140,000 pa	$30,000 pa	$25,000 pa
Front of House	780	$15,000 pa	$15,000 pa		-
Total	**2700**	**$155,000 pa**	**$155,000 pa**	**$30,000 pa**	**$25,000 pa**

summarises the operational costs associated with the electricity, water, and chemical with the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% RH average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.
- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1/L of 1% chlorine.

4.4 Facility Area Schedule (Outdoor 25m Pool Option)

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 850m² complete with:
  - Programme/Warm Water Pool – 300m³
  - Spa Pool - 25m³
  - Learn to Swim Pool – 100m³
  - Leisure/toddlers pool including toys and equipment – 60m³
- Outdoor Pool Area complete with:
  - 25m Lane Pool – 750m³
- Front of house 780m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Pool Store/Plant Area.

4.5 Estimated Operational Cost (Outdoor 25m Pool Option)

Table 4-2: Outdoor Cost Summary (Outdoor 25m Pool Option)

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	850	$85,000 pa	$70,000 pa	$30,000 pa	$30,000 pa
Outdoor Pool	-	$70,000 pa	$15,000 pa		
Front of House	780	$15,000 pa	$60,000 pa		
Total	**2700**	**$170,000 pa**	**$145,000 pa**	**$30,000 pa**	**$30,000 pa**

Table 4-2 summarises the operational costs associated with the electricity, water, and chemical with the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% RH average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Outdoor pool is covered for 12 hours a day.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.
- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1/L of 1% chlorine.

4.6 Site Energy Opportunities

There are no immediate opportunities for the site to share or recovery energy from any adjacent sites/ facilities. If the aquatic facility set up a central energy plant, there may however be opportunity for either the high school or recreation centre to utilise the aquatic centre's efficient heating and cooling plant.

4.7 Electrical Site Infrastructure

It is expected that a new dedicated 750kVA transformer is required to serve the site power requirements.

4.8 Site Water Infrastructure

The size and flow of the water connection will dictate the fill time for the pools. A minimum 63OD mains water connection is recommended for operations of the facility off the mains water supply (i.e. no water storage requirements onsite). Larger connections can be explored if suitable infrastructure enables faster filling time.

4.9 Site Wastewater Infrastructure

The wastewater connections will need to be explored in detail with the three waters team. A minimum 5l/s connection is generally required for general operations of the facility. Attenuation tanks will be required to attenuate the pool water filtration backwash water flow as well as considerations to emptying of the pools for maintenance.

Thames Aquatic and Sports Hub Feasibility

Ex-Carter Holt Harvey Site

Prepared for Visitor Solutions
Prepared by Beca Limited

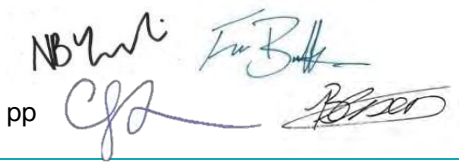
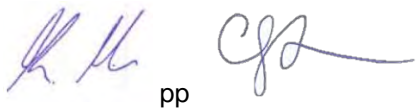
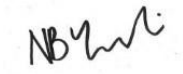
6 December 2023

Contents

Revision History

Revision Nº	Prepared By	Description	Date
A	Nick Yannakis Fraser Brotherstone Denzel Belbin	For Client Review	08/09/2023
B	Nick Yannakis	Final	06/12/2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	Nick Yannakis Fraser Brotherstone Denzel Belbin Bjorn Larsen		06/12/2023
Reviewed by	Kiran Hira Ken Read Ailsa Fisher		06/12/2023
Approved by	Nick Yannakis		06/12/2023
on behalf of	Beca Limited		

Executive Summary

The facility proposed for the Ex-Carter Holt Harvey site is a sub-regional aquatic facility at the front of the site. The site is located at 9428 SH26-Paeroa-Kopu Road, Matatoki and is located on a lot shared with Smart Environmental Ltd.

As per high level advice from a TCDC duty planner, the proposed facility most closely aligns with the District Plan definition of ‘Formal Recreation’ and ‘Community Facility’. They also noted that where these activities are not provided for by the Proposed District Plan, the rules for ‘Activities not provided for in the Plan’ will apply. The site is listed currently as an Industrial Zone and the Proposed District Plan outlines a number of rules for establishing a ‘Community Facility’ in the industrial zone and will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource management process.

The site is believed to be underlain by soft peaty soils, a high groundwater table and highly plastic clay soils. Further ground investigations will be recommended for the design of the building structure with either localised ground improvement or raising the ground level with imported fill potential mitigation options. Additionally, the very shallow groundwater will give rise to drainage and construction problems requiring the pools to be elevated out of the ground. There is also potential for contaminated land and it is recommended to be assessed by a specialist. The most significant potential effect should contaminated soils be present may be increased costs to dispose of unsuitable soils on excavation.

The site also is in a low flood hazard area that will require further investigation to set an appropriate floor level for the site. There is no public wastewater pipes servicing the site, however there is a private wastewater pump station within the site and a Ø63mm rising main which travels northwest and connects to the TCDC wastewater network near the Thames Golf Course. An agreement with TCDC will need to be reached on a maximum discharge rate to public wastewater system at the Thames Golf Course for activities such as pool draining. Additionally, there are no public water supply pipes servicing the site. There is a Ø32mm TCDC water pipe that supplies a residential property to the west of the site, this line would be insufficient to service the new facility and a new water supply will need to be considered.

The operational costs for an all-indoor facility have been estimated.

Overview

Visitor Solutions are undertaking a feasibility study and business case on behalf of Thames-Coromandel District Council (TCDC) on possible sites for aquatic and sport facilities in Thames.

The existing Thames Centennial Pool is located on an urupa (burial ground) and an agreement between Ngāti Maru and Thames-Coromandel District Council has been reached to relocate the facility by 2027 and the land will be returned to Ngāti Maru. The 50-year-old facility would also have needed investment to address its condition and extend the life of the facility.

Other issues including the under-supply of all-year aquatic facilities in the wider Waikato region and increasing flood risks to the Rhodes Park sports facility have led to the exploration of a combined facility that serves either local or sub-regional needs.

There are currently five sites that are being considered for the facility:

- Thames High School
- Ex-Carter Holt Harvey site
- Wenzlick Block
- Ngatea
- Upper Thames Racecourse

This report forms part of the business case and feasibility assessment for the sub-regional aquatic facility at the Ex-Carter Holt Harvey Site. This report is intended to identify feasibility considerations associated with the proposed site from a Building Services, Civil Infrastructure, Geotechnical Engineering and Planning perspective.

The facility proposed for the Ex-Carter Holt Harvey site is a sub-regional aquatic facility at the front of the site. The site is located at 9428 SH26-Paeroa-Kopu Road, Matatoki and is located on a lot shared with Smart Environmental Ltd.

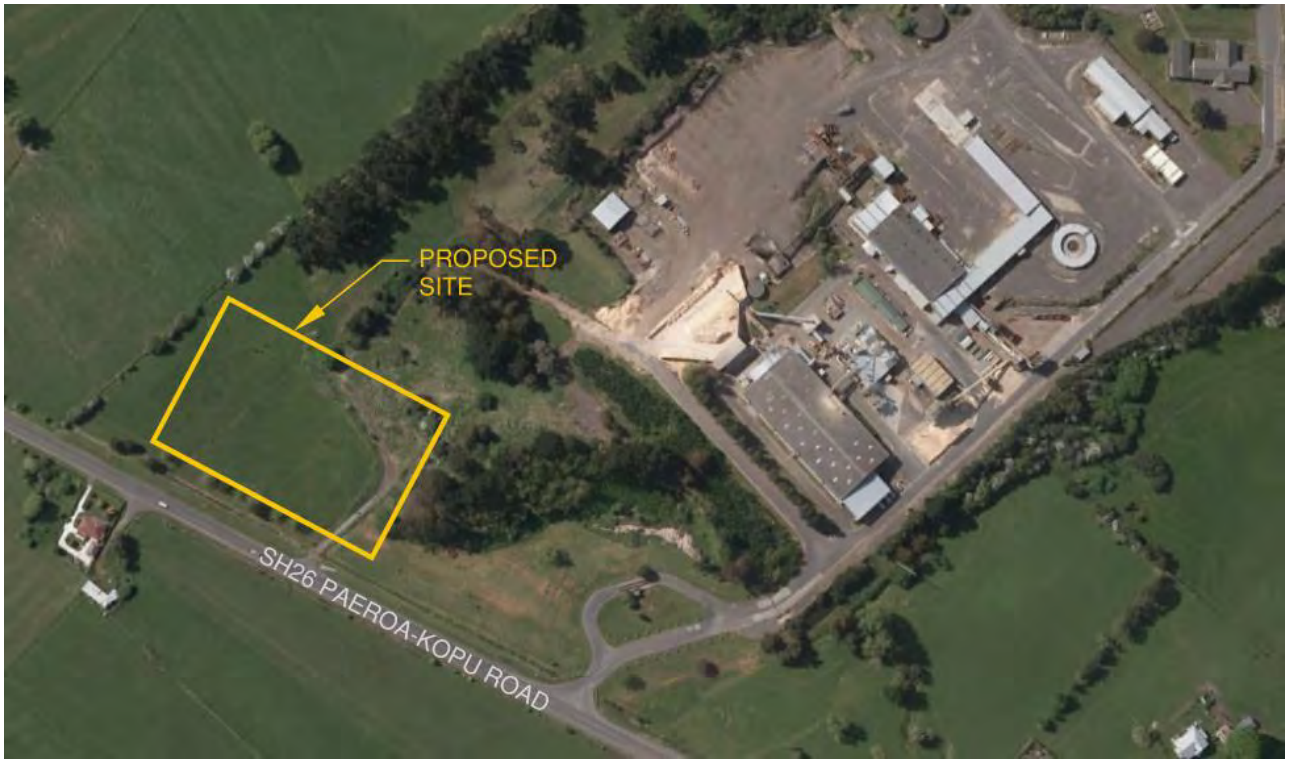


Figure 0-1: Proposed site location (Source: TCDC Property Maps)

1 Planning

1.1 Resource Management Consideration

The purpose of this desk-top assessment is to provide a high-level (feasibility study) planning scope in relation to the proposed sub-regional facility. The assessment:

- Identifies the relevant planning zones and overlays that apply under district and regional plans
- Summarises the likely consent requirements to enable the construction and operation of the project under district and regional plans
- Provides recommendations for progressing the resource consent process.

1.2 Thames District Plan (proposed) Zoning, Overlays, and District Plan Notations

The Thames-Coromandel District is currently operating under both Operative and Proposed District Plans. Although still subject to appeal in selected parts, the Proposed District Plan (PDP) (Appeals Version – 28 July 2023) is the current plan being used. Accordingly, the PDP has been considered for this study.

As per high level advice from a TCDC duty planner, the proposed facility most closely aligns with the District Plan definition of 'Formal Recreation' and 'Community Facility'. They also noted that where these activities are not provided for by the PDP, the rules for 'Activities not provided for in the Plan' will apply.

The PDP defines 'Formal Recreation' and 'Community Facility' as:

Formal Recreation *means a facility specifically designed for an organised sport(s) and/or other organised recreational activity. This does not restrict more casual sports and other recreation activities from using the facility. It may be for profit. Examples of formal recreation include:*

- Ball court, Sports field
- BMX/cycle track, skate park
- Observation stands and player and spectator infrastructure.

Community Facility *means a building and surrounding area, not otherwise defined in the Plan, where the primary purpose is to provide a community service(s). It includes the regular and occasional activities for which the facility is designed or planned, that occur in the facility.*

- *The service may be profit or non-profit.*
- *The activity may occur inside and/or outside the building, but the core of the activity is in the building.*
- *The service may be exclusive to members.*
- *It may include a public amenity.*

Community facility may include, but is not limited to:

- *Group gatherings (e.g. church, religious centre, hall, clubroom)*
- *Education (e.g. school, adult education, kura kaupapa, kohanga reo, library)*
- *Health services (e.g. health centre, hospital)*
- *Recreation (e.g. indoor multi-purpose recreation hall, coastguard building, lifesaving stand)*
- *Emergency services (e.g. police, fire or ambulance services).*

It is considered the proposed activity better aligns with the definition of 'Community Facility' and this should be confirmed with a TCDC Consent Planner. However, for the purposes of this assessment, both activities have been considered.

1.2.1 The Site

The site is located approximately 8.5km to the south of Thames' town centre, is surrounded by rural farmlands and is boarded by State Highway 26 to the west. A significant portion of the site, to the northeast of the proposed location, is used by Smart Environmental Limited Kopu as a recycling facility. The proposed development area comprises a relatively flat section of pasture that is isolated from the rest of the activities on the site. The site is located in the Industrial Zone of the PDP.

The site location and its zoning are shown in Figure 1-1 below.

Figure 1-1: Site 2 Planning Overlays and Features (Source: TCDC Planning maps)

The relevant planning notations are outlined in Table 1-1 below.

Table 1-1: PDP Planning Notations

Thames-Coromandel District Plan	
Zone	Industrial Zone
Overlays	Flood Hazard area - Low
Designations	N/A - None identified within the site
Features	N/A - None identified within the site

The relevant PDP rules for establishing a 'Community Facility' in the Industrial Zone are provided in Table 1-2 below. The table outlines the permitted standards for development in the zone and provides comments on likely resource consent triggers.

Table 1-2: Site 2 PDP Rules Assessment

Provision	Activity Status	Comment
Section 46 – Industrial Zone		
Section 46.4 Rule 12 - Community facility	**Discretionary Activity**	A community facility in the Industrial Zone that does not directly relate to an Industrial Activity requires land use consent as a **Discretionary Activity**.
Section 46.7 Rule 22 - Activities not provided for in the Section 46	**Non-complying Activity**	Formal Recreation activities are not provided for in the Industrial zone, and therefore, land use consent would be required as a **Non-complying Activity**.

Provision	Activity Status	Comment
Section 46.4 Rule 4 - Earthworks Standards as outlined in Rule 8A - Table 1 of the TCDP.	**Permitted Activity**	In this zone, earthworks are restricted to a volume of 1000m^3 over an area of 1000m^2 per year. The maximum height of any cut/fill is 5m and the maximum duration of work in a calendar year is 3 months. Given its size, the earthworks required for the proposed facility are expected to exceed these limits, and therefore, would likely require resource consent for a **Restricted Discretionary Activity**.
Section 46.8 - Table 4 - General Bulk and Location Standards.	**Permitted Activity**	The relevant bulk and location requirements for development in the Industrial zone are outlined below: • Maximum site coverage - 70% • Setbacks - front yard is 6m and yard from non-residential boundaries is 7.5m • Maximum building height - 15m • Height in relation to boundary of 3m & 45° The exceedance of these standards would trigger the need for resource consent as a **Restricted Discretionary Activity.**
Section 34 – Natural Hazards		
Section 34.9 - Rule 2 Any other activity in a Flood Hazard Area	**Restricted Discretionary Activity**	Community and recreation facilities in a Flood Hazard Area require resource consent as a **Restricted Discretionary Activity**.
Section 34.11 - Rule 10 Earthworks in a Natural Hazard Overlay	**Permitted Activity**	The consent status for earthworks depends on the status of the building itself. Accordingly, earthworks in a Flood Hazard area will require resource consent as a **Discretionary Activity**.
Section 39 – Transport		
Section 39.2 Rules 5 & 6 Vehicle access, parking, loading, and manoeuvring	**Permitted Activity**	For community and recreation facilities, the PDP requires a parking ratio of 1 car park per 25m^2 gross floor area, a minimum of two bicycle parks, and disabled parking. The plan also outlines when an Integrated Transport Assessment (ITA) is required, determined by the expected vehicle movements and the order of the road from which access is gained. This site is likely to gain access from a State Highway (SH 26), which involves additional access requirements, particularly in relation to separation distance from existing vehicle crossings. If these permitted standards are not met, resource consent will be required as a **Restricted Discretionary Activity**. Regardless of the consent requirements, an ITA may be required to support the wider resource consent application.

1.3 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) is a national set of standards and rules that apply to specific activities on certain 'pieces of land' that have or are more likely than not have had elevated levels of contaminants.

Whether the NESCS is relevant or not can be informed through a Preliminary Site Investigation (PSI), undertaken by a contaminated land specialist, who reviews information such as records from TCDC/WRC, historical aerial photography, and a site walkover. Further detailed site investigations (DSI) (e.g. soil sampling and testing) may be required to corroborate the findings of the PSI.

