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# 1. Executive Summary

Sport New Zealand (Sport NZ) commissioned this study to provide guidance and direction in the development of facilities for aquatic sports on a National basis. The National Facilities Strategy for Aquatic Sports aims to provide a framework for developing future facilities which are appropriately scaled and located to meet the needs of users: locally, regionally, nationally or internationally.

The key aspects of the methodology were:

- Identify the needs of the sector
- Identify the current state of provision
- Identify the trends
- Assess any gaps in provision and what might the future needs be for both competitive sport and community use

## Key Findings

The following points summarise the key findings of this Strategy.

### Competitive Network

- At International Level, the development of Millennium Institute of Sport and Health (MISH) and the establishment of the Christchurch Metro Sports Facility provides suitable facilities for this level of competition in New Zealand.
- Develop one additional National level facility in Auckland particularly meeting the needs of Competitive Swimming, Water Polo, Underwater Hockey, and Surf Life Saving but with a focus on deep water. This recognises that MISH will meet a short term need but that this facility should be incorporated as part of the Community Network (refer below).
- Develop one facility in the Northland to meet Regional competitive needs.
- Ensure that the proposed Christchurch Metro Sports Facility has sufficient capacity to operate as a Regional and National-level facility for the mid and upper South Island.
- Provide priority access for competitive aquatic sports to the existing facilities (at National Level), especially those with significant spectator capacity and specialist facilities (such as dive towers) to avoid the need for additional pools.
- Target any proposed investments for future National Facilities into improving the functionality of the existing facilities, rather than expanding the current National network.
- The Regional Level facilities are predominately serving local communities and the competitive sporting requirements are one of the demands on these facilities.
- The demand for access to facilities for competition (including training) is at conflict with the demands for territorial authorities to provide for community access. All parties must recognise the requirements of others and work together to ensure suitable access arrangements exist. Further, it is recommended that service level agreements are in place to ensure that there is a balance between meeting community and competitive needs. In terms of investment, Government may need to invest in improvements to the National network where these investments do not have a financial return to the operators.

The key issue is that there is not enough funding available to build and operate every facility that the National Sporting Organisations desire and to the specification they request which is generally unsustainable. Therefore there must be a compromise between the asset owner and the NSO on the facilities hierarchy position, that is the facility is built to meet the needs not the wants.



## Community Network

- Based on the analysis there are currently 18 more standard sized pools in New Zealand than required. There are generally enough pools in New Zealand for the scale of the population but they are distributed poorly, relative to the needs of their communities.
- Projected population changes in terms of total number and profile will impact the demand for pool facilities in the future.
- Additional standard pools (calculated as 500 m<sup>2</sup> being a 25m by 20m 8 lane pool) are required in Northland (5), Auckland (2), Bay of Plenty (4) and Hawke's Bay (3) to address the current shortage of facilities in these areas.
- A further 11 standard pools are required in Auckland over the next twenty years to address demographic growth with one each in Wellington and Christchurch.
- The additional facilities in Auckland could potentially incorporate the National level competition facility.
- The additional complex(s) in Northland providing the equivalent of five standard pools could potentially incorporate the Regional level competition facility.

The implications of the population growth are that it will reduce the net over supply in the network from 18 to 4 pools however the national average masks the shortage in some communities. Overall an additional 27 pools will be required to address the current shortfall (against the benchmark) and the projected demand over the next 20 years if all regions are to meet the proposed national benchmark.

## Cost of Providing and accessing facilities

- Generally most aquatic facilities in New Zealand operate at a loss and a subsidy is being provided by the asset owner (generally territorial authorities). All users do not pay the true cost of providing the service.
- The asset owners determine the level of the subsidy and also determine who has priority access.
- There is an increasing conflict between competitive sport requiring training and competition access and the community requiring recreational access.
- Allocation to competitive sports will be important, but under most local authority funding frameworks this is likely to remain at between 20-40% of total usage. It is simply uneconomic for asset owners to subsidise competitive sports to a greater percentage of total usage.
- A majority of aquatic facilities are under-utilised for a large proportion of the day. There are opportunities to improve utilisation during the non-peak times.
- On-going replacement costs are not being funded.

## Changing demographic profile in New Zealand

- The older (50+) age groups in the demographic profile are the major growth area and they have different expectations for aquatic facilities, being temperature, access, covered and water depth.
- There is a need to adapt and refurbish existing facilities to meet the needs of an aging population which can also include the provision of more tailored programmes within existing facilities. This is to ensure higher utilisations potentially in non-peak times now and into the future.
- The adaption of facilities will be critical to ensuring increased participation among the elderly.
- The aging population profile provides an opportunity to increase utilisation in some facilities during non-peak times and therefore address (in part) some of the cost issues associated with operating aquatic facilities.



### **Developing facilities and decision making**

- Decision makers must understand the role of the facility in the local, Regional and National network.
- Clear requirements for each facility should be developed and all detail captured in a business case.
- Decision making can be significantly improved with traditional project management principles aligning the project to its original purpose, with strict change control measures.
- Aligned funding can be achieved with all parties when objectives and requirements are clearly documented.

It is important that all asset owners determine the basis of allocating access to their facilities with the reasons why.

### **Developing the Road Map**

The outcome of this Strategy is a road map for moving forward. The key components of this are:

- Decision Making Criteria
- Toolkit for Developing Aquatic Facilities



## 2. Introduction

### 2.1 Overview

The following report outlines a National Facilities Strategy for Aquatic Sports (Strategy).

Sport New Zealand (Sport NZ) commissioned this study to provide guidance and direction in the development of facilities for Aquatic Sports.

Sport NZ provides leadership and direction within the sport and recreation sector with its primary role as an advisor and facilitator. The majority of sporting and recreation facilities are provided by local authorities, community trusts and schools.

This Strategy evaluated the current provision of aquatic facilities, future trends and needs. It reviewed the various needs of aquatic sports including Swimming, Water Polo, Diving, Canoe Polo, Surf Life Saving, Underwater Hockey and Synchronised Swimming. It also consulted with organisations with a strong interest in aquatic facilities such as Water Safety New Zealand (WSNZ).

The Strategy set out to achieve the following three main aims:

1. To provide a framework for developing aquatic facilities which are appropriately scaled and appropriately located to meet the needs of all stakeholders: locally, Regionally, Nationally and internationally.
2. To provide a framework and guidance to assist in developing the best practice in the aquatic facilities network which meets the needs and aspirations of the New Zealand public. It is not intended to be a directive of the appropriateness of current facilities in explicit locations, rather it must act as a catalyst for “better practice” in the future provision of aquatic facilities.
3. To recommend a pathway for future priorities.

The stakeholders were identified as Sports NZ, asset providers (including territorial authorities, Ministry of Education, not for profit organisations, regional sports trusts and the private sector), competitive sport organisations and members, funders and the broader community that uses aquatic facilities.

It is Sport NZ's intention that this will be a working and relevant Strategy that supports the key stakeholders. The Strategy aims to give decision makers and investors in aquatic facilities a clear guide on where the aquatic needs are and what are the priorities for investment across the country now and in the future. Also, how the aquatic facility network functions together with the intention of achieving better investment decisions going forward.

Sport NZ's intention is that the Strategy provides leadership and guidance to key stakeholders and that it will work with the Territorial Authorities long term planning documents and sport specific plans to bring a more cohesive approach locally, Regionally and Nationally.

#### **Additional Information**

While this Strategy documents and analyses individual aquatic facilities and at times draws conclusions from our experience with projects, it is not intended as a commentary on the appropriateness or performance of any individual assets. Further, the review consults with National Sporting Organisations (NSOs) and local authorities and summarises their opinions but it is not an endorsement or validation of any particular perceptions provided.



## 2.2 Key Objectives

The strategy has the following key objectives:

- The Strategy provides a picture of current and future needs for aquatic facilities and the “user” sports associated with them.
- The Strategy looks at the challenges and potential solutions of providing aquatic facilities for both competitive sport and leisure use. As part of this, it works to understand the future needs of both the sporting codes and the wider community needs.
- The work also highlights the current state of assets in the aquatic facilities network and makes suggestions on the potential future investment requirements.
- It highlights priority areas for future aquatic space which takes into account regional challenges, demographic changes and sport participation level trends. This is assessment based and appropriate for the needs of the Strategy.
- Identifies the current gaps in provision and possible future needs of aquatic facilities which may be sport specific.
- Reviews the utilisation of aquatic space within facilities and how this is currently being programmed. It also makes recommendations and suggests “best practice” for utilisation of aquatic space could be improved and organised more efficiently.
- Ensures the project takes a strategy overview and ensures it aligns and informs the range of Council Long Term Plans, sport specific strategies and other relevant plans.

## 2.3 Methodology

The predominant framework for the methodology was to focus on the needs of the sector, before investigating the facilities available. The intention was to understand the drivers for the use of aquatic facilities and the usage trends that are developing with time. The needs are then compared to the existing facilities to identify any gaps. The key aspects of the methodology were:

- Identify the needs of the sector.
- Identify the current state of provision.
- Identify the trends.
- Assess any gaps in provision and what might the future needs be for both competitive sport and community use.

Refer to Appendix C for a full description of the Methodology.

## 2.4 Establishing a New Zealand Appropriate Framework

A review of international models was undertaken to assist in determining appropriate benchmarks for the provision of facilities. In adopting the overseas examples care was taken to consider the scale of the population and its geographical spread over a relatively large area to ensure that the application of any international benchmarks were appropriate.

As highlighted in Appendix D, sports participation rates are higher in New Zealand than in many places overseas. As befits a small nation, national identity is commonly associated with the competitive success of a limited number of sports teams. This is the New Zealand connection with a sporting ‘way of life’.

Both the infrastructure of sporting assets and the management processes around them typically reflect the scale of the nation. The key finding from the research was:

- **Emphasis on Sharing Experiences and Information:** There are strong legislative requirements in the New Zealand local authority sector to ensure transparent costing in all of its projects. The



identified opportunity for leadership organisations such as Sport NZ is to provide guidance and information (including costing benchmarks) to support informed decision making.

- **Co-operative Models:** New Zealand's population distribution makes achieving critical mass for the development of assets in some locations difficult. This applies to a range of assets but also includes services (Territorial Authority and National levels) such as health, education and social services. In some instances a development which is not viable for a community (due to demand based on a limited population catchment) may be viable if it can share with other users including tertiary education institutes, military bases, schools or private facilities (to improve utilisation). The outcome is to seek to maximise co-operation and partnerships in all aspects of delivering a service (including assets).
- **National Co-ordination and Guidance:** There is a tension between funding community assets (typically a territorial authority responsibility) and the use of these assets (competitive needs verses community needs verses minimising operational funding deficiencies. This creates a clear role for Sport NZ to provide leadership on both the location and functionality of aquatic facilities for competitive aquatic sport.

## 2.5 Current Roles

A detailed analysis of the current roles in the sector is provided in Appendix H.

The provision and use of aquatic facilities is a complex and interrelated relationship between various key stakeholders. These organisations share a common commitment to the sporting and recreation needs of all New Zealand communities. However, understanding how the stakeholders inter-relate and the respective roles the stakeholders play in developing and operating aquatic facilities is pivotal. The key stakeholders and their primary roles include:

- Sport NZ, leadership in the sector
- Local authorities, asset developers, owners and operators
- National and Regional Sporting Organisations, leadership of their sports
- Funders, trusts and charitable organisations, funders for asset development
- Ministry of Education, asset owner and operators



## 3. The Current Facilities Network

### 3.1 Overview of Network

The current network of aquatic facilities in New Zealand comprises of some facilities that are nearly 100 years old. However more commonly they reflect the nations' focus on developing social infrastructure in the 1960's and 1970's.

At a strategic level the existing network reflects local authorities building pools to meet social demands at the time, namely aquatic facilities responding to the rapid population growth in the 1960s and 1970s. The network further reflects the historical territorial authority structure (large number of smaller territorial authorities) which results in a reasonably high number of smaller facilities.

Interestingly, the network also reflects the impact of interest groups influencing local authority decisions and this is represented by higher (and lower) aquatic spends distributed throughout the regions (as demonstrated via variations in territorial authority budgets).

In some ways the network has been organic, changing to meet different social needs with a range of aquatic facility offers and associated programmes. The current facilities network, while giving an overview of where facilities are available does not reflect the diversity of programmes or activities undertaken at these facilities. The network continues to evolve and this Strategy is a “**point in time**” picture of the network.

### 3.2 Current Aquatic Assets

To develop the understanding of the current network we researched a number of existing databases<sup>1</sup>. This was supported by specific research and consultation where required. The resulting database of existing aquatic facilities is included in Appendix I.

In addition to identifying community pools, we also assessed pools owned by schools in the Ministry of Education network<sup>2</sup>. It is important to understand the contribution school pools make to the overall network. They are often critical for 'learn to swim' programmes and in providing facilities in isolated communities. However, generally these pools are not available to the public and thus have been considered separately from the council network of pools. However, all community pools including those managed by trusts have been assessed as council pools.

The provision of pools includes indoor and outdoor pools, structured tanks and excludes leisure facilities (for play), slides and health facilities.

The following table highlights the provision of water space in the network. It identifies the areas of water (square metres) for both of the council and school networks, by region.

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<sup>1</sup> In particular the Water Safety New Zealand database was aligned with the Yardstick database developed in conjunction with New Zealand Recreation Association

<sup>2</sup> Developed from the Ministry of Education PMIS database

Total Provision of Pools by Region						
Region	Population	Council Pools (Sq.M)	School Pools (Sq.M)	Combined (Sq.M)	People per Sq.M of the Combined provision	% of School Pools verses Combined
Northland	159,100	2,132	10,260	12,392	13	83%
Auckland	1,488,000	20,490	18,960	39,450	38	48%
Waikato	416,600	12282	15,980	28,262	15	57%
Bay of Plenty	279,600	6001	7,840	13,841	20	57%
Gisborne	46,900	1000	3,120	4,120	11	76%
Hawke's Bay	155,300	2746	7,740	10,486	15	74%
Taranaki	109,600	4993	7,200	12,193	9	59%
Manawatu-Wanganui	233,500	9528	12,640	22,168	11	57%
Wellington	489,100	10283	6,200	16,483	30	38%
Nelson-Tasman	91,700	3124	3,760	6,884	13	55%
Marlborough	45,800	838	1,980	2,818	16	70%
West Coast	33,100	2250	1,520	3,770	9	40%
Canterbury	571,800	11630	13,360	24,990	23	53%
Otago	208,500	4049	4,900	8,949	23	55%
Southland	94,200	2869	2,820	5,689	17	50%
New Zealand	4,422,800	94,215	118,280	212,495	21	56%

Table 1 | Total (council and school) provision of pools by region

The provision of pool space across New Zealand varies greatly. On average there are around 21 people for every square metre of total pools available. However, this varies from around 9 people per square metre of water in Taranaki up to 38 people per square metre in Auckland.

More pools are available in provincial New Zealand, potentially reflecting a pattern of building aquatic facilities to serve the needs of smaller provincial centres with geographical constraints. However, the pattern appears to reflect the level of conurbation, with regions such as Wellington consisting of predominantly major cities, whereas the Bay of Plenty has a network of smaller provisional centres surrounding the major city of Tauranga. Basically, the network reflects lower pool provision per person in urban areas.

### 3.2.1 Pools per head of population

In order to be consistent with international benchmarking practices we have benchmarked demand using the surrounding pool network. The key reason for this is that there is sufficient evidence to provide benchmarks and that the considerable variables can be eliminated. ). To consider this issue

further, we translated the benchmark data into a 'standard-sized' pool of 25 m and eight lanes which equates with 500 square metres<sup>3</sup>.

The following table shows the number of people per region per 'standard size' pool, for both council and school facilities.

People per 'standard-sized' pool by region				
Region	Population	People per 'Standard-Size School Pools	People per Standard-size Council Pools	People per Total Standard size pools
Northland	159,100	7,753	37,312	6,419
Auckland	1,488,000	39,241	36,310	18,859
Waikato	416,600	13,035	20,029	7,896
Bay of Plenty	279,600	17,832	17,734	8,891
Gisborne	46,900	7,516	23,450	5,692
Hawke's Bay	155,300	10,032	16,910	6,297
Taranaki	109,600	7,611	10,975	4,494
Manawatu-Wanganui	233,500	9,237	15,198	5,745
Wellington	489,100	39,444	27,073	16,054
Nelson-Tasman	91,700	12,194	14,677	6,660
Marlborough	45,800	11,566	27,327	8,126
West Coast	33,100	10,888	7,356	4,390
Canterbury	571,800	21,400	24,583	11,441
Otago	208,500	21,276	34,192	13,115
Southland	94,200	16,702	16,417	8,279
New Zealand	4,422,800	18,696	23,472	10,518

Table 2 | People per 'standard-size' pool by region

Table 2 highlights a pattern of significantly higher ratios of people per pool in urban areas when compared to the ratios in regional and provincial areas with Waikato going against this pattern. This is consistent with the data presented in Table 1.

To further illustrate this point, the following table demonstrates the average number of people per pool for Auckland, major urban areas and provincial North and South Island centres.

<sup>3</sup> Under this basis of analysis 1,000 m<sup>2</sup> Olympic sized pool would count as two pools. The intention is to provide an intuitive basis of comparison

### Summary of Provision of Council Pools by Regional Type

Area	Average People per Pool	Average people per 'standard-sized' council Pool	Average People per Total 'standard-sized' Pool
Auckland	39,241	36,310	18,859
Major Metropolitan Centres	20,846	22,043	10,714
Provincial North Island	10,082	18,636	6,543
Provincial South Island	13,135	14,580	6,910
New Zealand Average	18,696	23,472	10,407

Table 3 | Summary of Provision of Council Pools by Regional Type

### 3.3 Outdoor and Heated Pools

The following table shows the distribution of council pools across each region, indicating the proportion by square metre, which are outdoors and heated.

Area and Percentage of Outdoor and Heated pools by Region			
Region	Total Area of Pools (Sq.M)	Percentage Outdoor	Percentage Heated
Northland	2,132	59%	32%
Auckland	20,490	45%	66%
Waikato	10,400	55%	71%
Bay of Plenty	7,883	51%	82%
Gisborne	1,000	70%	30%
Hawke's Bay	4,592	52%	70%
Taranaki	4,993	67%	98%
Manawatu-Wanganui	7,682	48%	55%
Wellington	9,033	42%	91%
Nelson-Tasman	3,124	45%	100%
Marlborough	838	54%	46%
West Coast	2,250	0%	100%
Canterbury	1,1630	19%	90%
Otago	3,049	18%	94%
Southland	2,869	0%	100%
New Zealand	94,214 (total)	41.0% (ave)	77.6% (ave)

Table 4 | Area and Percentage of Outdoor and Heated pools by Region

The pattern is largely consistent for outdoor pool types with the tendency for indoor pools to be more prevalent in the South. This also holds true for heated pools.

Areas such as Northland and Gisborne face both the low provision of pools and a high proportion of pools which are either outdoors or unheated. These areas are also highly dependent on the school network (a higher percentage of school pools as a percentage of the local network).

### 3.3.1 Age and condition of pools

The data presented in this section is based on the Water Safety New Zealand's (WSNZ) 2011 independent evaluation of the condition of plant and machinery undertaken by AECOM<sup>4</sup>. The focus on age and condition is intended as an indicator of trends rather than a definitive commentary on any particular region (due to potentially high variability within the data). It is intended to highlight the overall risk within the network.

Estimated condition and age of pools by region				
Region	Total Pool Area (Sq.M)	Over 45 Years	Poor Condition	Good Condition
Northland	2,132	79%	6%	15%
Auckland	20,490	35%	8%	49%
Waikato	10,400	37%	23%	39%
Bay of Plenty	7,883	41%	7%	54%
Gisborne	1,000	70%	Unavailable	Unavailable
Hawke's Bay	4,592	62%	43%	41%
Taranaki	4,993	66%	0%	43%
Manawatu-Wanganui	7,682	46%	0%	65%
Wellington	9,033	49%	10%	25%
Nelson-Tasman	3,124	18%	Unavailable	Unavailable
Marlborough	838	30%	0%	70%
West Coast	2,250	42%	11%	69%
Canterbury	1,1630	19%	2%	26%
Otago	3,049	12%	Unavailable	Unavailable
Southland	2,869	14%	0%	64%

Table 5 | Estimated Condition and Age of Pool by Region

For clarification, the “Unavailable” data was not available prior to printing. The high proportion of pools over 45<sup>5</sup> years of age in some locations (nearly 80% of the aquatic facilities) is considered a high risk to the overall network. There is a significantly low percentage in several areas of the south island indicating new facilities in recent years. Further comment would be that there are no clear correlations between age and condition with detailed investigation.

<sup>4</sup> AECOM developed database under contract to Water Safety NZ, which included review of plant and machinery in each site. This was part of the database provided by Water Safety NZ

<sup>5</sup> 45 year age chosen because profile showed strong pattern of construction in the 1970's

### 3.4 The Current Competitive Network

The user requirements for competitive aquatic sports are significantly different to the needs of the general community user. The current network of pools for competitive sports is an integral part of the total national network. The hierarchy of facilities for competitive sport represents different levels of functionality and service provisions. Competitive sports have specific requirements for facilities which include water depth and specialist associated equipment which can increase the challenges on pool operations, especially for larger events. Training requirements are less specific and more flexibility is available, with the key requirement being access to water space.

In seeking to understand the current use of aquatic facilities, consultation was carried out with the NSOs to gauge the level of events that the NSOs use the facilities for. This is outlined in Table 6.

For clarity, international and National facilities can provide the provision for Regional competition. Therefore consideration of the provision for regional competition needs to include pools in the National and international categories as well.

The following table shows the pools that are being used for international and National events (by the relevant NSO) within the last 5 years (nominally). Whilst the exact reasons for the use of each facility are not known, the key drivers are the suitability of the facilities, their availability and the ability of the NSO to reach agreed commercial terms for access.

Major Aquatic Sport use of existing facilities										
Sport	Millennium Institute, Auckland	West Wave, Auckland	Bay Wave Tauranga	Waterworld Te Rapa, Hamilton	WRAC, Wellington	Rotorua Aquatic Centre	Huia Lower Hutt	Lido Aquatic PNth	Splash Palace Invercargill	Moana Pool Dunedin
Swimming	International	National	National	National	National	National	National	National	National	National
Diving	National	International	National	National	International	National	National	National	National	National
Water polo	National	International	National	National	International	National	National	National	National	National
Canoe Polo	National	National	National	National	National	National	National	National	National	National
Life Saving	International	International	International	National	National	National	National	National	National	National
Underwater Hockey	National	International	National	National	National	International	National	National	International	National
Synchronised swimming	National	International	National	National	International	National	National	National	National	National

Table 6 | Sporting requirements compared to existing facilities

**Table Legend**

	International		National
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The following table lists the pools capable of hosting Regional-level competitions for each of the major aquatic sports.