If the NESCS is deemed relevant, resource consent requirements may be triggered depending on the extent of soil disturbance and/or in the instance of a change in land use, whether the PSI concludes it is highly unlikely that there is a risk to human health if the activity is undertaken. The PSI may require that a DSI is undertaken to confirm the risk of an activity to human health.

1.4 Waikato Regional Plan

The following matters will need to be considered in relation to the Waikato Regional Plan (WRP) in order to facilitate the development (these are dependent on the location of the activities onsite and final design):

1.4.1 Bulk Earthworks

The WRP outlines permitted activity standards for soil disturbance in the region. The standards are largely focused on managing erosion sediment control. There are also rules regarding encroachment of the groundwater table depending on the scale of excavations. If the earthworks of the proposed facility do not comply with the permitted activity standards of the WRP, resource consent would be required.

1.4.2 Stormwater Discharge to Water and Land

Depending on the method of stormwater discharge from the site, the WRP outlines permitted activity standards for discharging stormwater to land and water. These standards seek to minimise sediment and contaminant laden runoff. If the permitted standards for stormwater disposal are not met, resource consent will be required.

1.4.3 Water Takes

Such facilities may require the water take from ground and/or surface water resources. The WRP outlines permitted standards for ground and surface water takes. These standards are largely dependent on the volume of extraction and managing adverse effects on ground and surface water quality. Should surface or groundwater extraction be required for the operation of the facility, and the water take does not comply with the permitted standards, resource consent would be required.

1.4.4 Geothermal Resources

Geothermal water can be used to heat aquatic facilities and the WRP provides permitted standards for the extraction and reinjection of geothermal resources. If geothermal resources are utilised for the facility, and the extraction and reinjection do not meet the permitted limits, resource consent will be required.

1.4.5 Contaminated Land

As well as the NESCS, the WRP also have rules in relation to undertaking activities on contaminated sites. A contaminated land investigation (PSI and possible subsequent DSI) is required to inform the consenting requirements in relation to WRP contaminated land provisions.

1.5 National Environmental Standards for Freshwater

The National Environment Standard for Freshwater (NESFW) sets out requirements for works in and around freshwater resources including wetlands. Of particular relevance to this site is that it is a prohibited activity under regulation 53 of the NESFW to undertake earthworks in an inland wetland that will result in the complete or partial drainage of a wetland. It is also a non-complying activity to undertake earthworks within 100m of an inland wetland as specified under Section 53 of the standard.

A Google Imagery review of the site has revealed vegetation that might be associated with wetlands. Therefore, it is recommended that an ecological investigation is undertaken to determine if there are wetlands on the site and determine the location and extent if there are. This will contribute to determining the 'no-go' areas on the site and help inform any resource consenting requirements under the NESFW.

1.6 Authorising the Use

In consideration of the respective zoning rules and the planning investigation undertaken in this report, resource consent would likely be required for either a discretionary or a non-complying activity under the PDP provisions to establish the proposed facility onsite.

Resource consent applications for non-complying activities need to be considered under Section 104D of the Resource Management Act 1991 (RMA) which is otherwise known as the 'gateway test'. A consent authority can only grant such a resource consent if they are satisfied that the adverse effects will be (no more than) minor or the activity is not contrary to the relevant objectives and policies of the plan.

While it is considered the activity most closely aligns with 'Community Facilities' (and therefore would not trigger a non-complying resource consent), it is recommended this interpretation is confirmed with TCDC.

Resource consent may also be needed from TCDC under the NESCS pending further investigations.

While the potential regional plan provisions have been noted, it is recommended that the specific consent requirements be revisited when the necessary information is available.

An alternative pathway would be to consider serving a Notice of Requirement (NoR) to designate the land for a specific purpose by TCDC. This could be an appropriate pathway if (for example):

- There is an interest in protecting the land in the interim whilst maintaining flexibility in relation to timeframes for design and/or development; or
- There is a desire to stage the works (and thus avoid multiple resource consent processes with TCDC); or

The facility is proposed on land not owned by the requiring authority and the designation provides a basis for the subsequent acquisition of land needed for the works.

As archaeological sites have been identified on the property, it is recommended that an Archaeological Authority is obtained from Heritage New Zealand Pouhere Taonga to provide for the accidental discovery of archaeological finds during the earthworks stage of the project.

1.7 Specialist Investigation

As part of an application process, technical investigations will be required to understand the potential effects of the project and could inform the design and operation of the facility.

Technical inputs to support an application may include:

- Planning, (to provide further planning advice, and prepare the overarching application)
- Civil engineering (e.g. three waters infrastructure, earthworks and minimum floor levels, and flood assessment)
- Transport assessment (access, parking, and traffic assessment)

- Ecological investigation (determine the location and extent of potential wetlands)
- Landscape and visual assessment (provide guidance on built form and assess effects of built form and natural character)
- Contaminated land investigation (PSI and possible DSI per Section 2.2)
- Geotechnical assessment (to inform civil engineering)
- Noise and vibration investigation (to consider noise and vibration during construction and operation)
- Archaeological investigation (to advise regarding an Archaeological Authority)
- Cultural impact assessment (should mana whenua identify this as necessary to inform a cultural effect assessment).

1.8 Stakeholder Engagement

The following table sets out the suggested parties that could be consulted during the course of the project.

Table 1-3: Parties suggested for Stakeholder engagement.

Stakeholder	Why	When
Waka Kotahi NZ Transport Agency	The site is likely to gain direct access from SH 26 and given the potential volume of traffic generated, it is likely that amendments are required to the access layout.	Commence pre-lodgement with phone call and meeting. They will likely request a review of the resource consent application, especially the Traffic Impact Assessment
Mana whenua	Only tangata whenua can assess cultural effects including input into environmental effects from a māori perspective.	Commence pre-lodgement and continue over the course of the project. It would be advised to consider including an iwi representative as part of a project steering group or similar.
TCDC economic development	Likely supporter of the project who can help to facilitate processes internally and externally.	ASAP.
TCDC regulatory	Consent authority to process district council consents and/or other RMA matters.	Pre-lodgement meeting before seeking resource consent.
WRC regulatory	Consent authority to process regional council consent application.	Pre-lodgement meeting before seeking resource consent from WRC.
Neighbours	Smart Environmental may have concerns regarding reverse sensitivity effects and complaints from visitors. Thames Golf Club – as a likely supporter of the project given the recreation focus and attractor to the area. Neighbours located on the opposite side of SH 26 may have concerns regarding traffic and noise effects.	Pre-lodgement via letter drop then phone call/meeting.
Community	As it will be a community facility, it would be valuable to create public interest and support from the local community.	Pre-lodgement via website/social media. Potential to use an interactive website such as www.seekbeak.com and AI tools to give and receive feedback.

1.9 Conclusion

This scoping study has described the planning context of the site comprising a vacant section of the Ex-Carter Holt Harvey plant located along SH 26, which has been identified as a potential location for developing a sub-regional aquatic and sports hub facility. Planning approval(s) will be required to enable the development of the site.

Both of these pathways will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource management process.

2 Geotechnical

2.1 Geotechnical Considerations

The purpose of this desk-top assessment is to provide a high-level geotechnical comment in relation to the proposed sub-regional Thames Aquatic and Sports Hub facility. The scope of work has comprised:

- A desk study comprising the following:
  - Review of published geological information
  - Review of publicly available Historic Aerial Photos
  - Review of published historical maps
  - Groundwater Information from Waikato Regional Council (WRC) web site
  - Information from Thames Coromandel District Council (TCDC) web site
- A review of potential geotechnical constraints on development
- Preparation of this report.

2.2 Site Location

The site is currently an unoccupied paddock used for animal grazing with a small unused access road. Paeroa Kopu Road runs along the southern boundary of the site, with farmland to the west and land used by Smart Environmental Ltd to the north and east.

The site is located on a generally flat section with a slope in the north and northeast parts of the site.

Drains are noted along the length of the flat section of the site, running perpendicular to the road. The flat lying paddock areas appears slightly higher than the adjacent paddock.

2.3 Desk Study

2.3.1 Geological Information

Published Geological Maps

The published geology (Townsend et al., 2008) indicates that the proposed site covers the Holocene river deposits geological formation with close proximity the Middle to Late Pleistocene “River and hill slope deposits” geological formation with a basic description of each formation shown in the Table 2-1.

Table 2-1: Published geology – Ex-Carter Holt Harvey site

Name	Description
Holocene river deposits	Alluvial gravel, sand, silt, mud and clay with local peat.
Middle to Late Pleistocene “River and hill slope deposits”	Pumiceous sand, silt, mud and clay with interbedded gravel and peat.

The ‘Hauraki Marine Clay Location Plan” presented in IPENZ Practice Note 21 “Farm Dairy Effluent Ponds” version 3 dated August 2017 indicates that the site may be underlain by up to 5m of marine clays which are part of the Holocene River Deposits.(New Zealand Geotechnical Database (NZGD)).

There is no publicly available geological investigation data within 1 km of the site shown on the NZGD.

From observation of recent photographs we consider that groundwater may be less than 0.5m below ground level.

Active Faults Database

The nearest mapped known active fault shown on the GNS Active Faults Database is the northwest striking Kerepehi Fault located approximately 8km to the west/southwest of the site.

No faults are mapped as passing directly through the proposed site location and as such the risk of direct fault rupture is considered low.

2.3.2 Historic Aerial Photographs

We have reviewed publicly available historic aerial photography (www.Retrolens.co.nz and Google Earth Pro).

The earliest available photograph from 1944 shows the site being used as farmland. In this photograph an unknown cut feature is noted to the north of the site. This feature is not present in later photographs.

Field drains running perpendicular to SH26 are visible across the length of the paddock. The drainage pattern is typical of that adopted across the Hauraki Plains to drain peat soils.

The photograph taken in 1976 shows initial development of the adjacent industrial/commercial areas as a wood mill. During this development there appears to be some fill from construction and excavation placed on the proposed site, as seen in Figure 2-1. A small house is noted inside the proposed site boundary which was removed between 2002 and 2009.

Figure 2-1: Proposed site during 1976 development

‘Street view’ images on Google EarthPro show very shallow groundwater in the roadside and field drains. The landform can also be seen to be ‘domed’ between each field drain.

2.3.3 Historic Maps and Plans

Historic maps and plans (www.mapspast.org.nz) were checked for relevant information to the site.

The maps show little information about the site prior to 1989 where the nearby land was noted as a sawmill which continues to 1999.

The 2009 map is largely the same with a name change to mill and the addition of a few buildings to the saw mill on the adjacent land. Later in the 2019 map more buildings were added to the mill with no other changes noted.

2.3.4 Waikato Regional Council (WRC) Data

The Waikato Regional Council Hazards Portal (waikatoregion.maps.arcgis.com) indicates that the proposed site has a rating of “possible” for liquefaction and a low flood risk rating.

The Waikato Regional Council Groundwater map (waikatomaps.waikatoregion.govt.nz) shows the location of bores across the region. Two bores are located on the sawmill site; Bore 60_126 and Bore 60_130, both between 500 and 600m north/northeast of the site drilled to depths of 153m and 6m respectively. Both bores are in a different geological formation and therefore provide limited information with respect to the site.

2.3.5 Thames Coromandel District Council (TCDC) Data

TCDC map data (tcdc.maps.arcgis.com) was checked for relevant geotechnical hazard information pertaining to the site. No geohazards are noted on the web site.

It was noted that the site is shown to be in a low flood risk area.

2.4 Potential Geohazards

The potential geohazards assessed are summarised in Table 2-2.

Some hazards are discussed further in the sections below.

Table 2-2: Potential Geohazards Summary

Geohazard	Risk	Comment
Fault rupture	Low	See Section 2.1.3
Liquefaction	High	See Section 2.4.1
Expansive soils (Shrink/swell Potential of Soils)	Medium/High	See Section 2.4.2
Soft ground / non engineered fill	High	See Section 2.4.3
Slope instability	Low	See Section 2.4.4
Contaminated land	Low	See Section 2.4.5

2.4.1 Liquefaction

Groundwater is expected to be very shallow, and the low lying parts of the site are expected to be underlain by peat or other highly organic soils, over clays. Some sand beds may be present. Sand beds may liquefy, and peat and some clay soils can lose shear strength through strain softening.

Seismically induced lateral spreading into the adjacent drainage ditches may be a risk but can be addressed during development.

Based on the current information and site observation, we consider that the risk of potentially damaging seismic and liquefaction effects is high.

Site specific investigation and assessment recommended to confirm the liquefaction hazard.

It is likely that site specific foundation design will be required, possibly requiring ground improvement or piling to a suitable underlying layer.

2.4.2 Shrink/Swell Potential of Soils

The site is mapped as underlain by interbedded stiff sandy clays and silts, and loose sandy soils of Holocene river deposits, however other evidence suggests it may be underlain by Hauraki Marine clays.

Hauraki marine clay is known to have high plasticity contributing to a high shrinkage and swell capability on drying and wetting. Summer cracking in these clays of up to 30mm wide and up to 600mm deep have been observed.

The risk of expansive soils is therefore considered to be medium to high, to be confirmed with further ground investigation. However, this can be addressed by standard construction practices.

2.4.3 Soft Ground/Non-engineered Fill

There is a strong likelihood of near surface peats and soft soils beneath the low lying parts of the site.

Some areas of non-engineered fill may be anticipated across the site where fill was placed during the adjacent industrial development. Relict foundations may be anticipated beneath the north eastern section of the site where a house was previously located.

2.4.4 Slope Instability

The site is located on essentially level ground, with shallow gradients. There are steeper slopes to the east of the site which may need assessment to assess any risk posed to the site. Overall, however we consider the risk of slope instability to be low.

2.4.5 Contaminated Land

The site is located adjacent to land occupied by a waste management service which was previously a timber mill. We do not know if timber treatment was carried out on site or if treated timber was milled. If either activity was present, there may be a risk of treatment chemicals in the soils and/or groundwater.

There is also risk of demolition debris from the former building on part of the site being present in the soils. This could potentially give rise to metals and asbestos contamination.

There is also a legacy of raised cadmium levels in rural soils impacted by use of superphosphate fertilisers in the greater Waikato area.

We recommend that an environmental specialist be consulted to confirm the status of the site with respect to the National Environmental Standard (NES) for potentially contaminated land.

2.5 Conclusions and Recommendations

The site is believed to be underlain by soft peaty soils, a high groundwater table and highly plastic clay soils

The greatest geohazard risks identified are therefore soft compressible soils (ground giving risk to low bearing capacities for foundations and high settlement risks) and potentially expansive clay soils which can give rise to differential settlements.

The existing drainage of peaty soils will have set off long term settlement of the peat as can be seen by the doming of the ground surface between drains, where the peats at the drain side have settled more than that between the drains.

The very shallow groundwater may give rise to drainage and construction problems with inflows to excavations.

It is likely that these risks may be mitigated/managed by actions such as suitable foundation design, localised ground improvement or raising the ground level with imported engineered fill.

All these risks can be quantified by appropriate ground investigation.

The potential for contaminated land needs to be assessed by a specialist. The most significant potential effect should contaminated soils be present may be increased costs to dispose of unsuitable soils on excavation.

3 Civil Infrastructure

3.1 Civil Infrastructure Considerations

This section provides high-level considerations for the civil infrastructure requirements for the 'sub-regional' aquatic facility option proposed. The following infrastructure is considered:

- Stormwater
- Wastewater
- Water Supply
- Power
- Communications.

3.2 Stormwater

The TCDC asset map in Figure 3-1 shows no public stormwater pipes servicing the site.