	Competitive Swimming	Diving	Water Polo	Canoe Polo	Lifesaving 3	Under water Hockey	Synchronised Swimming
<b>Northland</b>							
Whangarei Aquatics	Capable of hosting	Not capable of hosting	Not capable of hosting	Not capable of hosting	Not capable of hosting	Not capable of hosting	Not capable of hosting
<b>Auckland</b>							
Millennium Institute	Not capable of hosting						
West Wave	Not capable of hosting						
<b>Waikato</b>							
Water World Te Rapa	Not capable of hosting						
<b>Bay of Plenty</b>							
Baywave TECT Aquatic Centre	Not capable of hosting						
AC Bath Taupo	Not capable of hosting						
<b>Gisborne Hawkes Bay</b>							
Waterworld Indoor Pool	Not capable of hosting						
Frimley Aquatic Centre	Not capable of hosting						
<b>Taranaki</b>							
TSB Pool Complex	Not capable of hosting						
<b>Manawatu Wanganui</b>							
Lido Aquatic	Not capable of hosting						
<b>Wellington</b>							
Wellington Regional Aquatic Centre, Wellington	Not capable of hosting						
NaeNae , Lower Hutt	Not capable of hosting						
Huia Pool, Lower Hutt	Not capable of hosting						
<b>Nelson, Tasman, Marlborough</b>							
Stadium 2000, Blenheim	Not capable of hosting						
<b>Canterbury</b>							
Jellie Park <sup>6</sup>	Not capable of hosting						
<b>Otago</b>							
Moana Dunedin	Not capable of hosting						
<b>Southland West Coast</b>							
Splash Palace	Not capable of hosting						

Table 7 | Aquatic facilities able to host Regional competition, by region

**Table Legend**

Capable of hosting	Not capable of hosting
--------------------	------------------------

<sup>6</sup> Outside pools used for some regional competitions in diving and canoe polo

## 4. Demand for Aquatic Facilities

### 4.1 Overview of Needs

This report identifies the two major categories of demand separately:

- **Competitive Demand:** Sport and competition based activity including training and competitive events.
- **Community Demand:** Recreational activity which includes swimming, school activity programmes, learn to swim and a range of facility based activities such as hydro-slides and wave pools.

To provide additional clarity, Competitive Demand includes:

- NSO, Regional Sports Organisations and club based organised activities
- Training for the above groups
- Competitions for the above groups

This group specifically excludes aquatic users who participate on a casual basis (eg lap swimmers) who have no affiliations with the organised activities.

Community demand includes:

- Casual users and participants in all facility organised activities / programmes.

The following table is derived from the Sport NZ/Gemba study of participation and it outlines the motivation of participants.

Motivation for Participation in Aquatic Activity	
Motivation	Percentage of Participants
Fitness	23%
Competition	3%
Relaxation	25%
Social	13%
Youth	36%
Total	100%

Table 8 | Motivation for Participation in Aquatic Activity

A key feature is that the combination of 'youth' (commonly learn to swim), 'relaxation' and 'social' equates with 74% of the motivation for participation in aquatic activity.

The remaining major component of fitness which represents 23% of the total motivation drivers are associated with healthy lifestyle choices as much as sport training. Therefore, assuming half the participation for 'fitness' is a part of training for competitive sports, the competition demand is in the range of 10-20% of total demand for facilities, with 80%-90% of demand for facilities being community-based non-competitive recreation.

### 4.2 Demand for the Competitive Network

Consultation was undertaken with the following key NSOs:

- Swimming NZ
- Diving NZ
- NZ Water Polo
- Surf Life Saving NZ
- NZ Canoe Polo Association
- Underwater Hockey
- Synchronised Swimming

Refer to Appendix F for a detailed summary of the consultation. The consultation was based on a discussion of participation and memberships. This information was supported by research on sporting participation either explicitly on the sport, or generically via the sector. A summary of the themes cited by all of the NSOs are presented below.

#### 4.2.1 Competitive network hierarchy

Based on the consultation and a review against the relevant sporting code requirements, the following is a hierarchy which aligns event type with aquatic facility requirements. For clarity, this is for competitions and excludes training (training requirements can be typically provided with a lower functional specification). This issue is somewhat complex in the New Zealand setting as the requirements for the sports vary considerably. In many instances a facility will be capable of holding regional events for one sport and international events for another. Therefore, each sport has been assessed specifically and the key requirements identified. Only the key requirements have been identified for each sport.

#### International Events - Key Requirements

International Event Requirements							
Sport	Indoor	Pool Length (m)	Pool Width (m)	Pool Depth (m)	Warm Up/ Down Pool	Spectator Seating	Support Facilities
Swimming NZ	Yes	50 m	25 m +	2 m	Yes	500+	Timing Equipment
Diving NZ	Yes	20 m	20 m	5 m	Ideally	200+	Dive Tower
NZ Water Polo	Yes	33 m	25 m	2 m	Ideally	500+	
Surf Life Saving NZ	Yes	25 m	25 m	3 m	No	500+	
NZ Canoe Polo Association	Yes	50 m	25 m	1 m	No	200+	
Underwater Hockey	Yes	50 m	25 m	2.5 m	No	500+	Tiled Floor*
Synchronised Swimming	Yes	25 m	12 m	3 m	Ideally	200+	

Table 9 | International Event Requirements

\*No tiles on the walls around the floor up to 500 mm off the floor.

## National Events - Key Requirements

National Event Requirements						
Sport	Indoor	Pool Length (m)	Pool Width (m)	Pool Depth (m)	Spectator Seating	Support Facilities
Swimming NZ	Yes	50 m	25 m	1.35 m	500+	Timing Equipment
Diving NZ	Yes	20 m	20 m	4.5 m	200+	Dive Tower
NZ Water Polo	Yes	33 m	21 m	2 m	200+	
Surf Life Saving NZ	No	25 m	20 m	1.8 m	200+	
NZ Canoe Polo Association	No	50 m	25 m	1 m	100+	
Underwater Hockey	No	25 m	12 m	2 m	200+	Tiled Floor*
Synchronised Swimming	Yes	20 m	12 m	2 m	200+	

Table 10 | National Event Requirements

\*No tiles on the walls around the floor up to 500 mm off the floor.

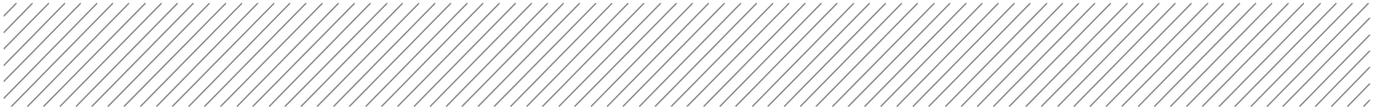
In all instances, access to a warm up / down pool for National Competitions is preferred, however all the NSOs have flexibility to adapt if this functionality can not be provided.

## Regional Events - Key Requirements

Regional Event Requirements						
Sport	Indoor	Pool Length (m)	Pool Width (m)	Pool Depth (m)	Spectator Seating	Support Facilities
Swimming NZ	No	25 m	16 m	1.35 m	100+	Timing Equipment
Diving NZ	No	20 m	20 m	4 m	50+	Dive Tower
NZ Water Polo	No	25 m	21 m	1.8 m	200+	
Surf Life Saving NZ	No	25 m	20 m	1.8 m	50+	
NZ Canoe Polo Association	No	25 m	15 m	1 m	50+	
Underwater Hockey	No	25 m	15 m	2 m	50+	Tiled Floor*
Synchronised Swimming	No	15 m	10 m	1.8 m	50+	

Table 11 | Regional Event Requirements

\*No tiles on the walls around the floor up to 500 mm off the floor.



The tables above recognises that often complex facility requirements for varying event types have been consolidated into a simplistic table and therefore in all instances when planning activities, reference to the NSO and each sports individual facility requirements driven by international guidelines is required.



The following is a summary of the consultation with the NSOs and their competitive event needs.

Summary of competition requirements by major aquatic sporting codes						
Sport	Participation	Membership	Critical Requirements	Regional Events	National Events	International Events
Swimming	Slow growth in organised swimming.	22,500 members 13,500 registered swimmers	Meet FINA requirements. Clear lanes (no community users).	30-40	8	1 every two years
Diving	Low participation.	Less than 1,000	Diving boards, platforms & deep water.	4-7	3	1 every two years (minimum)
Water Polo	Rapidly growing participation. Based in schools and clubs.	15,000 (10,000 in schools)	2 m min water depth.	20	16	1 every year
Surf Life Saving	Slow increase. Following demographic changes.	15,000 members (4,000 active)	Clear lanes (no community use). 2 m min water depth.	4-8	1-2	1 every three years
Canoe Polo	Generally static with some strong pockets of growth	2,000 players including secondary schools	Need 35m + pool for competitions.	4	1	1 every five years
Underwater Hockey	Rapidly growing participation based in schools. Static levels in clubs.	1,000 members 800 in schools	Flat bottom pool with tiled floors with over 2 m of water depth. No tiles in the 500 mm above the floor.	7	4	1 every four years
Synchronised Swimming	Slow growth from small base	400 members 300 participants	Over 1.8 metre water depth	4	1-2	1 every three years
<b>Total Overview</b>				<b>50-70 per annum</b>	<b>25-30 per annum</b>	<b>1-2 per annum</b>
<b>Likely facility Requirement</b>				<b>25-30 Regional Facilities</b>	<b>3-5 Nationally Facilitates</b>	<b>1-2- International Level Facilities</b>

Table 12 | Summary of competition requirements per annum by major aquatic sporting codes



## 4.2.2 Demand for competition facilities network

The key issue is translating the requirement for holding larger scale events into the number of aquatic facilities required. In determining this outcome we refer to Section 6 which discusses the key issues in significantly more detail. However, at a strategic level, the issues are:

- The NSOs require access to facilities however these facilities are generally provided by territorial authorities (as the asset owner). In a large number of instances, the objectives for the facilities are different to the needs of the NSOs.
- There are requirements for the asset owner to balance operational costs with revenue. Hosting events can result in reduced revenue as other activities can not be undertaken. Further, the facilities required for holding events (such as spectator seating) add additional capex costs during development which have limited payback. It costs more to build a specific aquatic facility capable of hosting competitions and larger events and often results in less revenue (when the events are held) with the gap being borne by the asset owner or the operator of the management contract.

The key issue is that there is not enough funding available to build and operate every facility that the NSOs desire. Therefore there must be a compromise.

One of the key issues has been NSOs seeking access to facilities for training. There is a moderate amount of flexibility in providing for events however training times for organised sports often clash with the peak times for community access.

### International

The NSOs all are actively trying to attract International Events to New Zealand as they provide a range of benefits to their sports. Based on the demand, this translates to 1 to 2 International Facilities. The key reasons are:

- Costs (capex and opex) are prohibitive in establishing multiple facilities.
- Travel is expected as a requirement to compete at this level.
- These potentially provide the High Performance focus as a training base.
- Location is better suited to areas of higher population to improve utilisation and ensure more users can get access.
- Supporting infrastructure such as airports and accommodation.

### National

The focus on NSOs is on ensuring that there are pathway programmes and the National Events provide this focus. It is also important that these events are distributed throughout New Zealand to assist in developing the sports. Based on the demand, this translates to 3 – 5 National Facilities. The key reasons are:

- Restricted to the main centres as they are able to draw on larger catchments which assist in improving utilisation of these facilities outside of competition times.
- Less facility requirements than for International Events but still must meet a high standard as they are the high performance pathways in New Zealand.
- Enables targeted investment by restricting the number of facilities.

### Regional

Regional Events are the backbone of the sports and provide the widest participation avenue for each sport. Based on the demand, this translates to 25 – 30 Regional facilities. The key reasons are:

- Needs to be located in the region.
- These facilities provide a training base at Regional level.
- Lower facility requirements (such as 25 m pool length).

- These facilities need to be available for competitions over a relatively small time period (eg school holidays) and therefore compete with community demands at key times.