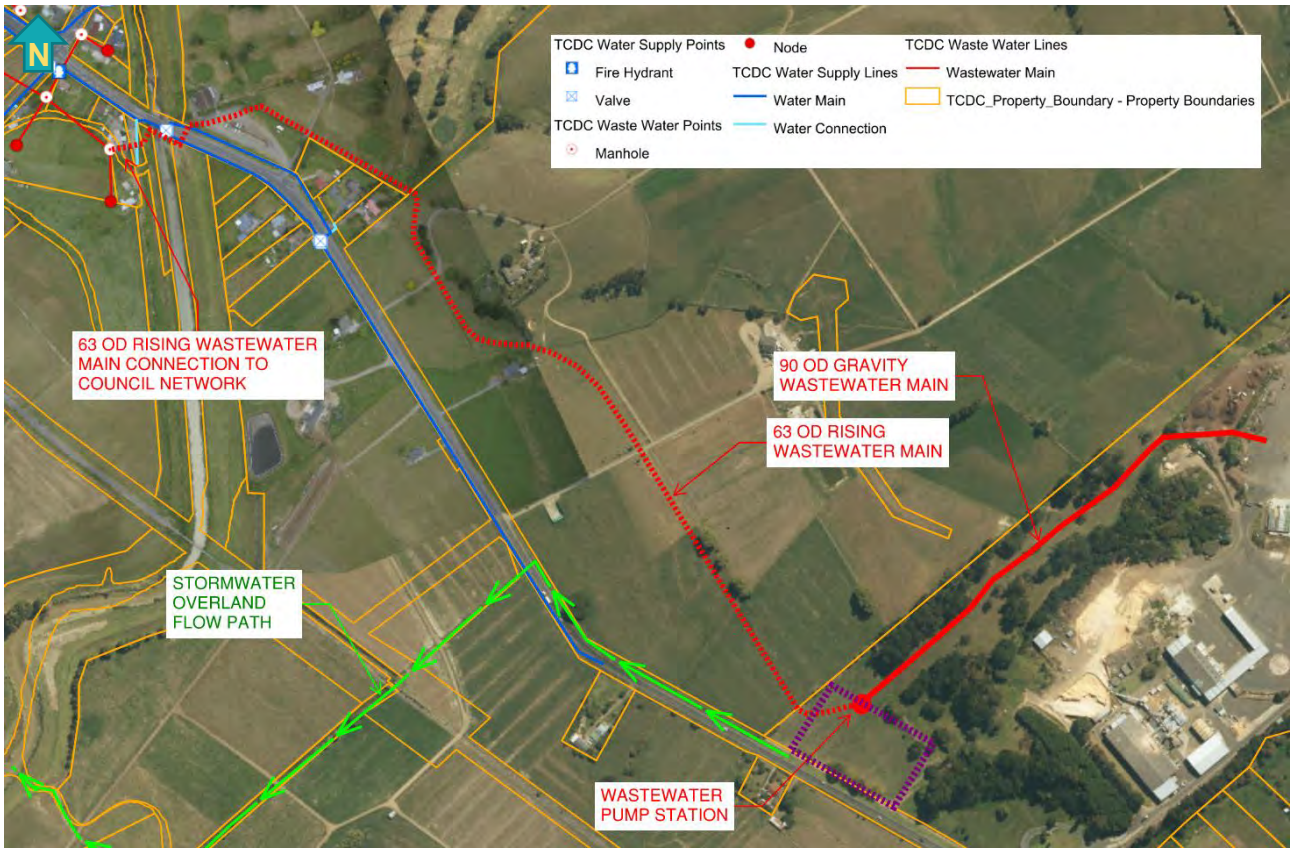


Figure 3-1: TCDC 3 Waters GIS

Due to the known high water table at the site and at times the groundwater level at ground level, stormwater discharge via soakage is not a viable option for the site. The site currently falls southwest toward State Highway 26 (SH26) and stormwater runoff discharges into an open drain along the north side of SH26. This drain flows northwest to a road culvert approximately 120 metres from the site, where it then flows under SH26 and travels southwest through an open drain through farmland to its ultimate discharge point to the Kirikiri Stream approximately 1 kilometre from the site. The new facility would need to discharge to the open drain on SH26 as there is no pipe network to discharge to and soakage is not viable.

In general, all of the site is currently a pervious surface, so it is not possible to match the total impervious surface areas, and therefore cannot match stormwater peak runoff, pre and post development without

stormwater attenuation, as required by TCDC. Stormwater attenuation will need to be done above ground, either from above ground rainwater tanks fed from the facility roof, a pond/basin or combination of both.

The site is located within a 'Low Flood Hazard Area' as show in Figure 3-2 from the TCDC Flood Hazard Map. As a result, flood modelling will be required to assess the effect of the new facility on surrounding properties and to determine a suitable finished floor level.

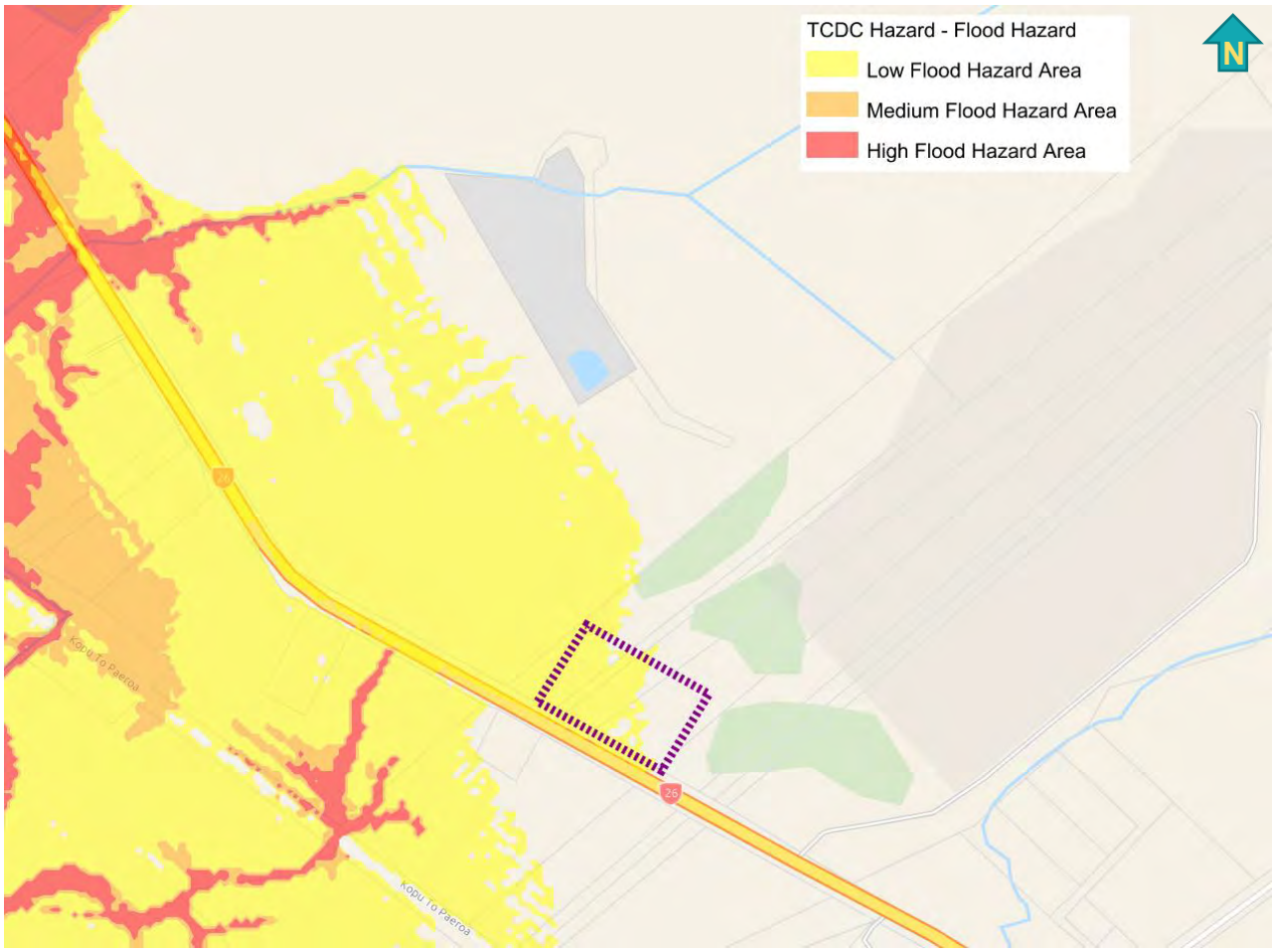


Figure 3-2: TCDC Flood Hazard Map

3.3 Wastewater

The TCDC asset map in Figure 3-1 shows no public wastewater pipes servicing the site, however, as has been sketched on to Figure 3-1, there is a private wastewater pump station within the site and a Ø63mm rising main which travels northwest and connects to the TCDC wastewater network near the Thames Golf Course. This pump station currently services the Ex-Carter Holt Harvey site. The pump station and rising main will need both their condition and capacities assessed to determine if the proposed pool facility can be added to this private network. If the condition or capacity is determined to be insufficient it is likely upgrading of these private wastewater assets will be required. Approval and coordination with the Ex-Carter Holt Harvey site will be required to reuse or upgrade these private wastewater assets.

An agreement with TCDC will need to be reached on a maximum discharge rate to public wastewater system at the Thames Golf Course for activities such as pool draining.

3.4 Water Supply

The TCDC asset map in Figure 3-1 shows no public water supply pipes servicing the site. There is a Ø32mm TCDC water pipe that supplies a residential property to the west of the site, this line would be insufficient to

supply the pool facility. Wells Aotearoa New Zealand GIS shows two water bore locations within the Ex-Carter Holt Harvey Site, as shown in Figure 3-3. There is limited information recorded for both these locations. The western bore is a 153m metre deep Ø150mm water bore constructed in 1985. The eastern location shows it has six shallower Ø110mm water bores, varying from 4m to 10m in depth, constructed in 1993. There are no testing results available for any of the bores on the site. A condition and capacity assessment of these water bores will be required to determine if they could supply the new pool facility.

Figure 3-3: Wells NZ Water Bore GIS

If the existing water bores within the Ex-Carter Holt Harvey site are found to be insufficient to supply the facility, the installation for a new water bore will be required. Alternatively, it could be investigated if the facility could be supplied from the TCDC network near the Thames Golf Course via a new water supply pipe.

3.5 Power

From PowerCo network information received through a Before You Dig enquiry, as shown in Figure 3-4, the Ex-Carter Holt Harvey site is supplied by 11kV overhead HV lines running along the north side of SH26. Discussions will be required with PowerCo to see if a new connection to these lines via a new transformer could provide the facility the required power supply.

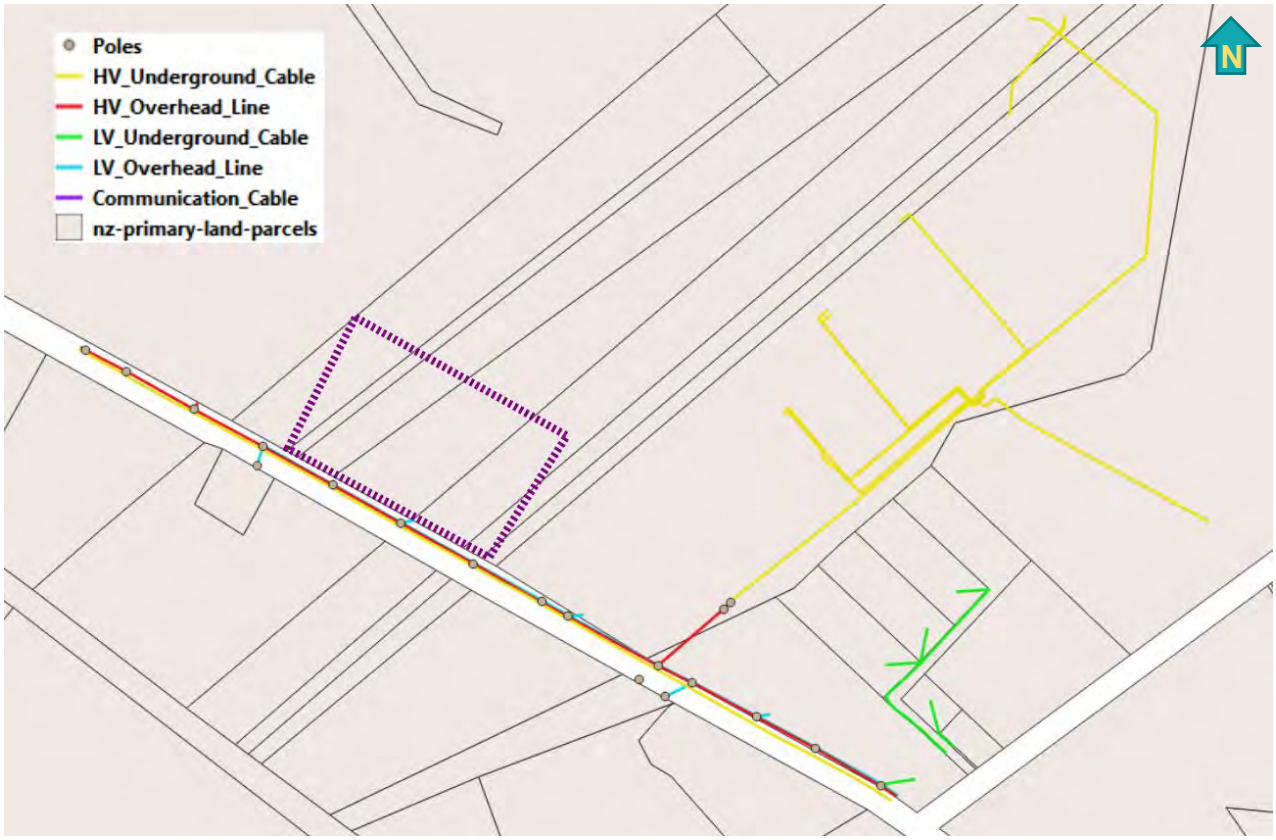


Figure 3-4: PowerCo Network GIS Data

3.6 Communications

From the Chorus communications network plans provided through a Before You Dig enquiry, as shown in Figure 3-5, the site is adjected to their communications networks. Coordination will be required with Chorus to connect the site.

Figure 3-5: Chorus Communications Plans

4 Building Services

4.1 Building Service Considerations

The purpose of this desktop assessment is to provide high-level considerations around the building service requirements for the 'sub-regional' aquatic facility option. The assessment will consider the following:

- Operational costs for heating, cooling, general electricity, water, and chemical costs.
- Service connection requirements for electricity, water, and sewer.

4.2 Facility Area Schedule

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 2700m² complete with:
  - 25m Lane Pool – 1250m³
  - Programme/Warm Water Pool – 350m³
  - Learn to Swim Pool – 200m³
  - Leisure/Toddlers Pool including hydroslide, toys and equipment – 200m³
  - Spa Pool 30m³
  - Sauna/Steam Room
- Front of house 1300m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Café
  - Pool Store
  - Plant Area.

4.3 Estimated Operational Cost

Table 4-1: Operational Cost Summary

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	2700	$303,000 pa	$284,000 pa	$50,000 pa	$40,000 pa
Front of House	1300	$27,000 pa	$26,000 pa		-
Total	**4000**	**$330,000 pa**	**$310,000 pa**	**$50,000 pa**	**$40,000 pa**

Table 4-1 summarises the operational costs associated with the electricity, water, and chemical considering the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% relative humidity (RH) average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.
- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1c/l of 1% chlorine.

4.4 Site Energy Opportunities

The site is located adjacent to an existing industrial site that is planned to be demolished and a new facility built. Initial discussions regarding processes that will be involved at the new industrial facility have identified a high heat requirement to dry the raw product. This is done outside in a revolving drum with a significant amount of heat vented to atmosphere. Within the building itself there is a significant amount of excess heat that is dissipated to atmosphere.

The heat is currently proposed to be generated using a diesel burner.

There are two main opportunities between the aquatic facility and the industrial site which are:

- Potential to share a common central energy centre to provide heat to both facilities. Noting the industrial site typically uses diesel burners, part of this process would be to investigate alternative non-fossil fuel heating options including heat pumps or biomass boilers to reduce operational carbon emissions and operational costs.
- Potential for the proposed aquatic facility to recover the waste heat from the industrial process to increase the efficiency of the heat pumps. Table 4-2 conservatively identifies the operational cost savings with the addition of the heat recovery increasing the heat pump CoP from 3.0 to 4.0.

Table 4-2: Operational Cost Summary with Additional Heat Recovery

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	2700	$238,000 pa	$284,000 pa	$50,000 pa	$40,000 pa
Front of House	1300	$22,000 pa	$26,000 pa		-
Total	**4000**	**$260,000 pa**	**$310,000 pa**	**$50,000 pa**	**$40,000 pa**

Table 4-2 summarises the operational costs associated with the electricity, water, and chemical with the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 4.0 (heating cost of 5.5c/kWh).

4.5 Electrical Site Infrastructure

It is expected that a new dedicated 1,000kVA transformer is required to serve the site power requirements.

4.6 Site Water Infrastructure

The size and flow of the water connection will dictate the fill time for the pools. A minimum 63OD mains water connection is recommended for operations of the facility off the mains water supply (i.e. no water storage requirements onsite). Larger connections can be explored if suitable infrastructure enables faster filling time.

4.7 Site Wastewater Infrastructure

The wastewater connections will need to be explored in detail with the three waters team. A minimum 5l/s connection is generally required for general operations of the facility. Attenuation tanks will be required to attenuate the pool water filtration backwash water flow as well as considerations to emptying of the pools for maintenance.

Thames Aquatic and Sports Hub Feasibility

Ngatea

Prepared for Visitor Solutions
Prepared by Beca Limited

6 December 2023

Contents

Revision History

Revision Nº	Prepared By	Description	Date
A	Nick Yannakis Fraser Brotherstone Bjorn Larsen	For Client Review	11/10/2023
B	Nick Yannakis Fraser Brotherstone Bjorn Larsen	Final	06/12/2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	Nick Yannakis Fraser Brotherstone Bjorn Larsen	pp	06/12/2023
Reviewed by	Kiran Hira Ailsa Fisher	pp	06/12/2023
Approved by	Nick Yannakis		06/12/2023
on behalf of	Beca Limited		

Executive Summary

The facility is proposed to replace the existing Ngatea outdoor pool with a sub-regional aquatic facility. The proposed site is adjacent to the primary school and hockey association and behind the bowling club at Hugh Hayward Domain, 78 Orchard West Road, Ngatea.

The site is in the Hauraki District, which is subject to the Hauraki District Plan (HDP). This site is within the wider Hugh Hayward (Ngatea) Domain and is located in the Reserve (Active) Zone and is not subject to any of the District Plan overlays. The HDP includes nesting tables outlining different activities and their activity status for development in the Reserve (Active) Zone. In this zone, swimming pools and associated accessory buildings are defined and considered as controlled activities under Rule 5.15.4.2(C1), subject to compliance with the relevant Zone Development Standards. Statutory approvals from HDC and WDC will be required to enable the development onsite. The resource consent process will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource consenting process.

The site is located within a ‘Regional Scale Flood Hazard Area’ from the Piako River. Stop bank and floodwater pumpstation protection are in place along the Piako River and are designed to protect Ngatea up to and including a 1% AEP design rainfall event. As a result, further site-specific flood modelling will be required to assess the effect of the new facility on surrounding properties and to determine a suitable finished floor level.

There is sufficient infrastructure to service facility without major upgrades, with the exception of power supply. Significant upgrades will be required to the power supply including upgrades to the transformer. There are also existing services that run across the site that will need to be relocated as part of the enabling works for the project.

The operational costs for an all-indoor facility have been estimated.

Overview

Visitor Solutions are undertaking a feasibility study and business case on behalf of Thames-Coromandel District Council (TCDC) on possible sites for aquatic and sport facilities in Thames.

The existing Thames Centennial Pool is located on an urupa (burial ground) and an agreement between Ngāti Maru and Thames-Coromandel District Council has been reached to relocate the facility by 2027 and the land will be returned to Ngāti Maru. The 50-year-old facility would also have needed investment to address its condition and extend the life of the facility.

Other issues including the under-supply of all-year aquatic facilities in the wider Waikato region and increasing flood risks to the Rhodes Park sports facility have led to the exploration of a combined facility that serves either local or sub-regional needs.

There are currently five sites that are being considered for the facility:

- Thames High School
- Ex-Carter Holt Harvey site
- Wenzlick Block
- Ngatea
- Upper Thames Racecourse

This report forms part of the business case and feasibility assessment for the sub-regional aquatic facility in Ngatea. This report is intended to identify feasibility considerations associated with the proposed site from a Building Services, Civil Infrastructure, and Planning perspective.

It is proposed to replace the existing Ngatea outdoor pool with a sub-regional aquatic facility which is adjacent to the primary school and hockey association and behind the bowling club at Hugh Hayward Domain, 78 Orchard West Road, Ngatea.

Figure 0-1: Proposed site location (Source: Hauraki District Council (HDC) Property Maps)

1 Planning

1.1 Resource Management Consideration

The purpose of this desk-top assessment is to provide a high-level planning scope (feasibility study) in relation to the existing Ngatea outdoor pool site for accommodating a new sub-regional aquatic facility. The assessment:

- Identifies the relevant planning zones and notations that apply to the site under the district and regional plans,
- Summarises the likely consent requirements to enable the construction and operation of the facility under the district and regional plans, and
- Provide recommendations for progressing the resource consent process.

1.2 Hauraki District Plan Zoning, and Planning Notations

1.2.1 The site

The site is located in the Hauraki District, which is subject to the Hauraki District Plan (HDP). It comprises the existing Ngatea outdoor pool swimming pool facility (red rectangle below), which forms part of the wider Hugh Hayward (Ngatea) Domain. Access to the site is provided via an accessway from State Highway 2 (SH 2). The site is located in the Reserve (Active) Zone and is not subject to any of the District Plan overlays. There are trees of significance identified on the wider property. The site location and its zoning are shown in Figure 1-1 below.

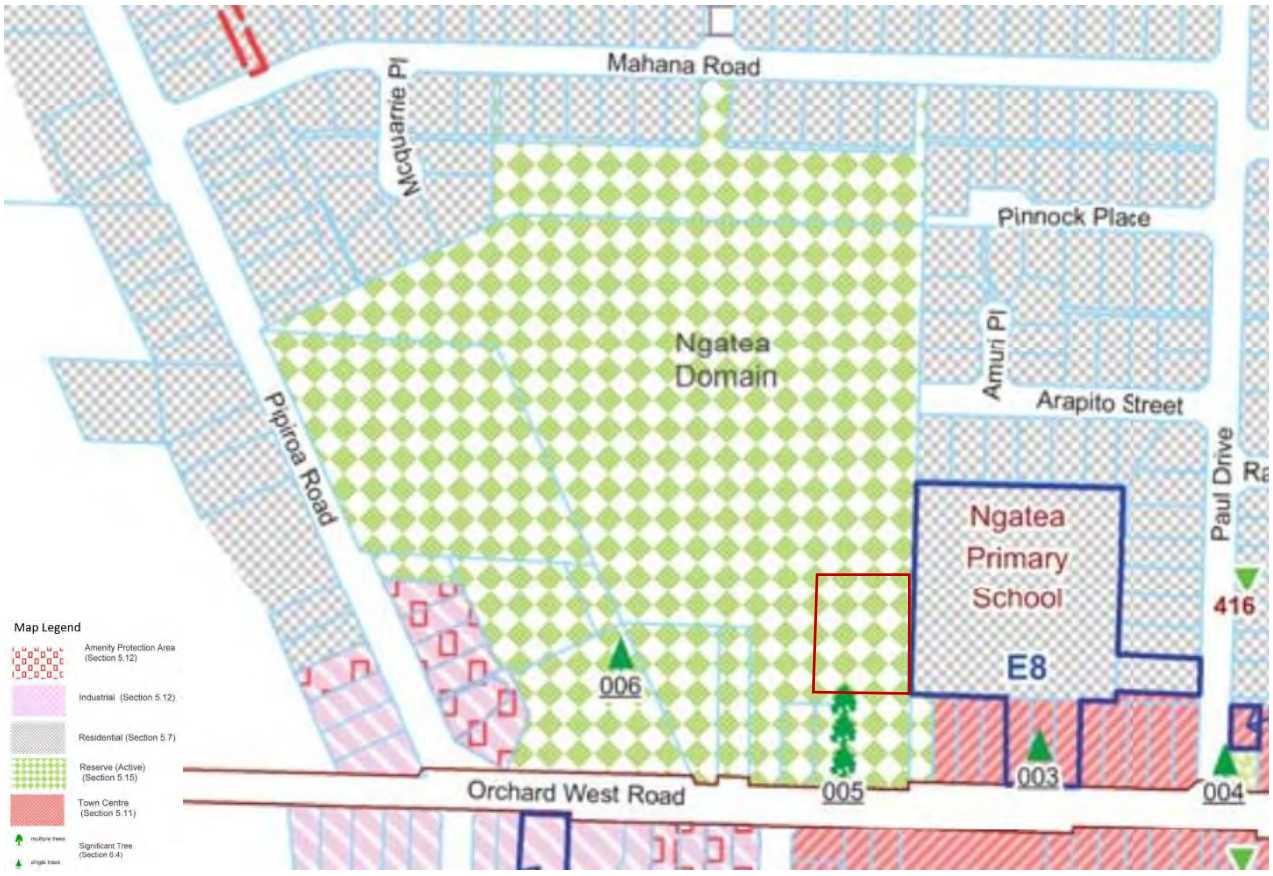


Figure 1-1: Site location and District Plan zoning.

An archaeological site search[1] has revealed that there are no recorded archaeological sites on the property itself or in the immediate surrounding area. An extract of the site search is shown in Figure 1-2 below.

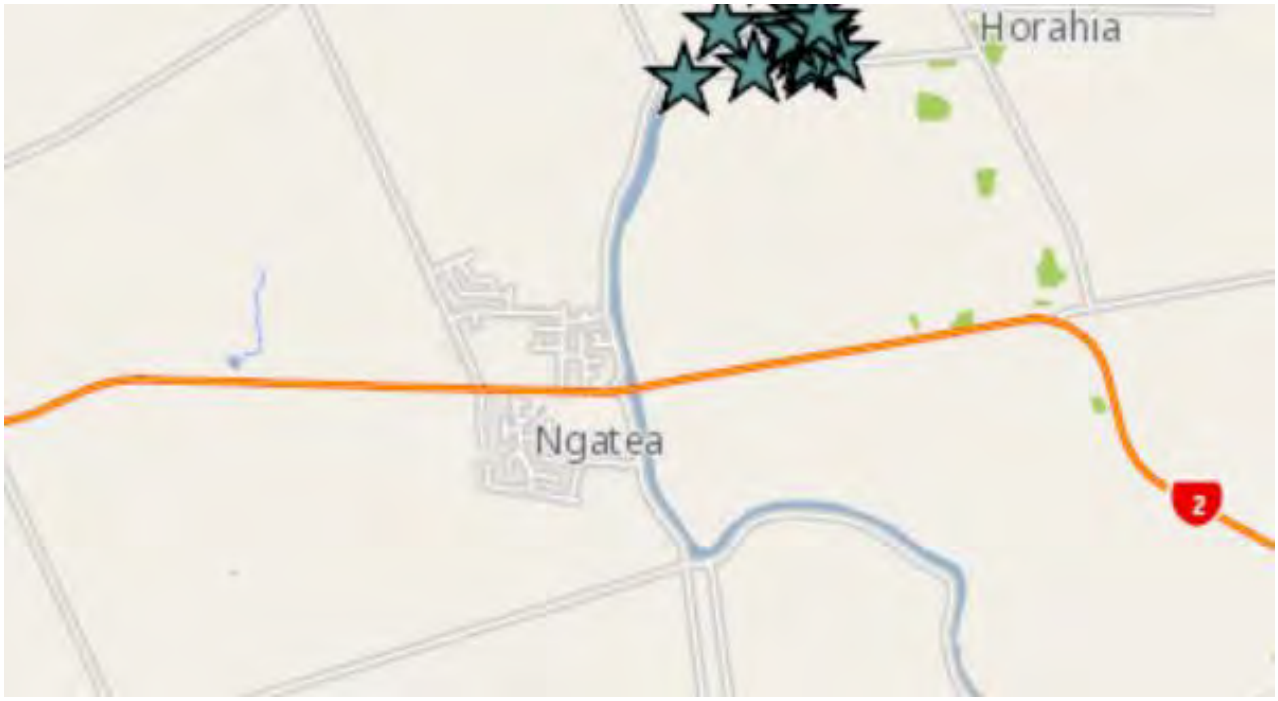


Figure 1-2: Archaeological sites.

1.2.2 Reserve (Active) Zone

The HDP includes nesting tables outlining different activities and their activity status for development in the Reserve (Active) Zone. In this zone, swimming pools and associated accessory buildings are defined and considered as controlled activities under Rule 5.15.4.2(C1), subject to compliance with the relevant Zone Development Standards.

1.2.3 HDP Rules Assessment

A summary of the relevant HDP rules for establishing a controlled activity in the Reserve (Active) Zone are provided in Table 1-1 below. The table outlines the relevant Zone Development Standards and provides comments on likely resource consent triggers.

Table 1-1: PDP Rules Assessment

Provision	Activity Status	Comment
Section 5.15 – Reserve (Active) Zone		
Rule 5.15.5 – Development standards	Controlled activities	The bulk and location requirements for buildings and structures in the Reserve (Active) Zone are: • Maximum height: 9m • Daylight controls: 2m in height at a 45° angle • Front yard setback: 5m • Side and rear setbacks: 8m and 3m from sensitive zone boundaries • Maximum coverage: 50% • Maximum GFA for accessory buildings: 150m²

[1] New Zealand Archaeological Association website: https://archsite.eaglegis.co.nz/NZAAPublic

Provision	Activity Status	Comment
		Non-compliance with these standards would trigger the need for resource consent as a **restricted discretionary activity** under Rule 5.15.4.3 of the HDP.
Section 8.2 – Design & location of buildings		
8.2.2.3 - Floor level standards	**Permitted**	For buildings in all zones, the provisions of the Building Act 2004 apply. The exceedance of this standard will trigger the need for resource consent as a **restricted discretionary activity** under Rule 8.2.2.4 of the HDP**.**
8.2.5.3(1 - 2) - Glare and lighting	**Permitted**	This rule outlines rules and standards in relation to Glare and lighting from new buildings. The relevant standards are: 1) All buildings are to be finished to ensure reflection from the building surface does not reflect onto adjoining properties or roads. 2) Light from a building or structure will not exceed 8.0 lux at the boundary of an adjoining site or road. Non-compliance with these standards would trigger the need for resource consent as a **restricted discretionary activity** under Rule 8.2.5.4 of the HDP**.**
Section 8.3 – Amenity matters		
8.3.1.3 - Noise	**Permitted**	In the Reserve (Active) Zone noise of activities is limited to 55dB all day, while noise measured in neighbouring zones are limited to 50dB between 7:00 am and 12 pm. The exceedance of these limits would trigger the need for resource consent as a **restricted discretionary activity** under Rule 8.3.1.4 of the HDP**.**
8.3.1.3(3) – Construction noise	**Permitted**	In the Reserve (Active) Zone construction noise (typical duration) is restricted to 75dB between 7:30 am and 6:30 pm. Non-compliance with these limits would trigger the need for resource consent as a **restricted discretionary activity** under Rule 8.3.1.4 of the HDP**.**
Section 8.4 – Vehicle parking loading and access		
8.4.1.3 - Parking spaces	**Permitted**	Indoor sports facilities are required to provide 6 parking spaces per court or 1 parking space per 25m² GFA, whichever is greater. If these standards are not achieved, resource consent as a **restricted discretionary activity** would be required under Rule 8.4.1.4 of the HDP**.**
8.4.3. – Vehicle crossing and access	**Permitted**	Vehicle access specifications (vehicle crossing design, sight distances and separation distances) need to comply with the HDC Engineering manual, and specification outlined in Appendix 1, Table 3.1.

Provision	Activity Status	Comment
		If compliance with these is not achieved, resource consent as a **restricted discretionary activity** would be required under Rule 8.4.1.4 of the HDP. While not specified in the District Plan, the additional vehicle movements generated by the facility could require a Traffic Impact Assessment (TIA) in support of the wider resource consent. Additionally, the site will likely gain access from SH 2, which requires approval from Waka Kotahi, who can necessitate additional access design requirements over and above those of the district plan.

1.3 National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) is a national set of standards and rules that apply to specific activities on certain 'pieces of land' that have or are more likely than not have had elevated levels of contaminants.

Whether the NESCS is relevant or not can be informed through a Preliminary Site Investigation (PSI), undertaken by a contaminated land specialist, who reviews information such as records from HDC/WRC, historical aerial photography, and a site walkover. A Detailed Site Investigations (DSI) (e.g., soil sampling and testing) may be required to corroborate the findings of the PSI.

If the NESCS is deemed relevant, resource consent requirements may be triggered depending on the extent of soil disturbance required and whether the PSI concludes it is highly unlikely that there is a risk to human health. The PSI may require that a DSI is undertaken to confirm the risk of an activity to human health.

1.4 Waikato Regional Plan

The following matters will need to be considered in relation to the Waikato Regional Plan (WRP) to enable the development of the proposed facility onsite:

1.4.1 Bulk Earthworks

The WRP outlines permitted activity standards for soil disturbance in the region. The standards are largely focused on managing erosion sediment control. There are also rules regarding encroachment of the groundwater table depending on the scale of excavations. If the earthworks of the proposed facility do not comply with the permitted activity standards of the WRP, resource consent would be required.

1.4.2 Stormwater Discharge to Water and Land

Depending on the method of stormwater management onsite, the WRP outlines permitted activity standards for discharging stormwater to land and water. These standards seek to minimise sediment and contaminant-laden runoff. If the permitted standards for stormwater disposal are not met, resource consent will be required.