### 4.3 Demand for the Community Facility Network

To assess the demand for community aquatic facilities we considered participation rates in aquatic sports and recreation. The participation data used is based on the 2007/2008 New Zealand Active Survey, which is based on detailed analysis of 5,000 individuals who maintain records of their activities. Similar but slightly lower participation rates were defined in the 'Gemba'<sup>7</sup> study of sport participation. However, the Active New Zealand study is more comprehensive and covers a wider age distribution.

The following table shows participation by age group for aquatic activities.

Participation in swimming by age group and implied annual swim visits				
Age Group	New Zealand Population 2011	Participation Rate	Estimated Participants	Percent age to total
15 and under	898,900	85.20%	765,863	39%
16 – 24	642,530	47.30%	303,917	15%
25 – 34	573,180	44.00%	252,199	13%
35 – 49	930,180	40.90%	380,444	19%
Over 50	1,380,630	20.50%	283,029	14%
Total	4,425,420	44.86%	1,985,243	100%

Table 13 | Participation in swimming by age group and implied annual swim visits

The table highlights the high proportion of participants in the younger age groups. The under-15 age group represent 39% of participants. This age group therefore represents a very high element of the demand for aquatic facilities. The extent to which this group drives pool demand is an important element in predicting future public demand for facilities especially when access times (e.g. the peak 4 pm to 7 pm timeslots) are considered. For a more detailed analysis of aquatic participation, including frequency of participation, refer to Appendix G.

#### 4.3.1 Benchmarks for facilities based on Population

A review of available international benchmark calculators was completed and an outcome was that a suitable tool for translating a population profile into demand for facilities is the *Sport England Sport Facility Calculator*. A discussion of the *Sport Facility Calculator* and indicative United States estimates are discussed in Appendix D. The *Sports Facility Calculator* proved to provide an inadequate estimate in provincial centres where pools need to cater to low populations spread over large areas. For this reason we used the calculator to inform discussions of the need but developed benchmarks which differentiate between provincial and urban areas.

In determining an appropriate benchmark for the provision of pools per head of population, it is important that geographically diverse regions are reflected as this is a key aspect that makes the provision of facilities within New Zealand unique. Many provincial regions in New Zealand have a

<sup>7</sup> Telephone survey commissioned by Sport NZ April –September 2011 conducted by Gemba Group Ltd

network of small rural townships, commonly with populations of around 10,000 which are providing servicing support for a hinterland of farming communities.

Based on the analysis presented in Appendix G, the following table states the benchmarks determined for estimating the demand for Community Pools (excluding the School Pool network).

Benchmark Estimates of Demand for Community Pools	
Type of Region	People per square metre of pool
Auckland	70
Urban Centres	60
Provincial Areas	35

Table 14 | Benchmark estimates of demand for Community Pools

70 people per square metre of pool was selected for Auckland as the population densities for Auckland are at the lower end of the range when compared to UK and American city population densities.

In metropolitan centres outside of Auckland, where the greater urbanisation would allow for greater efficiencies in the use of space, 60 people per square metre of pool was selected. The ratio of 35 people per square metre was used for provincial centres to reflect smaller population densities. We have then assessed these benchmarks against the typical population sizes that exist across New Zealand. This is shown in the following table.

Benchmark requirements for aquatic facilities		
Population	Outcome of Benchmark	Comment
Population centre of less than 10,000	<ul style="list-style-type: none"> <li>No guideline</li> </ul>	
Population centre of 10,000	<ul style="list-style-type: none"> <li>Ratio of 35 people per square metre implies one 300m<sup>2</sup> pool (nominally 25 m by 12 m)</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of NZ pools suggests that usage would vary between 20,000 to 40,000 pool visits per annum.</li> </ul>
Population centre of 30,000	<ul style="list-style-type: none"> <li>Ratio of 35 people per square metre suggests a minimum of one 500 square metre pool (nominally 25 by 20m).</li> </ul>	<ul style="list-style-type: none"> <li>Usage would commonly be in the range of 40,000 to 100,000 visits per annum.</li> </ul>
Population centre of over 100,000	<ul style="list-style-type: none"> <li>Ratio of 60 people per square metre implies a network of three to four 'standard size' pools. This would total around 1,500 to 2,000 m<sup>2</sup> of pool provision</li> </ul>	<ul style="list-style-type: none"> <li>Centre of this scale should contribute to competitive sporting needs by being capable of hosting Regional competition.</li> <li>Potential role in hosting National competitive events</li> <li>Seeking 100,000 to 500,000 visits per annum</li> </ul>
Population centre of over 300,000	<ul style="list-style-type: none"> <li>Ration of 60-70 people per square metre implies a network of ten to twenty 500 m<sup>2</sup> pools.</li> </ul>	<ul style="list-style-type: none"> <li>This should support a centre contributing to National competitive events</li> </ul>

Table 15 | Benchmark Requirements for aquatic facilities

Based on these benchmark levels the projected demand for facilities can be calculated. The calculation for each region is shown in the following table.

<b>Demand for pools based on population</b>			
<b>Region</b>	<b>Population</b>	<b>Benchmark Area Sq.M</b>	<b>Benchmark # of 'Standard-Size' Pools</b>
Northland	159,100	4,546	9
Auckland	1,488,000	21,257	43
Waikato	416,600	6,943	14
Bay of Plenty	279,600	7,989	16
Gisborne	46,900	1,340	3
Hawke's Bay	155,300	4,437	9
Taranaki	109,600	3,131	6
Manawatu-Wanganui	233,500	6,671	13
Wellington	489,100	8,152	16
Nelson-Tasman	91,700	2,620	5
Marlborough	45,800	1,309	3
West Coast	33,100	946	2
Canterbury	571,800	9,530	19
Otago	208,500	3,475	7
Southland	94,200	2,691	5
New Zealand	4,422,800	85,037	170

Table 16 | Demand for pools based on population

#### 4.4 Future Demand Based on Changing Trends in Participation

It is important to understand the rapidly changing demographic profile of New Zealand and whether this will have an impact on the demand for aquatic facilities.

There is strong population growth in some regions and a static but aging population in other regions. While nationally the population is slowly increasing it is actually aging quite significantly with a higher proportion of older age groups in most regions.

This is shown in the following table which illustrates the total population by age group in 2011 and projections for 2021 and 2031.

Demographic Profile of New Zealand: 2011, 2021 & 2031			
Age Demographics	2011	2021	2031
14 and under	898,900	936,500	928,000
15 – 24	642,530	611,030	656,930
25 – 44	1,182,870	1,263,080	1,320,570
45 – 64	1,114,820	1,195,520	1,171,240
65 and over	586,300	811,800	1,071,800
<b>Total</b>	<b>4,427,431</b>	<b>4,817,930</b>	<b>5,148,540</b>

Table 17 | Demographic Profile of New Zealand, 2011, 2021 and 2031

The table highlights that the population in the 24 year and younger age groups are relatively stable with a minor increase over the next two decades. However, what is significant is the near doubling of the population aged 65 or over.

At a regional level, most provincial centres have a static population, but with the proportion of under 15 year olds reducing and the number of over 65 year olds increasing. The implications of this are that regions with static but aging populations are likely to have a declining demand for aquatic facilities based on lower participation rates for these age groups. Effectively the younger age groups, of whom 85% are participating in aquatic activities are being replaced by older age groups of whom only between 20% to 40% are participating in aquatic facilities.

To understand the potential impact of the demographic changes we evaluated the Statistics New Zealand demographic population projections for 2021 and 2031<sup>8</sup>. We modelled this with the participation rates for each of the age groups to estimate the number of participants in each region. This allowed a more robust estimate of the future demand for aquatic facilities as it reflects the estimate population and the profile of that population (based on current participation rates). Full details of the analysis are included in Appendix G. The following key points apply in understanding the table:

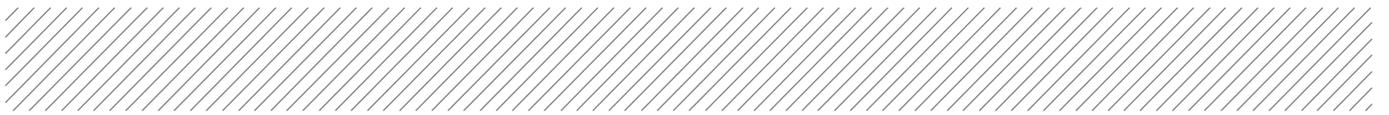
- Current Benchmark reflects our estimate of demand (not the existing facilities)
- Estimated Swim Visits determines the percentage of change
- The percentage of change is multiplied by the Current Benchmark to determine the actual change

The table below presents the data.

<sup>8</sup> The medium growth projections from the Department of Statistics were used

Region	Demographic Changes					Impact on Pools			
	Estimated Swim Visits 2011	Estimated Swim Visits 2021	Estimated Swim Visits 2031	Percentage Increase 2011 to 2021	Percentage Increase 2021 to 2031	Current Benchmark	Additional 2011-2021	Additional 2021- 2031	Pools Benchmark in 2031
Northland	1,402,320	1,412,180	1,406,620	1%	0%	9	-	-	9
Auckland	13,719,260	15,409,340	17,029,320	12%	11%	43	5	6	54
Waikato	3,777,340	3,913,880	3,999,180	4%	2%	14	1	-	15
Bay of Plenty	2,484,380	2,600,260	2,704,000	5%	4%	16	-	-	16
Gisborne	437,520	423,080	401,120	-3%	-5%	3	-	-	3
Hawke's Bay	1,385,020	1,358,860	1,316,820	-2%	-3%	9	-	-	9
Taranaki	965,620	942,480	893,720	-2%	-5%	6	-	-	6
Manawatu-Wanganui	2,069,980	2,036,080	1,985,040	-2%	-3%	13	-	-	13
Wellington	4,389,060	4,521,400	4,583,360	3%	1%	16	-	1	17
Tasman / Nelson	803,700	815,080	821,460	1%	1%	5	--	-	5
Marlborough	378,400	378,620	366,980	0%	-3%	3	-	-	3
West Coast	281,540	266,580	248,560	-5%	-7%	2	-	-	2
Canterbury	4,990,740	5,204,720	5,354,880	4%	3%	19	1	-	20
Otago	1,792,180	1,837,460	1,859,140	3%	1%	7	-	-	7
Southland	827,080	788,720	725,980	-5%	-8%	5	-	-	5
<b>Total New Zealand</b>	<b>39,712,111</b>	<b>41,914,100</b>	<b>43,700,660</b>	<b>6%</b>	<b>4%</b>	<b>170</b>	<b>8</b>	<b>6</b>	<b>184</b>

Table 18 | Demographic Changes



Based on the outcomes of the data, an additional standard 14 pools are required to accommodate the projected impact of both population growth and profile changes. The Auckland region has both the impact of a growing population and a growing number of under-15-year-olds. This compares with most provincial New Zealand centres where the under-15-year-old population is declining. The result is that the number of pool visits in Auckland is expected to increase by 12% over the next decade and grow by 25% (cumulative) by 2031. This is a key driver for additional facilities.



## 5. Gap Analysis

### 5.1 Network of Competitive Facilities

The evaluation of the needs for competitive sports is detailed in the table below and shows the major aquatic facilities in the network. This is compared to the current provision of these pools.

The most significant gap is the need for at least one internationally viable aquatic sports facility. This is not currently available in the New Zealand network. However, the proposed development of the new Millennium Institute Pool will meet this requirement.

The 4000-seat capacity facility will feature an Olympic-sized 50m pool and also a 25m warm-up pool, catering for a variety of aquatic codes including swimming, water polo and surf life-saving. Diving will not be provided for in this facility. The venue will sit alongside the existing 50m pool at the Millennium Institute and other facilities at the institute.