1.4.3 Water Takes

Irrigation and general water needs may require water to be taken from groundwater resources. The WRP outlines permitted standards for bores and groundwater takes. These standards are largely dependent on the volume of extraction and managing adverse effects on groundwater quality. Should groundwater extraction be required for the operation of the proposed facility, and the water take does not comply with the permitted standards, resource consent would be required.

1.4.4 Contaminated Land

As well as the NESCS, the WRP also have rules in relation to undertaking activities on contaminated sites and the associated risk to human health and environmental receptors. A contaminated land investigation (PSI and possible subsequent DSI) is required to inform the consenting requirements in relation to WRP contaminated land provisions.

1.5 Authorising the Use

Having considered the planning investigation undertaken in this report, resource consent for the proposed land use would likely be required for a controlled activity under the HDP, to establish an aquatic facility onsite. There are also potential bulk and location infringements that would require restricted discretionary consent.

Resource consent may also be needed from HDC under the NESCS pending further contaminated land investigations.

While the potential regional plan provisions have been noted, it is recommended that the specific consent requirements be revisited when the necessary information is available.

An alternative pathway would be to consider serving a Notice of Requirement (NoR) to designate the land for a specific purpose by HDC. This could be an appropriate pathway if (for example):

- There is an interest in protecting the land in the interim, whilst maintaining flexibility in relation to timeframes for design and/or development; or
- There is a desire to stage the works (and thus avoid multiple resource consent processes with HDC); or
- If the facility is proposed on land not owned by the requiring authority, the designation provides a basis for the subsequent acquisition of land needed for the project.

Despite archaeological sites not being identified on site, it is recommended that an archaeological authority is obtained from Heritage New Zealand Pouhere Taonga (HNZPT) to provide for the accidental discovery of archaeological finds during the earthworks stage of the project.

1.6 Specialist Investigation

As part of an application process, technical investigations will be required to understand the potential effects of the project which could inform the design and operation of the aquatic facility.

Technical inputs to support the resource consent process may include:

- Planning, (to provide further planning advice, and prepare the overarching application),
- Civil engineering (e.g., three waters infrastructure, earthworks, and minimum floor levels, and flood assessment),
- Transport assessment (access, parking, and TIA),
- Landscape and visual assessment (provide guidance on built form and assess effects of built form and natural character),
- Contaminated land investigation (PSI and possible DSI),
- Geotechnical assessment (to inform civil engineering),
- Archaeological investigation (to advise regarding an archaeological authority), and
- Cultural impact assessment (should Mana Whenua identify this as necessary to inform a cultural effect assessment as part of a resource consent application).

1.7 Stakeholder Engagement

The following table sets out the suggested parties that could be consulted during the course of the project.

Table 1-2: Parties suggested for Stakeholder engagement.

Stakeholder	Why	When
Waka Kotahi NZ Transport Agency	The site will likely gain access via the existing accessway from SH 2.	Commence pre-lodgement meeting. They will likely request a review of the resource consent application, particularly the TIA.
Tangata whenua	Only tangata whenua can assess cultural effects including input into environmental effects from a māori perspective.	Commence pre-lodgement and continue over the course of the project.
HDC regulatory	Consent authority to process district council consents and/or other RMA matters.	Pre-lodgement meeting before seeking resource consent.
WRC regulatory	Consent authority to process regional council consent application.	Pre-lodgement meeting before seeking resource consent from WRC.
Neighbours	Neighbours (particularly MOE) may have concerns regarding traffic, and noise effects.	Pre-lodgement via letter drop then phone call/meeting.
Community	As this will be a community facility, it would be valuable to create public interest and support from the local community.	Pre-lodgement via workshops, and ongoing via website/social media.

1.8 Conclusion

This scoping study has described the planning context of the site that has been identified as a potential location for developing a new local aquatic facility. Statutory approvals from HDC and WDC will be required to enable the development onsite.

The resource consent process will require further technical investigation and engagement with stakeholders. Such activities will help to inform design outcomes and the resource consenting process.

2 Civil Infrastructure

2.1 Civil Infrastructure Considerations

This section provides high-level considerations for the civil infrastructure requirements for the sub-regional aquatic facility option proposed. The following infrastructure is considered:

- Stormwater
- Wastewater
- Water Supply
- Power
- Communications.

2.2 Stormwater

The HDC asset map in Figure 2-1 shows the three waters servicing the site.

Figure 2-1: HDC 3 Waters GIS

The site currently discharges to a Ø450mm reinforced concrete stormwater main that runs north along the eastern boundary of the site. There is also a Ø225mm reinforced concrete stormwater main which runs

across the middle of the site west to east, this main would likely need to be realigned as part of site enabling works for a new facility.

Half of the site is currently a pervious surface, so it is not possible to match the total impervious surface areas as new carparking will be required as well as the facility. It is therefore not possible to match stormwater peak runoff pre and post development without stormwater attenuation, as required by HDC. Stormwater attenuation will likely need to be done above ground, either from above ground rainwater tanks fed from the facility roof, a pond/basin or combination of both.

The site is located within a 'Regional Scale Flood Hazard Area' from the Piako River as show in Figure 2-2 from the Waikato Regional Hazards Portal.

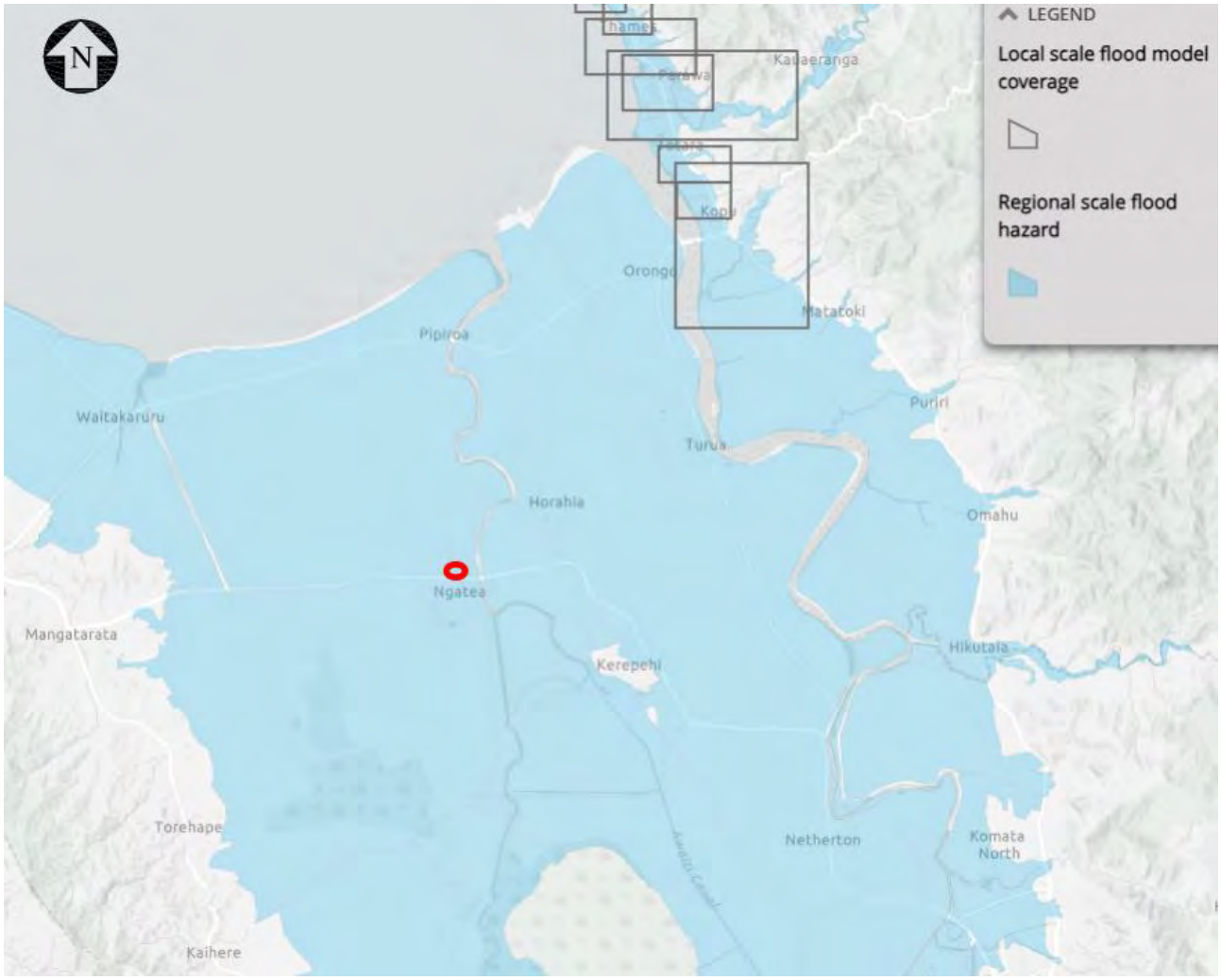


Figure 2-2: Waikato Regional Hazards Portal - Regional Scale Flood Hazard

Stop bank and floodwater pumpstation protection, as shown in Figure 2-3, are in place along the Piako River and are designed to protect Ngatea up to and including a 1% AEP design rainfall event from Waikato Regional Hazards Portal's Flood Management GIS. As a result, further site-specific flood modelling will be required to assess the effect of the new facility on surrounding properties and to determine a suitable finished floor level.

Figure 2-3: Waikato Regional Hazards Portal - Flood Management

2.3 Wastewater

The HDC asset map in Figure 2-1 shows the site currently discharges wastewater to a Ø150mm reinforced concrete main on its south boundary that runs to the east to the council wastewater network. An agreement with HDC will need to be reached on a maximum discharge rate to public wastewater system for activities such as pool draining.

2.4 Water Supply

The HDC asset map in Figure 2-1 shows the site is currently supplied by a Ø50mm AC water supply lateral from a Ø150mm uPVC water supply main along the northern side of Orchard West Road. Coordination with HDC will be required to determine if the current site connection will be sufficient to supply a new facility and agreements reached on a maximum intake rate from the public water supply network for activities such as pool refilling.

2.5 Power

From PowerCo network information received through a Before You Dig enquiry, as shown in Figure 2-4, the current site is supplied from an underground LV services from a transformer (ID TC4739) located to the southwest of the site on Orchard West Road. There will be a significant upgrade to the power supply required including an upgrade to the transformer. Coordination with PowerCo will be required to determine whether there is enough electrical capacity in the network to serve the site.

Figure 2-4: PowerCo Network GIS Data

2.6 Communications

From the Chorus communications network plans provided through a Before You Dig enquiry, as shown in Figure 2-5, the site is currently supplied with Telecoms. Coordination with Chorus will be required to determine if the current site connection will be sufficient to supply a new facility.

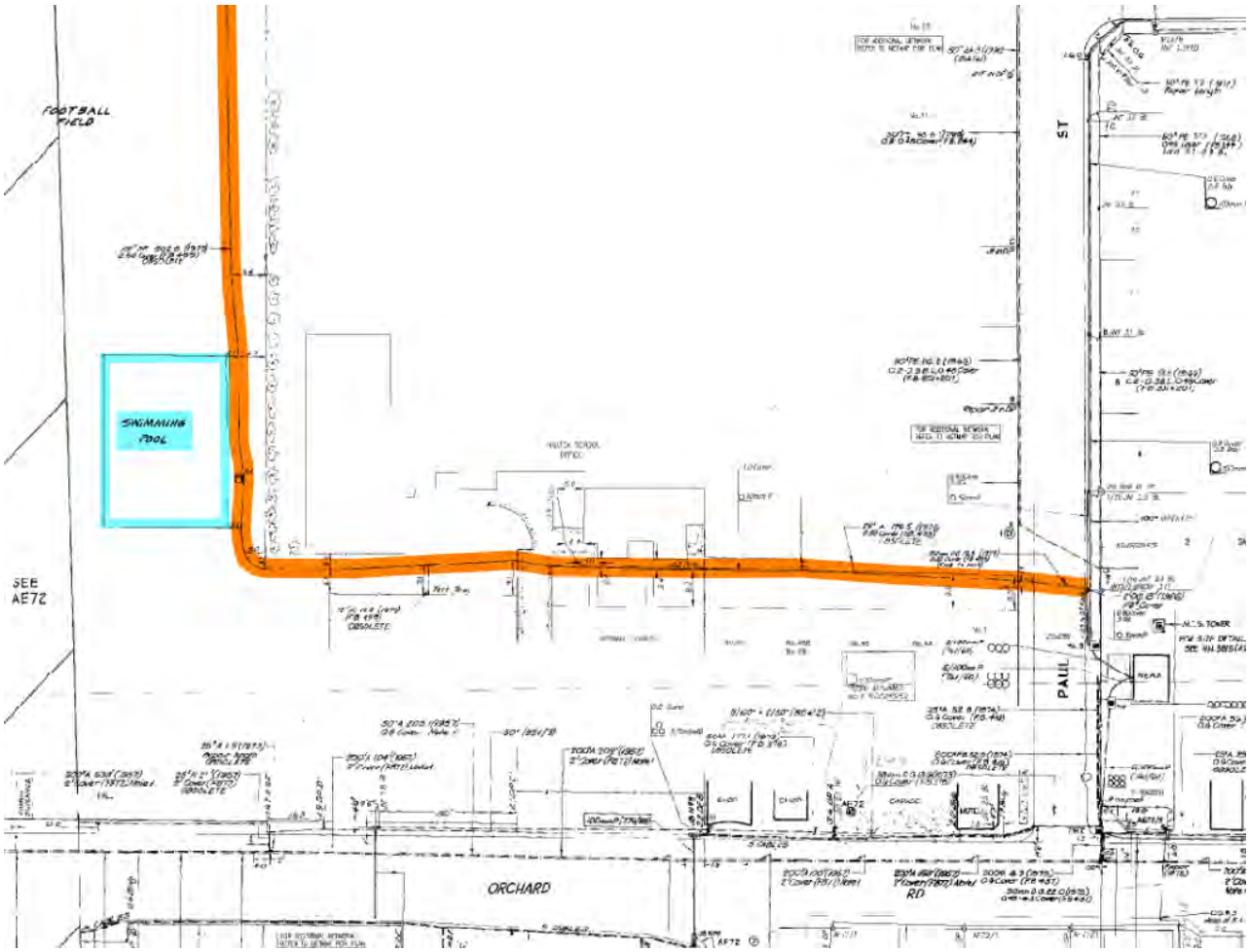


Figure 2-5: Chorus Communications Plans

3 Building Services

3.1 Building Service Considerations

The purpose of this desktop assessment is to provide high-level considerations around the building service requirements for the local aquatic facility option. The assessment will consider the following:

- Operational costs for heating, cooling, general electricity, water, and chemical costs.
- Service connection requirements for electricity, water, and sewer.

3.2 Facility Area Schedule

The facility has been analysed based on the following area schedule provided by Architecture HDT:

- Pool hall 2700m² complete with:
  - 25m Lane Pool – 1250m³
  - Programme/Warm Water Pool – 350m³
  - Learn to Swim Pool – 200m³
  - Leisure/Toddlers Pool including hydroslide, toys and equipment – 200m³
  - Spa Pool 30m³
  - Sauna/Steam Room
- Front of house 1300m² complete with:
  - Reception/Lobby
  - General Administration and Office Space
  - Staff Room including Staff Changing Room
  - Male/Female/Family/Accessible Change Space
  - Wet and Dry Circulation
  - Café
  - Pool Store
  - Plant Area.

3.3 Estimated Operational Cost

Table 3-1: Operational Cost Summary

	Area (m²)	Conditioning	General Electricity	Water	Chemicals
Main Pool Hall	2700	$303,000 pa	$284,000 pa	$50,000 pa	$40,000 pa
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Total	**4000**	**$330,000 pa**	**$310,000 pa**	**$50,000 pa**	**$40,000 pa**

Table 3-1 summarises the operational costs associated with the electricity, water, and chemical considering the following assumptions:

- Electricity tariff of 21c/kWh.
- Energy consumption based on benchmarked data for similar facilities with facility built out of water table.
- Electrified heating site based on heat pump technology with an average co-efficient of performance (CoP) of 3.0 (heating cost of 7c/kWh).
- Pool hall conditioned 24/7 to 27°C and 60% relative humidity (RH) average with medium to high level of heat recovery and utilising fresh air dehumidification.
- Front of house generally conditioned 15 hours per day between 21-24°C during occupied hours.
- Chemical and water consumption is based on estimated water volumes of pool water.
- Water is estimated at $2/m³.
- Chlorine is estimated at $0.1c/l of 1% chlorine.

3.4 Electrical Site Infrastructure

It is expected that a new dedicated 1,000kVA transformer is required to serve the site power requirements.

3.5 Site Water Infrastructure

The size and flow of the water connection will dictate the fill time for the pools. A minimum 63OD mains water connection is recommended for operations of the facility off the mains water supply (i.e. no water storage requirements onsite). Larger connections can be explored if suitable infrastructure enables faster filling time.

3.6 Site Wastewater Infrastructure

The wastewater connections will need to be explored in detail with the three waters team. A minimum 5l/s connection is generally required for general operations of the facility. Attenuation tanks will be required to attenuate the pool water filtration backwash water flow as well as considerations to emptying of the pools for maintenance.

APPENDIX D
CAPITAL COST ESTIMATES

mpm projects

Rough Order of Cost Estimate

Thames High School rev C

16 November 2023

P2635 - Thames Aquatic Facility - Thames High School rev C

MPM Projects Limited, 6 Kirk Street, Grey Lynn, Auckland
P O Box 3257, Auckland <> Phone: (09) 303 9420 <>

mpm projects

Thames High School rev C

Rough Order of Cost Estimate - November 2023
Clarifications & Exclusions

Clarifications

Estimates are based on the following :

HTD Skk 1010A Thames High School Rev C Dated 10 November 2023
Thames Aquatic and Sports Hub Feasibility - Thames High School Site dated 8 September 2023
Assumes piled foundations
Services infrastructure connections have been assumed based on Beca Infrastructure reports
Estimates assume a traditional procurement process
A separate item of esclation from Nov 23 to Dec 27 has been allowed

Exclusions

The following are excluded from these estimates:

Site specific allowances for geotech issues other than the assumed elevated platforms and piling
Site specific allowances for removal of hazardous materials & site contamination
Development Contributions & Infrastructure growth charges
Land, Finance & Legal costs
GST

OPTION 1: Thames High School rev C

mpm projects

Rough Order of Cost Estimate - November 2023

Thames High School rev C

				Low				**High**
Site Preparation								
Relocate horticultual shed & site demolitions	1	Sum	30,000	30,000	1	Sum	35,000	35,000
Demo & re-landscape existing school pool	1	Sum	200,000	200,000	1	Sum	220,000	220,000
Prov Allowance for Piling (assumed 650dia conc piles at 8m centres, 20m deep)	1	Sum	1,000,000	1,000,000	1	Sum	1,200,000	1,200,000
New Building								
Entrance Lobby	175	m2	7,500	1,312,500	175	m2	8,300	1,452,500
Reception	22	m2	7,500	165,000	22	m2	8,300	182,600
LTS Office	10	m2	7,500	75,000	10	m2	8,300	83,000
Administration Offices	45	m2	7,500	337,500	45	m2	8,300	373,500
Marshalling Room	80	m2	7,500	600,000	80	m2	8,300	664,000
Birthday Party Room	55	m2	7,500	412,500	55	m2	8,300	456,500
Staffroom and Staff Change	60	m2	9,000	540,000	60	m2	9,900	594,000
Change Rooms (inc Family & Accessible Change)	162	m2	9,000	1,458,000	162	m2	9,900	1,603,800
PWS Plantroom	180	m2	4,000	720,000	180	m2	4,400	792,000
Chlorine Room	30	m2	4,000	120,000	30	m2	4,400	132,000
Storage	53	m2	4,000	212,000	53	m2	4,400	233,200
MSB	23	m2	4,000	92,000	23	m2	4,400	101,200
Pool Hall	1,640	m2	5,700	9,348,000	1,640	m2	6,300	10,332,000
Total GFA	2,535				2,535			
Lane Pool 462m2	1	Sum	3,750,000	3,750,000	1	Sum	4,300,000	4,300,000
Spa 23m2	1	Sum	250,000	250,000	1	Sum	290,000	290,000
Programmes 160m2 (plus ramp 23m2)	1	Sum	1,800,000	1,800,000	1	Sum	2,100,000	2,100,000
Learn to Swim Pool 80m2	1	Sum	700,000	700,000	1	Sum	800,000	800,000
Splashpad 60m2	1	Sum	500,000	500,000	1	Sum	600,000	600,000
Toddlers Pool 15m2	1	Sum	125,000	125,000	1	Sum	150,000	150,000
Prov Allowance for equipment & fitout	1	Sum	400,000	400,000	1	Sum	450,000	450,000
Prov Allowance for Audio Visual /Active IT Equipmen	1	Sum	250,000	250,000	1	Sum	300,000	300,000
Outdoor AHU Yard	320	m2	720	230,400	320	m2	720	230,400
Outdoor Yard	1	Sum	150,000	150,000	1	Sum	165,000	165,000
Prov Allowance for hard paving around building	1	Sum	250,000	250,000	1	Sum	300,000	300,000
Prov Allowance for seating, bins, planters etc	1	Sum	100,000	100,000	1	Sum	110,000	110,000
Prov Allowance for landscaping	1	Sum	150,000	150,000	1	Sum	200,000	200,000
Prov Allowance for services infrastucture	1	Sum	1,000,000	1,000,000	1	Sum	1,200,000	1,200,000
Prov Allowance for carparking	1	Sum	250,000	250,000	1	Sum	300,000	300,000
Sub Total				**26,527,900**				**29,950,700**
Design Development Contingency	5%			1,327,000	5%			1,498,000
Professional Fees	15%			4,179,000	15%			4,718,000
Consent fees	1.5%			418,000	1.5%			472,000
Project Contingency	15%			4,868,000	15%			5,496,000
Total - Thames High School site				**$37,319,900**				**$42,134,700**
			Say	**$37,500,000**			**Say**	**$42,500,000**
Note additional cost of escalation from Nov 2023 to Dec 2027	13%			$4,875,000	13%			$5,525,000

mpm projects

Rough Order of Cost Estimate

Thames Aquatic Facilities

8 January 2024

P2635 - Thames Aquatic Facilities

MPM Projects Limited, 6 Kirk Street, Grey Lynn, Auckland
P O Box 3257, Auckland <> Phone: (09) 303 9420 <>

mpm projects

Thames Aquatic Facilities

Rough Order of Cost Estimate - January 2024
Clarifications & Exclusions

Clarifications

Estimates are based on the following :

- HDT Kopu south Sk2109 B rev C detailed plan
- HDT Kopu south Sk2109 B rev C site plan
- HDT Sk1711A Race course site - 1-200
- BECA Thames Aquatic and Sports Hub Feasibility - Upper Thames Racecourse
- HDT Ngatea Sk10-3D Detailed Plan
- HDT Ngatea Sk10-3C Site Plan
- Assumes piled foundations
- Services infrastructure connections have been assumed based on Beca Infrastructure repo
- Estimates assume a traditional procurement process
- A separate item of esclation from Jan 24 to Jan 28 has been allowed

Exclusions

The following are excluded from these estimates:

- Site specific allowances for geotech issues other than the assumed substructure & piling
- Site specific allowances for removal of hazardous materials & site contamination
- Development Contributions & Infrastructure growth charges
- Land, Finance & Legal costs
- GST

Estimate Summary

	Low	High
Option 3: Kopu South site	68,800,000	77,000,000
Option 2: Upper Racecourse Site	41,800,000	47,000,000
Option 4: Ngatea Site	60,400,000	67,000,000

Thames Aquatic Facilities

Rough Order of Cost Estimate - January 2024

OPTION 3: Kopu South Site

				Low				High
Site Preparation								
Provisional allowance to preload the site	1	Sum	700,000	700,000	1	Sum	1,100,000	1,100,000
Prov Allowance for Piling (assumed 650dia conc piles at 8m centres, 20m deep)	1	Sum	3,000,000	3,000,000	1	Sum	3,300,000	3,300,000
New Building								
Entrance Lobby	210	m2	7,500	1,575,000	210	m2	8,300	1,743,000
Reception	75	m2	7,500	562,500	75	m2	8,300	622,500
Café	50	m2	7,500	375,000	50	m2	8,300	415,000
Birthday Party Room	22	m2	7,500	165,000	22	m2	8,300	182,600
Administration & Staffroom	125	m2	7,500	937,500	125	m2	8,300	1,037,500
Dry Change	88	m2	7,500	660,000	88	m2	8,300	730,400
Studio & Fitness	215	m2	7,500	1,612,500	215	m2	8,300	1,784,500
Wet Change	451	m2	9,000	4,059,000	451	m2	9,900	4,464,900
Marshalling Room	126	m2	7,500	945,000	126	m2	8,300	1,045,800
Storage	107	m2	4,000	428,000	107	m2	4,400	470,800
Plantroom	282	m2	4,000	1,128,000	282	m2	4,400	1,240,800
Electrical/ MSB	83	m2	4,000	332,000	83	m2	4,400	365,200
Chlorine Room	88	m2	4,000	352,000	88	m2	4,400	387,200
Sauna & Steam Room	30	m2	9,000	270,000	30	m2	9,900	297,000
Pool Hall	2,380	m2	5,700	13,566,000	2,380	m2	6,300	14,994,000
Circulation	13	m2	7,500	562,500	13	m2	8,300	622,500
Total GFA	4,345				4,345			
Lane Pool 528m2	1	Sum	4,200,000	4,200,000	1	Sum	4,800,000	4,800,000
Spa 15m2	1	Sum	200,000	200,000	1	Sum	250,000	250,000
Programmes/ Learn to Swim Pool 300m2	1	Sum	2,400,000	2,400,000	1	Sum	2,800,000	2,800,000
Leisure Pool 231m2	1	Sum	2,000,000	2,000,000	1	Sum	2,300,000	2,300,000
Toddlers Pool 35m2	1	Sum	275,000	275,000	1	Sum	320,000	320,000
Hydro Slide Pool 52m2	1	Sum	320,000	320,000	1	Sum	370,000	370,000
Sauna & Steam room fitout & plant	1	Sum	200,000	200,000	1	Sum	230,000	230,000
Prov Allowance for Hydro Slide	1	Sum	1,100,000	1,100,000	1	Sum	1,300,000	1,300,000
Prov Allowance for equipment & fitout	1	Sum	700,000	700,000	1	Sum	750,000	750,000
Prov Allowance for Audio Visual /Active IT Equipmer	1	Sum	450,000	450,000	1	Sum	500,000	500,000
Service Yard	160	m2	720	115,200	160	m2	720	115,200
Prov Allowance for hard paving around building	1	Sum	350,000	350,000	1	Sum	400,000	400,000
Prov Allowance for seating, bins, planters etc	1	Sum	100,000	100,000	1	Sum	110,000	110,000
Prov Allowance for landscaping	1	Sum	450,000	450,000	1	Sum	500,000	500,000
Prov Allowance for services infrastucture	1	Sum	2,500,000	2,500,000	1	Sum	2,750,000	2,750,000
Prov Allowance for carparking	1	Sum	1,800,000	1,800,000	1	Sum	1,800,000	1,800,000
Prov Allowance for State Highway 26 Access Modification	1	Sum	500,000	500,000	1	Sum	575,000	575,000
Sub Total				**48,890,200**				**54,673,900**
Design Development Contingency	5%			2,445,000	5%			2,734,000
Professional Fees	15%			7,701,000	15%			8,612,000
Consent fees	1.5%			771,000	1.5%			862,000
Project Contingency	15%			8,972,000	15%			10,033,000
Total - Kopu South Site				**$68,779,200**				**$76,914,900**
			Say	**$68,800,000**			**Say**	**$77,000,000**

Thames Aquatic Facilities

Rough Order of Cost Estimate - January 2024

OPTION 2: Upper Racecourse Site

				Low				**High**
Site Preparation								
Prov Allowance for Piling (assumed 650dia conc piles at 8m centres, 20m deep)	1	Sum	1,700,000	1,700,000	1	Sum	1,900,000	1,900,000
New Building								
Entrance Lobby	175	m2	7,500	1,312,500	175	m2	8,300	1,452,500
Reception	24	m2	7,500	180,000	24	m2	8,300	199,200
Administration & Staffroom	103	m2	7,500	772,500	103	m2	8,300	854,900
Birthday Party Room	62	m2	7,500	465,000	62	m2	8,300	514,600
Wet Change	133	m2	9,000	1,197,000	133	m2	9,900	1,316,700
Marshalling Room	78	m2	7,500	585,000	78	m2	8,300	647,400
Storage	55	m2	4,000	220,000	55	m2	4,400	242,000
Plantroom	215	m2	4,000	860,000	215	m2	4,400	946,000
Pool Control	10	m2	4,000	40,000	10	m2	4,400	44,000
Pool Hall	1,895	m2	5,700	10,801,500	1,895	m2	6,300	11,938,500
Circulation	-	m2	7,500	562,500	-	m2	8,300	622,500
Total GFA	2,750				2,750			
Lane Pool 465m2	1	Sum	3,800,000	3,800,000	1	Sum	4,400,000	4,400,000
Spa 20m2	1	Sum	250,000	250,000	1	Sum	290,000	290,000
Programmes/ Learn to Swim Pool 267m2	1	Sum	2,300,000	2,300,000	1	Sum	2,700,000	2,700,000
Leisure Pool 60m2	1	Sum	600,000	600,000	1	Sum	690,000	690,000
Toddlers Pool 15m2	1	Sum	125,000	125,000	1	Sum	145,000	145,000
Prov Allowance for equipment & fitout	1	Sum	450,000	450,000	1	Sum	500,000	500,000
Prov Allowance for Audio Visual /Active IT Equipmer	1	Sum	300,000	300,000	1	Sum	350,000	350,000
Service Yard	250	m2	720	180,000	250	m2	720	180,000
Outdoor Compound	1	Sum	250,000	250,000	1	Sum	300,000	300,000
Prov Allowance for hard paving around building	1	Sum	120,000	120,000	1	Sum	150,000	150,000
Prov Allowance for seating, bins, planters etc	1	Sum	100,000	100,000	1	Sum	110,000	110,000
Prov Allowance for landscaping	1	Sum	400,000	400,000	1	Sum	450,000	450,000
Prov Allowance for services infrastucture	1	Sum	1,500,000	1,500,000	1	Sum	1,750,000	1,750,000
Prov Allowance for carparking	1	Sum	600,000	600,000	1	Sum	700,000	700,000
Sub Total				**29,671,000**				**33,393,300**
Design Development Contingency	5%			1,484,000	5%			1,670,000
Professional Fees	15%			4,674,000	15%			5,260,000
Consent fees	1.5%			468,000	1.5%			526,000
Project Contingency	15%			5,445,000	15%			6,128,000
Total - Upper Racecourse Site				**$41,742,000**				**$46,977,300**
			Say	**$41,800,000**			**Say**	**$47,000,000**
Note additional cost of escalation from Jan 2024 to Jan 2028	13%			$5,434,000	13%			$6,110,000