The potential Christchurch Metro Sports Facility may also be capable of providing an internationally-credible facility. The publicly available information (from CERA's Christchurch Central Development Unit) indicates that the Metro Sports Facility will be a world-class venue and centre of excellence, accessible to people of all ages, abilities and sporting skills. It will provide aquatic and indoor sports facilities and cater to the day-to-day needs of the recreational, educational and high-performance sporting communities, and host National and International events.

The Metro Sports Facility will include:

- An aquatic centre with a 50m, 10-lane competition pool, and dive and leisure pools;
- Indoor stadium – 8 indoor courts, with seating for up to 2,800;
- High performance centre with facilities for coaching and training;
- Day-to-day recreation, including a fitness centre and landscaped outdoor space;
- Performance movement centre with studios and performance space;
- Administration facilities and parking.

The re-establishment of aquatic facilities in Canterbury will be critical to the provision of Nationally capable facilities in the South Island. The previous QEII was cited as a critical component of the network by a number of NSOs. There are signs that taking this major facility out of the network has had an impact on participation, both within the Canterbury region and for some other sports on a national basis.

For National Aquatic Facilities we consider the network to be appropriate (with the re-establishment of a facility in Christchurch). However the distribution of pools is heavily biased toward the lower South Island, with two of the three national pools in Otago/Southland. Further investment in this area should be targeted at improving the functionality of the facilities.

The following table categories assessed the demand for events against the existing facilities and highlights where the gaps are in the existing network. This is at International, National and Regional levels.

## Comparison of hierarchy of needs to hierarchy of aquatic facilities

Sport		International <sup>9</sup>	National	Regional			
				Upper North Island	Lower North Island	Upper South Island	Lower South Island
Existing Facilities	Facilities in Category	MISH (Future) West Wave ChCh Metro (Future) WRAC	MISH (Future) West Wave ChCh Metro (Future) WRAC Splash Palace Moana Dunedin Waterworld Hamilton	13	11	10	8
	Demand						
	Competitive Swimming	1-2	5	3	2	2	1
	Diving	1	1	1	1	1	1
	Water polo	2	3	3	2	2	1
	Canoe Polo	1	1	1	1	1	1
	Life Saving	1	3	2	1	1	1
	Underwater Hockey	1	4	1	1	1	1
	Synchronised swimming	1	1	1	1	1	1
Gaps	Competitive Swimming	Adequate	Limited Capacity	Limited Capacity	Adequate	Adequate	Adequate
	Diving	Adequate	Adequate	Limited Capacity	Limited Capacity	Inadequate	Adequate
	Water polo	Adequate	Limited Capacity	Limited Capacity	Adequate	Limited Capacity	Adequate
	Canoe Polo	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate
	Life Saving	Adequate	Limited Capacity	Limited Capacity	Adequate	Adequate	Adequate
	Underwater Hockey	Limited Capacity	Adequate	Adequate	Adequate	Limited Capacity	Limited Capacity
	Synchronised swimming	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate

Table 19 | Existing Sporting Facilities compared to demand

<sup>9</sup> International relates to providing international level capacity for some aquatic sports, but not necessarily all sports. The categorisation includes spectator capacity.

### 5.1.1 Key gaps

**International** - The requirement for an international facility for a number of aquatic sports will be met by the proposed extension at MISH and potentially by the Metro Sports Facility. It is critical that the facility at MISH provides the international functionality to the network which is required.

**National** - There are a number of areas with limited capacity at present and this is primarily driven by competition for access at peak times. The sports of Competitive Swimming, Water Polo, Underwater Hockey and Surf Lifesaving have limited capacity for National level events predominantly because of the large number of events they are co-ordinating. One additional facility in Auckland that meets the National requirements will complete the national network. In determining this outcome it has been assumed that the proposed facility in Christchurch will also meet the requirements for a National facility.

**Regional** - The need for Regional facilities in the Upper North Island could be augmented by a Regional level facility in Northland, which would also address the shortage of community-level facilities in that area (refer following section). The addition of a National facility in Auckland would also support this gap.

The new pools all need to meet the requirements of Water Polo, Underwater Hockey and Surf Life Saving. The requirements for water depth (in the game area) are largely similar between Water Polo and Synchronised Swimming. Diving is also struggling with lack of access to its facilities, with a number of the regions unable to host diving activities in winter (outdoor pools). The participation levels in these sports are significantly less, but additional facilities may allow these sports to grow.

For example, there are no diving facilities in Hawkes Bay and Bay of Plenty. The installation of diving boards at the Newmarket Pool would provide an immediate (and cheap) solution for Central Auckland.

A plan to cover (and heat) some of the existing outdoor pools would provide an immediate increase in the number of facilities available for all aquatic sports and all asset owners should consider this as part of their long term asset planning. This must be considered against the additional costs of meeting a relatively small number of users and therefore the asset owner should consider this in the context of their local network.

Immediate examples would include Panmure (Auckland), Palmerston North, Whangarei, New Plymouth and Nelson but there are numerous others as well.

The capacity in the Upper South Island is also a limiting factor for a number of aquatic sports. It is obvious from discussions with the NSOs that the loss of the QEII facility has already had a major impact on participation in sports in the South Island. The new Christchurch Metro Sports Hub will be critical in meeting the needs of the Upper South Island. However, this facility's contribution at a Regional and National level is more important than its contribution as an International facility.

For clarity, the above assessments did not include facilities under construction or in the planning stages as part of the existing network. For example, the existing Kapatī facility was not included in the existing asset base.

### 5.1.2 Recommended competitive sporting facilities

The following outcomes are recommended:

- Ensure that the aquatic facility at MISH meets the needs for international aquatic sports particularly in Competitive Swimming.
- Develop one additional National level facility in Auckland particularly meeting the needs of Competitive Swimming, Water Polo, and Surf Life Saving but with a focus on deep water. Specifically, this could be incorporated with the Community facilities required in Auckland.

- 
- Develop one facility in the Northland to meet Regional competitive needs.
  - Ensure that the proposed Christchurch Metro Sports Hub has sufficient capacity to operate as a Regional and National-level facility for the mid and upper South Island.
  - Provide priority access for competitive aquatic sports to the existing facilities (at National Level), especially those with significant spectator capacity and deep water to avoid the need for additional pools.
  - Target any proposed investments at National Facilities into improving the functionality of the existing facilities, rather than expanding the existing National network.

## **5.2 Network of Recreational Facilities**

The following table shows the existing provision of pools for each region compared to the national benchmark. It therefore highlights the over or undersupply of pools in the network. This is the combined identified need (as competitive needs are a sub-set of the community needs).

## Comparison of provision of pools to benchmark

Region	Population	Current Provision of Pools in region (Sq.M)	Current Provision of Pools (Standard Pools <sup>10</sup> )	Benchmark Requirements (Standard Pools)	Current Over / Under Supply (Standard-Pools <sup>11</sup> )	Increase in Demand for Pools by 2031 (Standard Pools)	Total needs to address existing gap and population change by 2031 (Standard Pools)
Northland	159,100	2,132	4	9	5	0	5
Auckland	1,488,000	20,490	41	43	2	11	13
Waikato	416,600	12,282	25	14	(11)	1	(10)
Bay of Plenty	279,600	6,001	12	16	4	0	4
Gisborne	46,900	1,000	2	3	1	0	1
Hawke's Bay	155,300	2,746	6	9	3	0	3
Taranaki	109,600	4,993	10	6	(4)	0	(4)
Manawatu-Wanganui	233,500	9,528	19	13	(6)	0	(6)
Wellington	489,100	10,283	20	16	(4)	1	(3)
Nelson-Tasman	91,700	3,124	6	5	(1)	0	(1)
Marlborough	45,800	838	2	3	1	0	1
West Coast	33,100	2,250	5	2	(3)	0	(3)
Canterbury	571,800	11,630	23	19	(4)	1	(3)
Otago	208,500	4,049	8	7	(1)	0	(1)
Southland	94,200	2,869	5	5	0	0	0
<b>New Zealand</b>	<b>4,422,800</b>	<b>94,215</b>	<b>188</b>	<b>170</b>	<b>(18)</b>	<b>14</b>	<b>(4)</b>

Table 20 | Existing Sporting Facilities compared to demand

<sup>10</sup> Based on standard 500 m<sup>2</sup> pool equivalent, so no necessarily equating with pools or complexes in region

<sup>11</sup> Bracketed figures show estimated over supply of pools against benchmarks



### 5.2.1 Key gaps

Based on the analysis there are currently 18 more standard sized pools in New Zealand than required. There are generally enough pools in New Zealand for the scale of the population but they are distributed poorly, relative to the needs of their communities. Specifically:

- Northland (5), Auckland (2), Bay of Plenty (4) and Hawke's Bay (3) all currently have a shortage of pools
- A number of areas have an excessive number of pools. We are not making a recommendation that these be closed rather that the owners/operators look at the financial viability of each facility as part of their asset planning methodologies

Further, there are a number of areas, such as the West Coast which have a provision of pools well above the New Zealand benchmark. While this is above the New Zealand benchmark it may reflect decisions by local communities to invest in aquatic facilities over other recreation facilities.

Whilst the above summary addresses the current position, the table also estimates the requirements for 2031. The changes assuming that benchmark provision is provided are:

- Auckland requires up to 13 additional pools
- Wellington and Canterbury require 1 additional pool each

The implication of the demographic growth suggests the growing population will reduce the net over supply in the network from 18 to 4 pools however as mentioned earlier the national average masks the shortage in some communities. Overall an additional 27 pools will be required to address the current shortfall (against the benchmark) and the projected demand over the next 20 years if all regions are to meet the proposed national benchmark.

### 5.2.2 Recommended community facilities

The following outcomes are recommended:

- Additional pools are required in Northland (5), Auckland (2), Bay of Plenty (4) and Hawke's Bay (3) to address the current shortage of facilities
- A further 11 pools are required in Auckland over the next twenty years to address demographic growth
- The additional facilities in Auckland could potentially incorporate the National level competition facility
- The additional complex(s) in Northland providing the equivalent of five 'standard size pools' could potentially incorporate the Regional level competition facility

## 6. Meeting Future Needs

This Strategy recognises that the issues are not only about the provision of facilities but also how aquatic facilities are planned, funded and operated. The following are the key issues that have been derived from the process of evaluating the operational data and discussions with the key stakeholders:

- The cost of providing and accessing facilities
- The changing demographic profile of New Zealand
- Developing new facilities and decision making

### 6.1 The Cost of Providing and Accessing Facilities

All parties consulted spoke of the cost of operating and accessing facilities. It was recognised that facilities are expensive to operate and that the cost of access does not represent the true cost of providing the service. There is a subsidy being provided by the asset owners (generally the territorial authorities).

Of local authority managers surveyed as part of our consultation 38% said pricing and user-charges were a major influence on utilisation while the remaining 62% thought it was of 'some influence'. This was further echoed in the one-on-one interviews with a number of facility managers saying that cost was a major factor in attracting participation, particularly in lower socio-economic groups.

Several NSOs spoke of the cost of access to pools and the impact this could have on a multiple day event. A number of NSOs also spoke with surprise of the significant regional variations in cost for facilities. In some cases the hourly costs for a pool exceeded the daily costs at other venues. There is a huge variance of costs for NSOs booking facilities for competitive events.

#### 6.1.1 Levels of subsidy in aquatic facilities

This issue is important because of the significant difference between the cost of provision and the revenue facilities achieve.

The most robust framework for benchmarking facility costs is the LeisureCheck<sup>12</sup> survey.

The LeisureCheck database shows the average charge for pool admission is \$4.70 per visit. However, the operating cost of most facilities greatly overshadows the admission charges. According to LeisureCheck admission charges equate with around 44% of the total cost of a visit. The actual cost of pool provision is around \$10.70 and therefore the net subsidy per visit is around \$5.30. Whilst this figure will vary it is the best available evidence that the provision of aquatic facilities is a heavily subsidised activity and is consistent with our discussions with the territorial authorities (as asset owners).

The LeisureCheck estimates are based on the direct costs of the aquatic facility and do not include corporate overheads, depreciation or return on capital investments. For context, we estimate that depreciation is likely to be approximately \$1.30 per admission. Regardless of how the pools are

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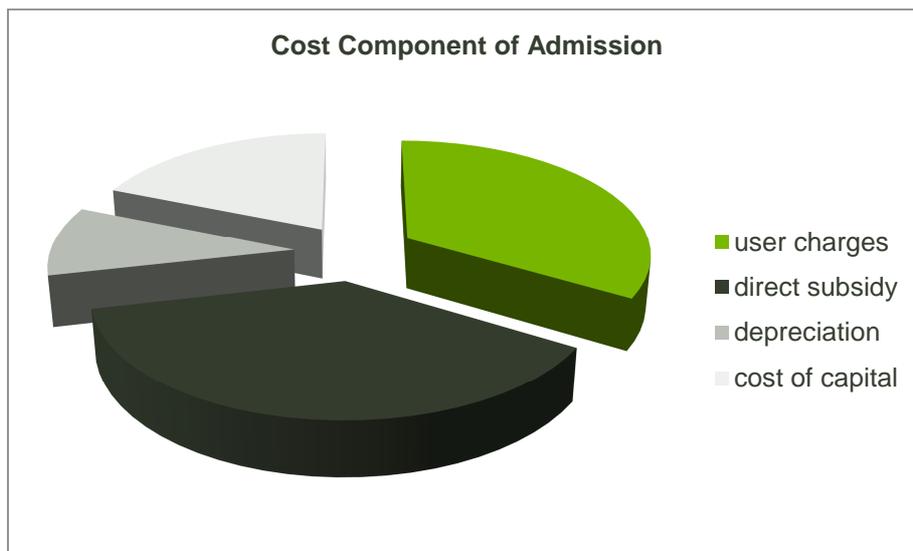
<sup>12</sup> LeisureCheck was developed for the industry as a benchmarking tool to collect management and planning information. The framework was developed in association with the New Zealand Recreation Association (NZRA) and is aimed at measuring the current performance of the facilities and driving future improvements. The database represents around one-third of all local authority pools and the distribution covers a variety of scale and location.

funded any cost analysis needs to reflect the cost of providing the capital. Assuming only a nominal return on the depreciated value of the assets results in a cost of capital of \$2.60 per admission<sup>13</sup>.

The total cost of the admission is therefore approximately \$14 per user with the user paying on average around one third of the cost of providing the facility.

The distribution of the component costs of pool admission is shown in the following graph.

**Graph 12: Components of Cost of Pool Admission**



### 6.1.2 NSO costs for access

The cost of participating for each of the aquatic sports consulted as part of this Strategy varies depending on the locality of the facility, and operational contracts. Some sports, such as canoe polo have high costs for equipment and travel and so access charges represent a small proportion of the total cost of participation. For other sports, such as diving and swimming there is relatively little equipment and the majority of the costs are borne by the facility including specialist infrastructure. The consistent feedback from all the NSOs was that the costs they considered to be reasonable for access to the facilities, were well below a reasonable return on the cost of providing the facility by the operators. This is one of the major drivers in tension between the needs of the Competitive sports and the asset owners and contract operators.

### 6.1.3 Community costs for access

With reference to the earlier section on the level of subsidies provided by territorial authorities, the actual process for identifying and allocating subsidies for users of recreational facilities is well established in the local authority context. Public benefits are elements where the Council determines there are wider community gains from the provision of the facilities<sup>14</sup>.

<sup>13</sup> Assumed a 6% return on capital for a depreciated replacement cost of the pool in the LeisureCheck database. This may understate capital costs, as it will not represent cost of replacing the facility. However, the estimates reflect existing network, which includes some inefficient pools.

<sup>14</sup> A common example may be libraries, where a Council will provide the service without cost on the basis that there is 'public good' in providing access to books and information. Private benefits are those where the user can be expected to pay the full cost of provision



As part of the study we reviewed various feasibility studies and aquatic strategies prepared by local authorities<sup>15</sup>. These all showed a large component of ‘public’ benefit from aquatic facilities. The reasons for this commonly include:<sup>16</sup>

- Improving health and fitness
- Development of learn to swim/survive capabilities
- Increasing participation
- Developing a sense of pride in the community
- Contributing to the development of excellence in aquatic sports

It appears that underlying driver is that local authorities promote healthy lifestyles and they do this by ensuring facilities are available.

The amenity value of aquatic facilities is also an important contribution even for non-users who gain increased property values or higher status suburbs from their proximity to aquatic facilities. This increased amenity value is appropriately paid for through local authority rates.

A full discussion of these issues is attached in Appendix G however this generally supports the conclusion that the major reasons for subsidies relate to recreational rather than competitive uses. It is important that all asset owners determine the basis of allocating access to their facilities with the reasons why.

#### **6.1.4 Utilisation of facilities**

Local authority facility managers spoke of the challenge of driving higher utilisations in their facilities. Conversely the NSOs commonly argued that greater access to facilities would allow a significant increase in participation in their sports. The agreed challenge is that the demand for use is commonly in a narrow band of 4pm to 7pm (and in the morning prior to work hours) which cater for the pre and post-school and work participants. This leaves a large portion of the day during which the facilities are not being fully utilised.

In an attempt to ensure high utilisation, facility managers often develop programmes including learn to swim, aqua-fitness programmes, holiday programmes and community events. Whilst relatively minor in the total New Zealand context, this can create concerns for private sector operators who directly compete with what they perceive as Council-subsidised programmes in some locations.

NSOs and local authority managers all cited the challenge of balancing the demand for access between competitive sports and recreational users. Even between NSOs there was debate about the right basis for access with some NSOs citing local authorities providing preference to sports with higher user numbers (eg water polo over diving) or greater ability to pay for space as the differentials in providing access. Some criteria was historical, ie they have always had that access provision.

Given the discussion on operating costs and high peak demands for access to these facilities further consideration should be given to the issue of user-charges. A traditional market response to any competition for access would be a pricing adjustment. The potential is for higher prices for peak times and lower prices during periods with lower utilisation. There are a number of risks associated with this approach and may see more use by the wealthier groups (both community and sports) at the detriment of the lower socio economic groups. This would obviously have significant social implications that conflict with the objectives of the territorial authorities. This approach should be assessed on a facility by facility basis by the facility operator.

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<sup>15</sup> For list of local authority documents review see appendix x

<sup>16</sup> Example derived from Rotorua Aquatic Centre Policy, but is reflective of many similar documents with other local authorities



The issue of utilisation is made more complex by a number of facility operators being outsourced (to private operators). In most instances there is a contract agreement between the owner and the operator however it is really important that the terms of the agreement reflect the desires of the owner. The risk is that non-alignment will deliver the wrong outcomes. This adds further weight to the argument regarding documentation of facility objectives, including access and utilisation trade-offs.

### **6.1.5 Competition with the Private Sector**

There are commonly private sector concerns about the role of local authorities and the provision of programmes or facilities which the private sector provide. The most quoted concerns relate to the fitness centres which local authorities are increasingly associating with aquatic facilities. The private sector argues that local authorities are using public funds to subsidise gymnasiums which would not otherwise be viable.

Conversely local authority managers comment that they are providing facilities or programmes in a sector of the market which the private sector would not operate, such as in lower socio-economic areas or isolated communities. The local authority managers also argue that the fitness centres can assist with the underwriting of the more expensive or niche facilities which the private sector would otherwise ignore.

Similarly there are programmes which both the public and private sector provide, such as learn-to-swim or holiday programmes. However, the private sector would commonly provide facilities in those niches which were profitable such as high socio-economic areas, but not across the entire community.

The actual outcome is that the gymnasiums adjacent to swimming centres return a profit which assist in subsidising the aquatic facilities and there is little competition between the private sector and territorial authorities.

### **6.1.6 Understanding on-going maintenance costs**

Local authority managers have increasingly needed to provide asset management plans as part of the financial requirements under the Local Government Act. Within our survey most local authority managers expressed confidence in their understanding of the asset issues they faced. When asked “We have a good understanding of future maintenance issues” 50% strongly agreed and a further 40% agreed. The issue is therefore not the understanding of the maintenance problems but understanding how these will be addressed and paid for. When asked what were the major issues with their asset portfolio – “Increasing maintenance and operating costs” 20% commented that ‘a high proportion’ of their assets were in this category and a further 60% responded that ‘many of their assets’ were in this category.

However, there was wide spread belief that the operating costs were not fully understood by Councillors when committing to an asset. As one metropolitan local authority manager commented:

*“The cheapest thing we do is to build the asset. It is the running costs that are the real impact”*

The overall conclusion is that local authority managers tend to have a good understanding of the maintenance planning but recognise that funding for replacement or upgrading is not well planned for or understood particularly at a governance level.

### **6.1.7 Key findings**

- Generally most aquatic facilities in New Zealand operate at a loss and a subsidy is being provided by the asset owner (generally territorial authorities). All users do not pay the true cost of providing the service
- The asset owner determines the level of the subsidy and can on occasion determine who has priority access

- There is a conflict between NSOs requiring access and the community requiring access
- The facility operators will need to seek to recovery more of the costs of providing the service or reduce the service provision into the future
- Allocation to sporting groups will be important, but under most local authority funding frameworks this is likely to remain at between 20-40% of total usage
- A majority of aquatic facilities are under-utilised for a large proportion of the day. There are opportunities to improve utilisation during the non-peak times
- On-going replacement costs are not being funded

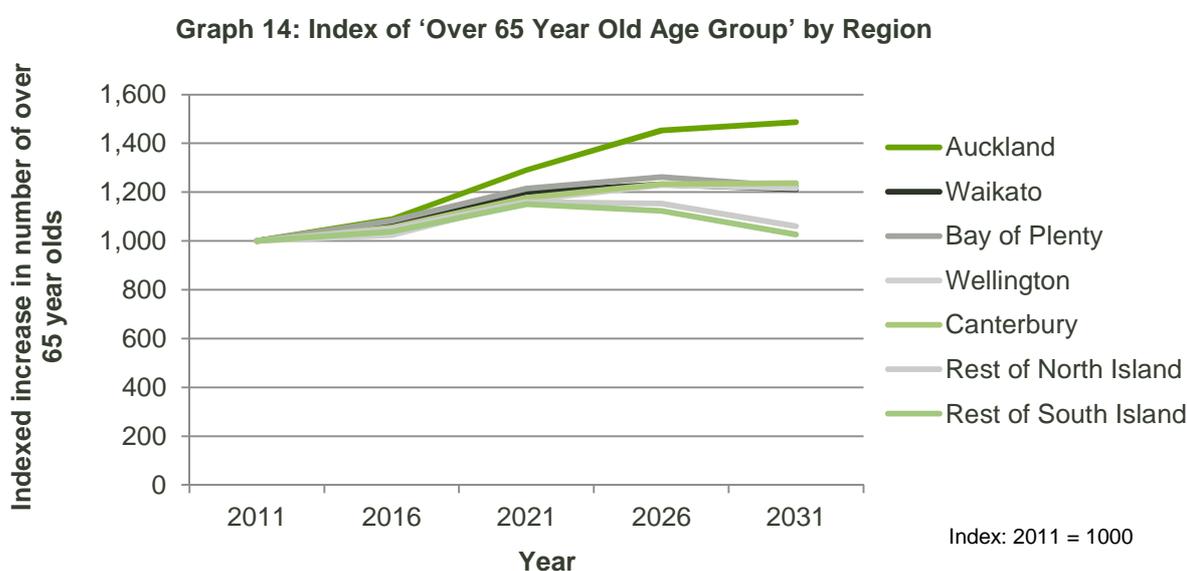
## 6.2 Changing Demographic Profile in New Zealand

For most regions in New Zealand the demographic profile is changing and this is likely to result in a need for different functionality in facilities and for different programmes.