Thames Aquatic Facilities

Rough Order of Cost Estimate - January 2024

OPTION 4: Ngatea Site

				Low				High
Site Preparation								
Demo existing school pool	1	Sum	200,000	200,000	1	Sum	225,000	225,000
Prov Allowance for Piling (assumed 650dia conc piles at 8m centres, 10m deep)	1	Sum	1,300,000	1,300,000	1	Sum	1,500,000	1,500,000
New Building								
Entrance Lobby	210	m2	7,500	1,575,000	210	m2	8,300	1,743,000
Reception	75	m2	7,500	562,500	75	m2	8,300	622,500
Café	50	m2	7,500	375,000	50	m2	8,300	415,000
Birthday Party Room	22	m2	7,500	165,000	22	m2	8,300	182,600
Administration & Staffroom	125	m2	7,500	937,500	125	m2	8,300	1,037,500
Dry Change	88	m2	7,500	660,000	88	m2	8,300	730,400
Studio & Fitness	215	m2	7,500	1,612,500	215	m2	8,300	1,784,500
Wet Change	451	m2	9,000	4,059,000	451	m2	9,900	4,464,900
Marshalling Room	126	m2	7,500	945,000	126	m2	8,300	1,045,800
Storage	107	m2	4,000	428,000	107	m2	4,400	470,800
Plantroom	282	m2	4,000	1,128,000	282	m2	4,400	1,240,800
Electrical/ MSB	83	m2	4,000	332,000	83	m2	4,400	365,200
Chlorine Room	88	m2	4,000	352,000	88	m2	4,400	387,200
Sauna & Steam Room	30	m2	9,000	270,000	30	m2	9,900	297,000
Pool Hall	2,380	m2	5,700	13,566,000	2,380	m2	6,300	14,994,000
Hall ways & Circulation	13	m2	7,500	562,500	13	m2	8,300	622,500
Total GFA	4,345				4,345			
Lane Pool 528m2	1	Sum	4,200,000	4,200,000	1	Sum	4,400,000	4,400,000
Spa 15m2	1	Sum	200,000	200,000	1	Sum	250,000	250,000
Programmes/ Learn to Swim Pool 300m2	1	Sum	2,400,000	2,400,000	1	Sum	2,600,000	2,600,000
Leisure Pool 231m2	1	Sum	2,000,000	2,000,000	1	Sum	2,250,000	2,250,000
Toddlers Pool 35m2	1	Sum	275,000	275,000	1	Sum	350,000	350,000
Hydro Slide Pool 52m2	1	Sum	320,000	320,000	1	Sum	370,000	370,000
Sauna & Steam room fitout & plant	1	Sum	200,000	200,000	1	Sum	230,000	230,000
Prov Allowance for Hydro Slide	1	Sum	1,100,000	1,100,000	1	Sum	1,300,000	1,300,000
Prov Allowance for equipment & fitout	1	Sum	750,000	750,000	1	Sum	850,000	850,000
Prov Allowance for Audio Visual /Active IT Equipmer	1	Sum	500,000	500,000	1	Sum	600,000	600,000
Service Yard	180	m2	720	129,600	180	m2	720	129,600
Service Lane	710	m2	350	248,500	710	m2	350	248,500
Prov Allowance for hard paving around building	1	Sum	200,000	200,000	1	Sum	250,000	250,000
Prov Allowance for seating, bins, planters etc	1	Sum	100,000	100,000	1	Sum	110,000	110,000
Prov Allowance for landscaping	1	Sum	150,000	150,000	1	Sum	200,000	200,000
Prov Allowance for services infrastucture	1	Sum	1,100,000	1,100,000	1	Sum	1,300,000	1,300,000
Sub Total				**42,903,100**				**47,566,800**
Design Development Contingency	5%			2,146,000	5%			2,379,000
Professional Fees	15%			6,758,000	15%			7,492,000
Consent fees	1.5%			676,000	1.5%			750,000
Project Contingency	15%			7,873,000	15%			8,729,000
Total - Ngatea Site				**$60,356,100**				**$66,916,800**
			Say	**$60,400,000**			**Say**	**$67,000,000**

APPENDIX E
TRAFFIC ASSESSMENT

Traffic Engineering & Management Ltd
Level 2, 1b Buscomb Avenue,
Henderson, Auckland
PO Box 21-803, Henderson, Auckland 0650

Technical Memorandum

PROJECT	**THAMES AQUATIC & SPORTS HUB**
SUBJECT	**SITE – THAMES HIGH SCHOOL (OPTION 1)**
TO	**ANITA COY-MACKEN** **VISITOR SOLUTIONS**
CC	
FROM	**KEITH BELL**
DATE	**10 OCTOBER 2023**

INTRODUCTION

The following is a high-level transport related assessment of the proposed site. The proposed development has sole access to Richmond Street, which is a very wide local road with parallel parking available on both sides of the road.

VEHICLE ACCESS

Any potential vehicle access to the site should be able to be provided without issue from Richmond Street. The carriageway is very wide, level, and straight and there are very good sightlines available in both directions from any location along the site frontage.

PEDESTRIAN ACCESS

There are very good pedestrian connections to the site via the footpath network and the close proximity to the High School and the retail/commercial area of Thames.

PARKING

Parking is generally limited to on-street parking, with the existing parking along both sides of Richmond Street being largely utilised. The existing parking demand is assumed to be related to the adjacent retail/commercial area as the site visit was undertaken during school holidays and therefore the parking demand is not associated with the school.

BUS ACCESS

There is no on-site bus parking provided, and therefore a bus parking area would need to be provided on-street. The provision of a bus parking area would reduce the amount of car parking available on Richmond Street.

CRASH ANALYSIS

A study has been made of the crash record maintained by NZTA for the full five-year period 2018 to 2022 inclusive. Also included in the search were the crashes that have been processed and were on file for 2023. The crash search area covered Richmond Street and the intersection with Mackay Street.

There were four crashes reported as occurring within the searched area and given timeframe, which included three minor injury crashes and one non-injury crash.

All crashes involved vehicles that failed to give way at a give-way controlled intersection of Richmond Street and Mackay Street and collided with vehicles travelling along Mackay Street.

The crash history at the Richmond Street/Mackay Street intersection is typical of x-road intersections and would not likely be affected by the proposed development. No crashes were related to property access or access to the subject stie.

PUBLIC TRANSPORT

It is understood that the nearest bus stop is located approximately 130 metres northwest of the subject site. This bus stop is serviced by route 70, which is a regional bus provided by Thames Connector. This route provides connections to Tararu and Thames. These services operate approximately every 50 minutes to 1 hour, depending on the time of day and the day of the week.

On this basis, the proposed development is considered to have reasonable connectivity for pedestrians to public transport.

SUMMARY

- Any potential vehicle access to the site should be able to be provided without issue from Richmond Street.
- There are good cycling/pedestrian connections within Thames.
- Parking is generally limited to on-street parking, with the existing parking along both sides of Richmond Street being largely utilised.
- There is no on-site bus parking provided, and therefore a bus parking area would need to be provided on-street. The provision of a bus parking area would reduce the amount of car parking available on Richmond Street.

- The crash history at the Richmond Street/Mackay Street intersection is typical of x-road intersections and would not likely be affected by the proposed development. No crashes were related to property access or access to the subject stie.
- There is reasonable public transport available.

Traffic Engineering & Management Ltd
Level 2, 1b Buscomb Avenue,
Henderson, Auckland
PO Box 21-803, Henderson, Auckland 0650

Technical Memorandum

PROJECT	**THAMES AQUATIC & SPORTS HUB**
SUBJECT	**SITE – STATE HIGHWAY 26 (OPTION 3)**
TO	**ANITA COY-MACKEN** **VISITOR SOLUTIONS**
CC	
FROM	**KEITH BELL**
DATE	**10 OCTOBER 2023**

INTRODUCTION

The following is a high-level transport related assessment of the proposed site. The proposed development has access to State Highway 26 (SH26) which has a 100km/h posted speed limit and on-street parking available.

VEHICLE ACCESS

Any potential vehicle access to the site will require widening of the highway carriageway to provide a right turn facility and a left turn facility, so that vehicles entering the site can move out of the through traffic lanes and reduce speed before turning into the site.

There should not be any issue with locating access positions, however sightlines will need to be confirmed in relation to the corner to the north of the site which has a 75km/h advisory speed sign.

PEDESTRIAN ACCESS

There are no suitable pedestrian/cycling connections to the site, and therefore all staff and visitors will need to access the site via private vehicles or busses.

PARKING

Parking is limited to onsite parking without the ability to overflow to the street. The number of parking spaces shown on the plan appears to be suitable. However, it is suggested that the ability to expand on-site parking be considered in any site design.

BUS ACCESS

There is good access for busses, however the ability for busses to turn around onsite needs to be considered, preferably without any need for reverse manoeuvring. A potential solution could be to provide two accesses to the highway, so that buses can drive through the site.

CRASH ANALYSIS

A study has been made of the crash record maintained by NZTA for the full five-year period 2018 to 2022 inclusive. Also included in the search were the crashes that have been processed and were on file for 2023. The crash search area covered SH26 within 200 metres of the subject site.

A total of two crashes were reported as occurring within the searched area and given timeframe, which included one serious-injury crash and one non-injury crash.

The serious-injury crash involved a ute travelling southbound on SH26 that collided with a slow-moving heavy vehicle. It is understood that this crash was due to reduced visibility caused by fog. The remaining non-injury crash involved a stolen vehicle veering too far left and collided with two police vehicles following an extensive pursuit.

The above crashes are isolated events and do not show a pattern that would indicate the presence of any inherent safety or operational concerns with the layout of SH26 in the vicinity of the site.

PUBLIC TRANSPORT

Given that the subject site is located near the urban boundary of Kopu, it is understood that there are no active bus stops within easy access to the subject site, with the nearest boarding station being located approximately 2.5 kilometres north from the subject site. It is considered unlikely that visitors will be taking bus as a mode of transport.

SUMMARY

- Access to the highway will require widening of the carriageway to provide left and right turning facilities.
- There are no cycling/pedestrian connections.
- An onsite turnaround area or multiple site accesses should be considered for bus operations.
- All parking will need to be provided onsite and potential future expansion of parking areas should be considered.
- There are no existing traffic safety issues associated with the site.
- There are poor public transport amenities.

Traffic Engineering & Management Ltd
Level 2, 1b Buscomb Avenue,
Henderson, Auckland
PO Box 21-803, Henderson, Auckland 0650

Technical Memorandum

PROJECT	**THAMES AQUATIC & SPORTS HUB**
SUBJECT	**SITE – NGATEA PUBLIC SWIMMING POOL (OPTION 4)**
TO	**ANITA COY-MACKEN** **VISITOR SOLUTIONS**
CC	
FROM	**KEITH BELL**
DATE	**10 OCTOBER 2023**

INTRODUCTION

The following is a high-level transport related assessment of the proposed site. The proposed development has existing vehicle connections to State Highway 2 and Pipiroa Road.

VEHICLE ACCESS

The existing main access to SH2 is managed by a 'Give Way' control and has a centrally located flush median on the highway to accommodate right turning traffic into the site.

The secondary access to the car parking area is to Pipiroa Road via the rugby club.

The access arrangements for the site are considered to be good and will accommodate additional movements without issue.

PEDESTRIAN ACCESS

There are very good pedestrian connections to the site via the footpath network and the close proximity to the retail/commercial area of Ngatea.

PARKING

There is significant onsite parking that is shared between the swimming pool, park, hockey fields and rugby club. There is also the ability for overflow parking to occur to the surrounding streets without causing any issues.

BUS ACCESS

Bus access is very good with busses being able enter the site via one access and depart via the other access without the need or any onsite manoeuvring.

CRASH ANALYSIS

A study has been made of the crash record maintained by NZTA for the full five-year period 2018 to 2022 inclusive. Also included in the search were the crashes that have been processed and were on file for 2023.

The crash search area covered State Highway (SH) 2 within 100 metres of the subject site, including the intersection of SH2 and Darlington Street.

There were no crashes recorded within the searched area for the given timeframe. The reported crash history does not raise any concerns with regard to the current traffic operation in the vicinity of the site.

PUBLIC TRANSPORT

It is understood that there are no active bus stops within easy access to the subject site, with the nearest boarding station being located approximately 10 kilometres north from the subject site. it is considered unlikely that visitors will be taking bus as a mode of transport.

SUMMARY

- Access to the site is very good and will accommodate additional movements without issue.
- There are good cycling/pedestrian connections within Ngatea.
- Bus access is very good with busses being able enter the site via one access and depart via the other access without the need or any onsite manoeuvring.
- There is significant onsite parking and there is also the ability for overflow parking to occur to the surrounding streets without causing any issues.
- There are no existing traffic safety issues associated with the site.
- There is poor public transport available.

APPENDIX F
OPERATIONAL MODELS

OPTION 1 : THAMES HIGH SCHOOL LOCAL AQUATIC FACILITY - ALL INDOOR										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Quantity of visitors										
- Casual visits	29,381	27,573	28,400	29,252	30,130	31,034	31,965	32,924	33,911	34,929
- Swim squad	7,848	8,083	8,326	8,576	8,833	9,098	9,371	9,652	9,942	10,240
- Schools	4,500	4,725	4,961	5,209	5,470	5,743	6,000	6,000	6,000	6,000
- Learn to swim	9,009	9,279	9,558	9,844	10,140	10,444	10,757	11,080	11,412	11,755
- Aqua programmes	1,050	1,159	1,280	1,413	1,560	1,722	1,901	2,099	2,100	2,100
- Birthday parties	291	300	309	318	328	338	348	358	369	380
Revenue per visitor - Unit Rate										
- Casual visits	$ 3.04	$ 3.12	$ 3.20	$ 3.28	$ 3.36	$ 3.44	$ 3.53	$ 3.62	$ 3.71	$ 3.80
- Swim squad	$ 1.74	$ 1.78	$ 1.83	$ 1.87	$ 1.92	$ 1.97	$ 2.02	$ 2.07	$ 2.12	$ 2.17
- Schools	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87
- Learn to swim	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Programmes	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
- Birthday parties	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
Revenue per unit										
- Casual visits	89,421	86,016	90,811	95,874	101,219	106,862	112,819	119,109	125,749	132,760
- Swim squad	13,649	14,410	15,213	16,061	16,956	17,902	18,900	19,953	21,066	22,240
- Schools	3,913	4,109	4,314	4,530	4,756	4,994	5,217	5,217	5,217	5,217
- Learn to swim	97,924	103,383	109,147	115,232	121,656	128,438	135,599	143,158	151,139	159,565
- Programmes	4,565	5,166	5,846	6,615	7,486	8,471	9,586	10,847	11,125	11,403
- Birthday parties	3,165	3,342	3,528	3,725	3,932	4,152	4,383	4,627	4,885	5,158
Aquatic Income	**212,637**	**216,425**	**228,859**	**242,036**	**256,005**	**270,818**	**286,504**	**302,912**	**319,182**	**336,343**
Vending Machine - net profit	7,678	7,370	7,592	7,819	8,054	8,296	8,544	8,801	9,065	9,337
Retail - net profit	4,505	4,640	4,779	4,922	5,070	5,222	5,379	5,540	5,706	5,877
Total Income	**224,819**	**228,435**	**241,229**	**254,778**	**269,129**	**284,336**	**300,427**	**317,253**	**333,953**	**351,557**
Expenditure										
Staff - pool	540,000	553,500	567,338	581,521	596,059	610,960	626,234	641,890	657,938	674,386
Staff - learn to swim	72,072	74,234	76,461	78,755	81,118	83,551	86,058	88,639	91,299	94,038
Kiwisaver and ACC	30,604	31,387	32,190	33,014	33,859	34,726	35,615	36,526	37,462	38,421
Energy	310,000	317,750	325,694	333,836	342,182	350,737	359,505	368,493	377,705	387,148
Water	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Chemicals	25,000	25,625	26,266	26,922	27,595	28,285	28,992	29,717	30,460	31,222
Cleaning & consumables	20,000	20,500	21,013	21,538	22,076	22,628	23,194	23,774	24,368	24,977
Repairs and maintenance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Administration	55,000	56,375	57,784	59,229	60,710	62,227	63,783	65,378	67,012	68,687
Insurance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Other operating costs	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Total Expenditure	**1,192,676**	**1,222,871**	**1,253,832**	**1,285,580**	**1,318,133**	**1,351,512**	**1,385,738**	**1,420,833**	**1,456,820**	**1,493,719**
EBITDA	**-967,856**	**-994,436**	**-1,012,603**	**-1,030,802**	**-1,049,003**	**-1,067,176**	**-1,085,312**	**-1,103,580**	**-1,122,867**	**-1,142,162**

OPTION 1A : THAMES HIGH SCHOOL LOCAL AQUATIC FACILITY - PART OUTDOOR										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Quantity of visitors										
- Casual visits	24,661	22,606	23,058	23,520	23,990	24,470	24,959	25,458	25,968	26,487
- Swim squad	6,912	7,119	7,333	7,553	7,780	8,013	8,253	8,501	8,756	9,019
- Schools	3,750	3,938	4,134	4,341	4,558	4,786	5,000	5,000	5,000	5,000
- Learn to swim	9,009	9,279	9,558	9,844	10,140	10,444	10,757	11,080	11,412	11,755
- Aqua programmes	1,050	1,159	1,280	1,413	1,560	1,722	1,901	2,099	2,100	2,100
- Birthday parties	291	300	309	318	328	338	348	358	369	380
Revenue per visitor - Unit Rate										
- Casual visits	$ 3.04	$ 3.12	$ 3.20	$ 3.28	$ 3.36	$ 3.44	$ 3.53	$ 3.62	$ 3.71	$ 3.80
- Swim squad	$ 1.74	$ 1.78	$ 1.83	$ 1.87	$ 1.92	$ 1.97	$ 2.02	$ 2.07	$ 2.12	$ 2.17
- Schools	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87
- Learn to swim	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Programmes	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
- Birthday parties	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
Revenue per unit										
- Casual visits	75,057	70,522	73,731	77,085	80,593	84,260	88,094	92,102	96,292	100,674
- Swim squad	12,021	12,691	13,399	14,146	14,934	15,767	16,646	17,574	18,553	19,588
- Schools	3,261	3,424	3,595	3,775	3,964	4,162	4,348	4,348	4,348	4,348
- Learn to swim	97,924	103,383	109,147	115,232	121,656	128,438	135,599	143,158	151,139	159,565
- Programmes	4,565	5,166	5,846	6,615	7,486	8,471	9,586	10,847	11,125	11,403
- Birthday parties	3,165	3,342	3,528	3,725	3,932	4,152	4,383	4,627	4,885	5,158
Aquatic Income	**195,993**	**198,528**	**209,245**	**220,577**	**232,564**	**245,249**	**258,654**	**272,656**	**286,343**	**300,735**
Vending Machine - net profit	6,734	6,377	6,523	6,673	6,826	6,983	7,143	7,308	7,476	7,648
Retail - net profit	4,505	4,640	4,779	4,922	5,070	5,222	5,379	5,540	5,706	5,877
Total Income	**207,231**	**209,544**	**220,547**	**232,172**	**244,460**	**257,454**	**271,176**	**285,504**	**299,525**	**314,261**
Expenditure										
Staff - pool	554,400	568,260	582,467	597,028	611,954	627,253	642,934	659,007	675,483	692,370
Staff - learn to swim	72,072	74,234	76,461	78,755	81,118	83,551	86,058	88,639	91,299	94,038
Kiwisaver and ACC	31,324	32,125	32,946	33,789	34,654	35,540	36,450	37,382	38,339	39,320
Energy	315,000	322,875	330,947	339,221	347,701	356,394	365,303	374,436	383,797	393,392
Water	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Chemicals	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Cleaning & consumables	20,000	20,500	21,013	21,538	22,076	22,628	23,194	23,774	24,368	24,977
Repairs and maintenance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Administration	55,000	56,375	57,784	59,229	60,710	62,227	63,783	65,378	67,012	68,687
Insurance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Other operating costs	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Total Expenditure	**1,217,796**	**1,248,619**	**1,280,224**	**1,312,631**	**1,345,860**	**1,379,933**	**1,414,870**	**1,450,693**	**1,487,426**	**1,525,091**
EBITDA	**-1,010,564**	**-1,039,074**	**-1,059,677**	**-1,080,459**	**-1,101,400**	**-1,122,479**	**-1,143,693**	**-1,165,190**	**-1,187,901**	**-1,210,830**

OPTION 2 : THAMES UPPER RACECOURSE LOCAL AQUATIC FACILITY										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Quantity of visitors										
- Casual visits	28,816	27,544	28,095	28,657	29,230	29,815	30,411	31,019	31,640	32,273
- Swim squad	6,912	7,119	7,333	7,553	7,780	8,013	8,253	8,501	8,756	9,019
- Schools	3,750	3,938	4,134	4,341	4,558	4,786	5,000	5,000	5,000	5,000
- Learn to swim	9,009	9,279	9,558	9,844	10,140	10,444	10,757	11,080	11,412	11,755
- Aqua programmes	1,050	1,159	1,280	1,413	1,560	1,722	1,901	2,099	2,100	2,100
- Birthday parties	291	300	309	318	328	338	348	358	369	380
Revenue per visitor - Unit Rate										
- Casual visits	$ 3.04	$ 3.12	$ 3.20	$ 3.28	$ 3.36	$ 3.44	$ 3.53	$ 3.62	$ 3.71	$ 3.80
- Swim squad	$ 1.74	$ 1.78	$ 1.83	$ 1.87	$ 1.92	$ 1.97	$ 2.02	$ 2.07	$ 2.12	$ 2.17
- Schools	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87
- Learn to swim	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Programmes	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
- Birthday parties	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
Revenue per unit										
- Casual visits	87,700	85,927	89,836	93,924	98,197	102,665	107,337	112,220	117,326	122,665
- Swim squad	12,021	12,691	13,399	14,146	14,934	15,767	16,646	17,574	18,553	19,588
- Schools	3,261	3,424	3,595	3,775	3,964	4,162	4,348	4,348	4,348	4,348
- Learn to swim	97,924	103,383	109,147	115,232	121,656	128,438	135,599	143,158	151,139	159,565
- Programmes	4,565	5,166	5,846	6,615	7,486	8,471	9,586	10,847	11,125	11,403
- Birthday parties	3,165	3,342	3,528	3,725	3,932	4,152	4,383	4,627	4,885	5,158
Aquatic Income	**208,636**	**213,932**	**225,350**	**237,416**	**250,169**	**263,654**	**277,897**	**292,775**	**307,377**	**322,726**
Vending Machine - net profit	7,565	7,365	7,531	7,700	7,874	8,052	8,234	8,420	8,610	8,805
Retail - net profit	4,505	4,640	4,779	4,922	5,070	5,222	5,379	5,540	5,706	5,877
Total Income	**220,705**	**225,937**	**237,660**	**250,038**	**263,113**	**276,928**	**291,510**	**306,734**	**321,693**	**337,409**
Expenditure										
Staff - pool	548,178	561,882	575,930	590,328	605,086	620,213	635,718	651,611	667,902	684,599
Staff - learn to swim	72,072	74,234	76,461	78,755	81,118	83,551	86,058	88,639	91,299	94,038
Kiwisaver and ACC	31,013	31,806	32,620	33,454	34,310	35,188	36,089	37,013	37,960	38,932
Energy	310,000	317,750	325,694	333,836	342,182	350,737	359,505	368,493	377,705	387,148
Water	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Chemicals	25,000	25,625	26,266	26,922	27,595	28,285	28,992	29,717	30,460	31,222
Cleaning & consumables	20,000	20,500	21,013	21,538	22,076	22,628	23,194	23,774	24,368	24,977
Repairs and maintenance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Administration	55,000	56,375	57,784	59,229	60,710	62,227	63,783	65,378	67,012	68,687
Insurance	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Other operating costs	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Total Expenditure	**1,201,263**	**1,231,672**	**1,262,854**	**1,294,827**	**1,327,611**	**1,361,227**	**1,395,696**	**1,431,041**	**1,467,282**	**1,504,443**
EBITDA	**-980,557**	**-1,005,736**	**-1,025,194**	**-1,044,789**	**-1,064,498**	**-1,084,299**	**-1,104,187**	**-1,124,306**	**-1,145,588**	**-1,167,034**

OPTION 3 : KOPU SOUTH : (EX-CARTER HOLT SITE) SUB-REGIONAL FACILITY										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Quantity of visitors										
- Casual visits	54,503	51,823	53,377	54,979	56,628	58,327	60,077	61,879	63,735	65,647
- Swim squad	8,486	8,741	9,003	9,273	9,552	9,838	10,133	10,437	10,750	11,073
- Schools	5,250	5,513	5,788	6,078	6,381	6,700	7,036	7,387	7,500	7,500
- Learn to swim	10,286	10,594	10,912	11,240	11,577	11,924	12,282	12,650	13,030	13,421
- Aqua programmes	1,470	1,623	1,792	1,978	2,184	2,411	2,662	2,938	2,940	2,940
- Birthday parties	700	721	743	765	788	811	836	861	887	913
- Fitness centre	310	326	342	359	377	396	416	436	458	481
- Hydroslide	7,574	7,201	7,417	7,640	7,869	8,105	8,348	8,599	8,857	9,122
Revenue per visitor - Unit Rate										
- Casual visits	$ 3.04	$ 3.12	$ 3.20	$ 3.28	$ 3.36	$ 3.44	$ 3.53	$ 3.62	$ 3.71	$ 3.80
- Swim squad	$ 1.74	$ 1.78	$ 1.83	$ 1.87	$ 1.92	$ 1.97	$ 2.02	$ 2.07	$ 2.12	$ 2.17
- Schools	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87
- Learn to swim	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Programmes	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
- Birthday parties	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Fitness centre	$ 478.26	$ 490.22	$ 502.47	$ 515.03	$ 527.91	$ 541.11	$ 554.64	$ 568.50	$ 582.71	$ 597.28
- Hydroslide	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
Revenue per unit										
- Casual visits	165,879	161,664	170,677	180,192	190,237	200,843	212,040	223,861	236,342	249,518
- Swim squad	14,759	15,582	16,450	17,368	18,336	19,358	20,437	21,577	22,780	24,049
- Schools	4,565	4,793	5,033	5,285	5,549	5,827	6,118	6,424	6,522	6,522
- Learn to swim	111,802	118,035	124,616	131,563	138,898	146,641	154,816	163,447	172,560	182,180
- Programmes	6,391	7,232	8,184	9,261	10,480	11,859	13,420	15,186	15,574	15,964
- Birthday parties	7,609	8,033	8,481	8,954	9,453	9,980	10,536	11,123	11,744	12,398
- Fitness centre	148,357	159,669	171,843	184,947	199,049	214,226	230,561	248,141	267,062	287,425
- Hydroslide	32,929	32,092	33,881	35,770	37,764	39,870	42,092	44,439	46,917	49,532
Aquatic Income	**492,290**	**475,008**	**505,284**	**537,568**	**572,001**	**608,734**	**647,928**	**689,760**	**732,582**	**778,056**
Café Income - rental	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Vending Machine - net profit	12,958	12,483	12,858	13,244	13,641	14,050	14,472	14,906	15,353	15,814
Retail - net profit	5,143	5,297	5,456	5,620	5,788	5,962	6,141	6,325	6,515	6,710
Total Income	**540,391**	**523,539**	**555,117**	**588,738**	**624,545**	**662,688**	**703,332**	**746,651**	**791,002**	**838,046**
Expenditure										
Staff - pool	749,464	768,200	787,405	807,090	827,268	847,949	869,148	890,877	913,149	935,977
Staff - learn to swim	82,286	84,755	87,298	89,917	92,614	95,392	98,254	101,202	104,238	107,365
Staff - fitness	108,570	111,284	114,066	116,918	119,841	122,837	125,908	129,056	132,282	135,589
Kiwisaver and ACC	47,016	48,212	49,438	50,696	51,986	53,309	54,666	56,057	57,483	58,947
Energy	570,000	584,250	598,856	613,828	629,173	644,903	661,025	677,551	694,490	711,852
Water	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920	62,443
Chemicals	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Cleaning & consumables	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Repairs and maintenance	55,000	56,375	57,784	59,229	60,710	62,227	63,783	65,378	67,012	68,687
Repairs - fitness	15,000	15,375	15,759	16,153	16,557	16,971	17,395	17,830	18,276	18,733
Administration	60,000	61,500	63,038	64,613	66,229	67,884	69,582	71,321	73,104	74,932
Insurance	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920	62,443
Other operating costs	35,000	35,875	36,772	37,691	38,633	39,599	40,589	41,604	42,644	43,710
Total Expenditure	**1,892,336**	**1,940,076**	**1,989,023**	**2,039,207**	**2,090,659**	**2,143,412**	**2,197,498**	**2,252,952**	**2,309,807**	**2,368,099**
EBITDA	**-1,351,945**	**-1,416,538**	**-1,433,906**	**-1,450,469**	**-1,466,115**	**-1,480,724**	**-1,494,167**	**-1,506,300**	**-1,518,804**	**-1,530,053**

OPTION 4 : NGATEA SUB-REGIONAL AQUATIC FACILITY										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income										
Quantity of visitors										
- Casual visits	45,792	41,976	43,235	44,532	45,868	47,244	48,662	50,122	51,625	53,174
- Swim squad	8,486	8,741	9,003	9,273	9,552	9,838	10,133	10,437	10,750	11,073
- Schools	4,200	4,410	4,631	4,862	5,105	5,360	5,628	5,910	6,000	6,000
- Learn to swim	9,954	10,253	10,560	10,877	11,203	11,539	11,886	12,242	12,609	12,988
- Aqua programmes	1,470	1,623	1,792	1,978	2,184	2,411	2,662	2,938	2,940	2,940
- Birthday parties	700	721	743	765	788	811	836	861	887	913
- Fitness centre	278	291	306	321	337	354	372	390	410	430
- Hydroslide	5,002	4,585	4,722	4,864	5,010	5,160	5,315	5,474	5,639	5,808
Revenue per visitor - Unit Rate										
- Casual visits	$ 3.04	$ 3.12	$ 3.20	$ 3.28	$ 3.36	$ 3.44	$ 3.53	$ 3.62	$ 3.71	$ 3.80
- Swim squad	$ 1.74	$ 1.78	$ 1.83	$ 1.87	$ 1.92	$ 1.97	$ 2.02	$ 2.07	$ 2.12	$ 2.17
- Schools	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87	$ 0.87
- Learn to swim	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Programmes	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
- Birthday parties	$ 10.87	$ 11.14	$ 11.42	$ 11.71	$ 12.00	$ 12.30	$ 12.61	$ 12.92	$ 13.24	$ 13.57
- Fitness centre	$ 452.17	$ 463.48	$ 475.07	$ 486.94	$ 499.12	$ 511.59	$ 524.38	$ 537.49	$ 550.93	$ 564.70
- Hydroslide	$ 4.35	$ 4.46	$ 4.57	$ 4.68	$ 4.80	$ 4.92	$ 5.04	$ 5.17	$ 5.30	$ 5.43
Revenue per unit										
- Casual visits	139,367	130,947	138,247	145,954	154,091	162,682	171,752	181,327	191,436	202,108
- Swim squad	14,759	15,582	16,450	17,368	18,336	19,358	20,437	21,577	22,780	24,049
- Schools	3,652	3,835	4,027	4,228	4,439	4,661	4,894	5,139	5,217	5,217
- Learn to swim	108,196	114,228	120,596	127,319	134,417	141,911	149,822	158,175	166,993	176,303
- Programmes	6,391	7,232	8,184	9,261	10,480	11,859	13,420	15,186	15,574	15,964
- Birthday parties	7,609	8,033	8,481	8,954	9,453	9,980	10,536	11,123	11,744	12,398
- Fitness centre	125,478	135,046	145,343	156,426	168,353	181,190	195,006	209,875	225,878	243,101
- Hydroslide	21,746	20,432	21,571	22,774	24,044	25,384	26,799	28,293	29,871	31,536
Aquatic Income	**427,198**	**279,856**	**295,985**	**313,084**	**331,216**	**350,451**	**370,861**	**392,526**	**413,744**	**436,040**
Café Income - rental	20,000	20,500	21,013	21,538	22,076	22,628	23,194	23,774	24,368	24,977
Vending Machine - net profit	11,149	10,446	10,759	11,082	11,414	11,757	12,109	12,473	12,847	13,232
Retail - net profit	4,977	5,126	5,280	5,439	5,602	5,770	5,943	6,121	6,305	6,494
Total Income	**463,324**	**315,928**	**333,036**	**351,142**	**370,308**	**390,605**	**412,107**	**434,894**	**457,263**	**480,743**
Expenditure										
Staff - pool	761,118	780,146	799,650	819,641	840,132	861,135	882,664	904,730	927,348	950,532
Staff - learn to swim	79,632	82,021	84,482	87,016	89,627	92,315	95,085	97,937	100,875	103,902
Staff - fitness	97,125	101,981	107,080	112,434	118,056	123,959	130,157	136,665	143,498	150,673
Kiwisaver and ACC	46,894	48,207	49,561	50,955	52,391	53,870	55,395	56,967	58,586	60,255
Energy	640,000	656,000	672,400	689,210	706,440	724,101	742,204	760,759	779,778	799,272
Water	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920	62,443
Chemicals	40,000	41,000	42,025	43,076	44,153	45,256	46,388	47,547	48,736	49,955
Cleaning & consumables	30,000	30,750	31,519	32,307	33,114	33,942	34,791	35,661	36,552	37,466
Repairs and maintenance	55,000	56,375	57,784	59,229	60,710	62,227	63,783	65,378	67,012	68,687
Repairs - fitness	15,000	15,375	15,759	16,153	16,557	16,971	17,395	17,830	18,276	18,733
Administration	60,000	61,500	63,038	64,613	66,229	67,884	69,582	71,321	73,104	74,932
Insurance	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920	62,443
Other operating costs	35,000	35,875	36,772	37,691	38,633	39,599	40,589	41,604	42,644	43,710
Total Expenditure	**1,959,769**	**2,011,731**	**2,065,131**	**2,120,014**	**2,176,423**	**2,234,403**	**2,294,001**	**2,355,267**	**2,418,251**	**2,483,003**
EBITDA	**-1,496,444**	**-1,695,802**	**-1,732,095**	**-1,768,872**	**-1,806,114**	**-1,843,797**	**-1,881,894**	**-1,920,373**	**-1,960,987**	**-2,002,260**


VISITOR
SOLUTIONS