### 6.2.1 Facilities may not be appropriate for an aging population

The previous discussion of demographics focused on the over-50-year-olds as a category which tends to hide major shifts within that age group<sup>17</sup>. The profile trend is an increase in the over-65-years age group as shown in the following graph. For the purposes of comparison the total numbers in the age groups were converted to an index with a base year of 2011 equalling 1,000. Each region was then tracked against the base year for the next two decades. This allowed a comparison between regions with very different population numbers.

The resulting graph indicates the increase in the number of over-65-year-olds over the next two decades.



Auckland shows the largest increase within this age cohort which is expected to increase by nearly 50% over the next twenty year period. Similar age profiles are shown for other major metropolitan areas including Waikato, Bay of Plenty, Wellington and Canterbury. However, in the provincial centres of both the North and South Island the over-65 year age group is expected to increase by around 20% over the next ten years before returning to current levels.

<sup>17</sup> The Gemba study categorise 'over 50' as the only elderly age group and therefore demographic analysis used this categorisation.



Research into the needs of this age group demonstrates that they are significantly more sensitive to comfort in their leisure decisions<sup>18</sup>. The quality of the change rooms, covered pools and water temperature are likely to be important in attracting this age cohort as well as the ease of access to and within the facility.

The qualities of the facilities are therefore likely to be a major determinant in promoting participation in line with Sport NZ growth targets. If New Zealand is to achieve the Government driven objective of further increasing activity levels then the quality of facilities will need to align with the needs of a rapidly growing portion of the population profile.

### **6.2.2 School pools**

The school pool network plays a critical role in the provision of aquatic facilities in New Zealand and has been particularly important in regions which have a distribution of small regional towns. However a number of regions have a very high proportion of aquatic facilities provided by schools. This makes these networks particularly vulnerable to policy decisions made by the Ministry of Education. Whilst this was discussed in some detail in Section 3, for clarity regions such as Northland have 83% of their total pools provided as part of the school network. Similarly Gisborne has 76% of pools provided by the school network.

Typically school pools are not suited to an aging population in that they generally have limited change rooms and other facilities, are not covered and are not heated.

The challenge with school pools is the unclear funding mechanism from the Ministry of Education, which provides for some maintenance but not replacement or upgrades. This has resulted in a significant number of school pools now being removed from the network. This trend may continue in the future.

A further complexity is the high proportion of school pools which are for primary education. These pools are generally relatively small and shallow, reflecting the needs of primary school learn-to-swim programmes. This component of the network is therefore inappropriate for an aging population which are more likely to seek warmer water, depth and covered facilities.

### **6.2.3 High percentages of uncovered and poor condition pools**

Some areas such as Northland (79%) and Gisborne (70%) have a high percentage of pools over 45 years of age.

Areas such as Gisborne (70%), Taranaki (67%) and Northland (59%) have a high percentage of pools that are outdoors.

Areas such as Northland (32%), Gisborne (30%) and Marlborough (46%) have a low percentage of heated pools.

As the population profiles change, these areas are likely to face further issues (requirements for investment capital) to update their facilities to accommodate the changing needs of the population.

### **6.2.4 Utilisation**

Section 6.1 included a discussion on utilisation. The increase in the size of the older demographics actually provides an opportunity for aquatic facilities to increase utilisation in the non-peak times by specifically targeting this demographic.

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<sup>18</sup> University of Waikato study Burrows and McCormack

## 6.2.5 Key findings

- The older (50+) age groups in the demographic profile are the major growth area and they have different expectations for aquatic facilities, being temperature, access, covered and water depth
- There is a need to adapt existing facilities to meet the needs of an aging population which can include the provision of tailored programmes within existing facilities. This is to ensure higher utilisations into the future
- The adaption of facilities will be critical to ensuring increased participation among the elderly
- The adaption of facilities is likely to need to be complemented by changes to programmes to promote aquatic activities in older generations
- The aging population profile provides an opportunity to increase utilisation in some facilities during non-peak times and therefore address (in part) some of the cost issues associated with operating aquatic facilities

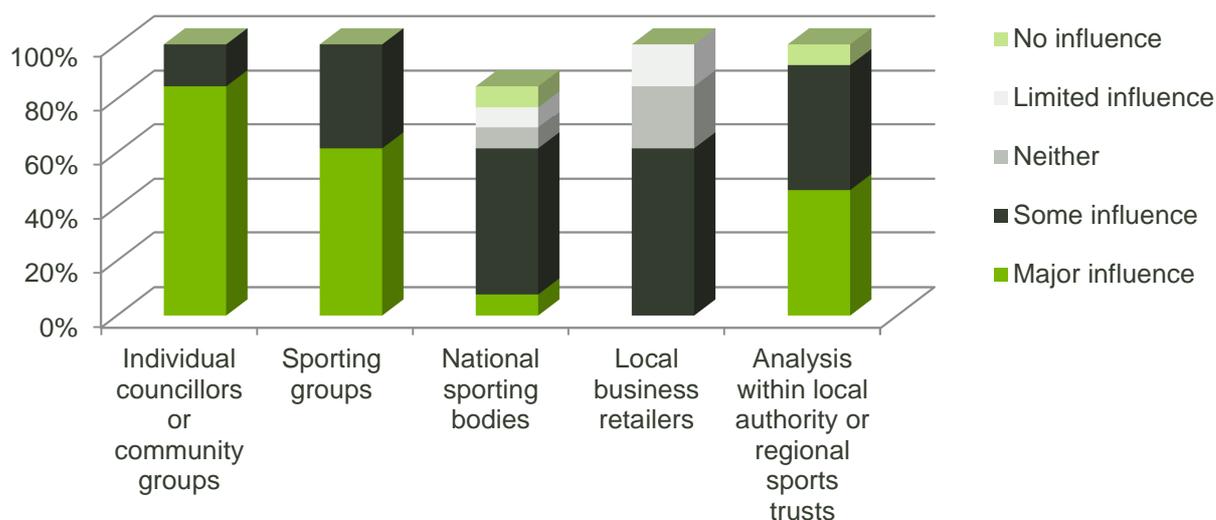
## 6.3 Developing Facilities and Decision Making

All stakeholders advised that the establishment of new aquatic facilities is a complex and difficult process. There were no clear guidelines and often decision making became unclear during the process. The objectives for proposed facilities often changed with significant implications for the whole of life costs of operating the facilities.

### 6.3.1 Decision-making processes

A number of local authority managers spoke of the capture of a development proposal by either small community groups or individual councillors thereby driving forward proposals which were out of scale with local demand. Within the local government survey, when asked “who is the most important decision maker or opinion leader in the process”; 84% of respondents cited individual councillors or community groups as ‘a major influence’ and the remaining 15% as of ‘some influence’. Similarly the influence of community groups was cited as a ‘major influence’ by 61% of local authorities and some influence by the remaining 39%. This is represented graphically below.

**Graph 8: Significance of Decision Makers and Opinion Leaders**



In this context, a critical element of the challenge with aquatic facilities is understanding their role within the network (including surrounding facilities). Commonly cited by stakeholders were examples



where local authorities developed facilities to attract the economic benefits through Regional or National competitions.

Part of the issue is that local authorities may be induced by representations from sporting or interest groups to extend a development on the belief that they will attract National events with subsequent economic benefits.

Typically the incremental increases in the size of a facility appear minor to the decision makers but they generally have a significant impact on the whole-of-life cost of operating the facility. For instance, local authorities may be convinced to include additional lanes in a swimming pool to make it viable for National competitions. However, adding this increased capacity greatly increases the amount of water to be filtered and air to be conditioned potentially adding significantly to the operating costs. This comes with very little additional revenue to off-set the additional operating costs.

Whilst the pool length and width are vital elements in attracting National events, there are a range of other factors (including spectator seating) which are often not considered. Almost always, the events envisaged are not committed to by the NSOs when funding decisions are made and therefore the developer is at risk of not attracting the events. Further, this event (or events) must be moved from another facility in New Zealand and therefore competes with the network.

A number of NSOs spoke of facilities which were designed to allow National competitions, but where the surrounding infrastructure did not provide enough support. This would include insufficient accommodation, poor airport access or too great a travel distance to competitors. In addition, the occurrence of the events may be less regular than the local authority assumes in the process – once a decade rather than once a year. This results in a significant reduction of budgeted revenue.

The critical issue in decision making is to therefore understand the role that the facility provides in the network, define the objectives of the facility and ensure that appropriate decisions are made with reference to the proposed role of the facility. This will involve territorial authorities and other pool developers looking beyond their own boundaries and this may challenge decision making processes.

### **6.3.2 Charitable funding models**

The role of charitable organisations is critical to the development of many aquatic facilities. The Lotteries Grants Board and large Gaming Trusts have provided investment in much of the recreational infrastructure throughout their communities.

The charitable organisations commented that they faced rapidly growing demand for capital investment as the network of infrastructure developed in the 1960/70's comes to the end of its functional life or lacks the capability sought by modern users. Within the funding allocations these Trusts control there is capital for investment in facilities. However, many trusts would prefer to make donations for explicit events, activities or interventions in the community rather than upgrading capital infrastructure.

It is not uncommon for the charitable organisations to be faced with two or more funding requests for facilities which may be competing for the same users or the same competitive events. This may be because of local interest groups lobbying within a region.

Improved decision making coupled with a clear understanding of the role of the facility in the network, should enable the third party funding organisations to support appropriate causes.

### **6.3.3 Facilities as part of urban renewal**

In the survey of local authorities 76% of respondents commented that bringing economic activity to a location was either a 'major influence' or 'some influence' and similarly promoting community engagement or identity was cited as a major influence or some influence by 100% of respondents.



In the discussions with facility managers they cited that the role of a new facility was often part of an urban renewal programme for centres which had lost business or retail outlets. Similarly, there maybe a need to rationalise and/or centralise a range of local community facilities which are past their economic lives.

The challenge for local authorities was therefore balancing wider social objectives, such as community cohesion or urban renewal with the financial considerations associated with aquatic facilities.

#### **6.3.4 Design of facilities**

Previous analysis of aquatic facilities commissioned by Sport NZ (SPARC) in 2002 highlighted the errors which have been made by various local authorities in the design and development of aquatic facilities.

The underlying challenge with the facilities is that the design is commonly intended to be an iconic venue, rather than a 'work-a-day' tool. The design process therefore focuses on the form rather than function of the facility. Local authority managers and users spoke of examples where in an attempt to bring projects within a budget, compromises were made on the fundamental components rather than on design aesthetics. These have had significant operational implications in recent years.

In contrast, there have been examples within the framework where the inclusion of specialist facility managers and operators within the design and development process has resulted in significant savings throughout the process (and over the life of the facility). The savings derive from cost reductions in the total project but also reductions in the future operating costs.

Sport NZ has developed a peer review service which is available to local authorities or organisations which provides independent reviews of development plans for new facilities. The intention is to ensure the lessons from previous experience are made available to other facility developers within the network.

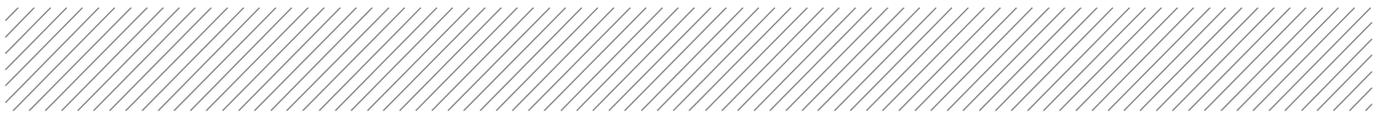
#### **6.3.5 Development aligned to this Strategy**

There are a number of drivers for the development of aquatic facilities. At the local level, territorial authorities fund and develop facilities for their communities. Likewise, Regional facilities are funded by territorial authorities as they predominately service their local (including regional) communities. Drivers for developing facilities in the National network are less clear as whilst they do serve their local communities there are additional requirements that are of limited additional value (to the local communities). At international level, governments typically contribute significantly to the costs of these facilities (with reference to MISH as an example).

It is not financially feasible to develop a standalone competitive based facility at National level as the costs significantly outweigh the revenue and there has historically been a lack of desire (from all parties) to fund this. National facilities therefore best exist in regions where there are higher populations but the specific requirements that make them National facilities (such as spectator seating, improved timing equipment or water depth) generally do not have economic paybacks. This creates a tension between the needs of the NSOs and the financial challenges especially cost recovery to the operators.

This creates the need for additional investment (outside of local government) into the National network, provided they agree with the size and shape of the network.

Many of the National standard facilities developed in New Zealand were developed to attract international or National events, such as the Christchurch or Auckland Commonwealth Games. In addition some of the push for additional internationally credible facilities is driven by an interest in attracting appropriately scaled international completion. Key findings include:



- Decision makers must understand the role of the aquatic facility in the network and its mix of services to meet requirements
- Clear requirements for each facility should be developed and all detailed captured in a business case
- Decision making can be significantly improved with by aligning the project to its original purpose (objectives), with strict change control measures
- Aligned funding can be achieved with all parties when objectives and requirements are clearly documented



## 7. Developing the Road Map

The discussion in Section 6 resulted in a number of key findings. Each of the key findings have been considered so that guidance material can be developed to support all project stakeholders.

The outcome is a suite of initiatives which support the development of a collaborative approach between stakeholders. Appendix A outlines the Decision Making Criteria for aquatic facility development which incorporates the anticipated roles and responsibilities for all stakeholders.

The analysis and consultation has identified that the stakeholders expect Sport NZ to play a leadership role in any new developments. The scale of the involvement needs to be appropriate to the scale and role of the facility in the network. In part, the process will be of brokerage of experiences between local authorities.

Appendix B then documents a Toolkit for Developing Aquatic Facilities and captures the key elements that need to be considered. This process applies equally to new facilities or to the re-development of existing facilities.

The 'Development Guidelines' require clear alignment with the NSOs on the role of the aquatic facilities they utilise. This needs to define the role and usage levels as part of development of the sport. For this to be effective it will require the NSOs to establish National event strategies to maximise the usage of the network facilities (a programme of events). This will provide credibility and rigour to any endorsement of the demand, especially for competitive Regional or National tournaments.

By extension, asset owners should develop a clear understanding of their plans by completing needs assessments for their aquatic facilities and developing aquatic facility plans that guide its future development and priorities. These plans must align to this National Strategy.

Local authorities should be encouraged to obtain a clear statement on the role of the facility within the national network from each of the NSOs, prior to committing to new facilities. This requires detailed consideration of the allocation of space to various different user groups.

Local authorities are encouraged to determine and publish a framework for access between club/sporting groups and the broader recreational community. The key issue is that when each territorial authority determines its plan, this will respond to the needs of the total community, this includes both sporting and community users. It is not possible to define an exact percentage for allocation of space to each of the groups. Rather it requires consideration of the total assets in each area, a balance between the specific demands of each group in the locality and the level of subsidisation that the asset owner is prepared to support.

# Appendices





# Appendix A

## Decision Making Framework

### Decision Making Processes

Figure A.1 demonstrates a decision making process that is focussed on project stakeholders maximising development (including re-development) opportunities. This process aims to achieve a targeted approach to investment in order to avoid the risk of allocating funding in a piecemeal manner, and maximises the ability of projects to provide sustainable monetary and non-monetary benefits.

When considered in the context of this Strategy, the process provides a pathway for good decision making.

Guidelines (refer Appendix B) have been developed to assist in the consideration of projects (including re-development projects) and form a critical part of the decision making process outlined below.

It must be noted that the identification of the need for an Aquatic Facility may be generated by a variety of sources. The Decision Making Framework proposed is based on Territorial Authorities (TAs) developing Aquatic Facility Plans and the major NSOs aligning to this Strategy. The role for Sport NZ is to engage as facilitator and mentor in the preparation of the plans and in continued discussions with the NSOs.

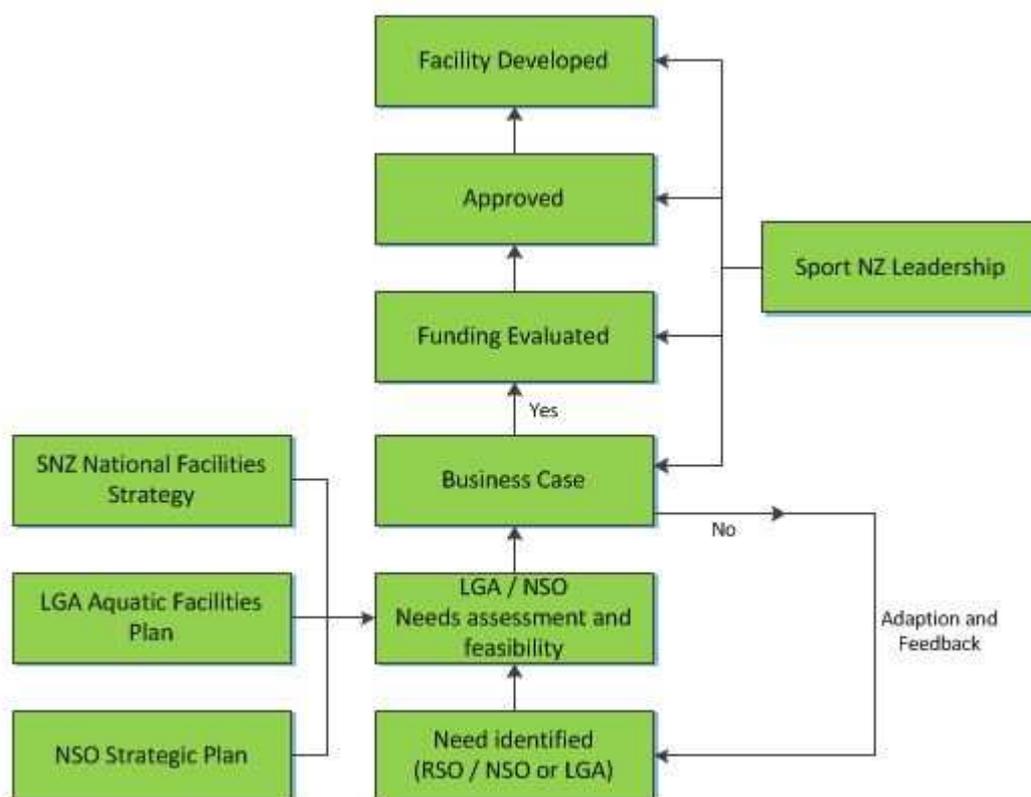


Figure A.1 Decision Making Framework

## Roles and Responsibilities of Key Stakeholders

In adopting a new approach to the planning, prioritisation, development and funding of aquatic sport facilities as set out in Figure A.1, it is important to clarify the roles and responsibilities of key stakeholders in the process. The following roles and responsibilities have been identified in line with Figure A.1.

### *Sporting Clubs, Associations and Community Organisations*

- Focus on delivering their sports
- Identify and articulate their issues to RSO and TA
- Assess the plans of the NSO, TA and this Strategy
- Consideration and engagement with other organisations/activities who require similar facilities

### *Regional Sporting Organisations (RSO)*

- Provide support to Sporting Clubs and Associations
- Identify the need for new or re-developed facilities based on:
  - Gaps in current facilities provision based on demand (membership and use)
  - Changing demographics including population growth
- Identify and articulate their issues to the NSO and TA
- Work with the TAs and land owners for co-located facilities and to assess demand
- Ensure consistency with NSO strategic planning
- Proactively engage with all stakeholders



### *National Sporting Organisations (NSO)*

- Undertake strategic planning for the sport and engage with the TAs and this Strategy
- Ensure consistency with NSO planning (a consistent voice from the sport)
- Assist in the co-ordination of initial investigations and engagement between the RSO, and Sport Clubs and Associations to analyse the feasibility of the project
- Engage with all partners and stakeholders

### *TAs*

- Recognise its role as the primary provider of aquatic facilities
- Work with the RSO and NSOs to understand their needs
- Develop Aquatic Facility Plans that reflect their local communities and the Strategy.
- Lead the preparation of needs analysis, gap and demographic assessments
- Lead the preparation of feasibility studies and resultant business cases and work closely with the RSO / NSO when relevant.
- Understand key measures of success including:
  - Participation levels
  - Financial sustainability (using benchmarks to provide a 10-year period to determine operational subsidy or surplus)
- Work with the project stakeholders including the NSO, RSO and Clubs to determine priorities and objectives for the facility including consideration of:
  - What is the purpose of the facility
  - What is the service mix required to meet community demands
  - Identify the right site including consideration of land values, access, strategic planning policy and location
  - Impact on other facilities in the network
- Engage with community partners and stakeholders

### *Sport NZ (SNZ)*

- Provide leadership, guidance and advice throughout the planning process
- Provide benchmarks and information against which proposals can be measured
- Assess business case submissions against funding criteria
- Remain strategic in the consideration of all new proposals as they relate to the Strategy

# Appendix B

## Toolkit for Aquatic Facility Development

### Aquatic Facilities Checklist

Project Identified	For Consideration	Tick box when completed
	Establish the need for the project	<input type="checkbox"/>
	Establish key characteristics of the population	<input type="checkbox"/>
	Establish the type, number and requirements for facilities mix	<input type="checkbox"/>
	Engage with other organisations/activities who could co-locate	<input type="checkbox"/>
	Define roles and responsibilities within the stakeholders	<input type="checkbox"/>
	Identify a gap in facility provision (re-development, reallocation of space and new facilities should all be considered)	<input type="checkbox"/>

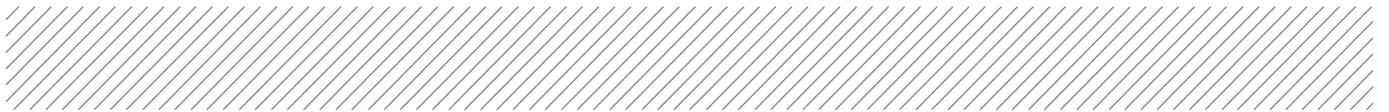


**RSO / NSO / LGA Needs assessment and feasibility**

Feasibility	For Consideration	Tick box when completed
	Formalise the need	<input type="checkbox"/>
	Assess locations for the facility (including redevelopments)	<input type="checkbox"/>
	Assess the scope of the facility, building on the facilities mix	<input type="checkbox"/>
	Concept costings including whole of life and operational	<input type="checkbox"/>
	Is the project feasible to progress to Business Case?	<input type="checkbox"/>



**Business Case**



Asset Owner	For Consideration	Tick box when completed
	Set vision and objectives - Determine the purpose of the facility	<input type="checkbox"/>
	Identify service mix required to meet community needs and ensure alignment to existing strategies and policies (eg Sport and Recreation Plans)	<input type="checkbox"/>
	Select the site - Demonstrate that the site is located within a growth area or urban regeneration area	<input type="checkbox"/>
	Demonstrate the ability to link with adjacent or nearby facilities and services	<input type="checkbox"/>
	Identify and engage further with stakeholders and the community, particularly potential operators	<input type="checkbox"/>
	Select management and operating model including determination of the following: <ul style="list-style-type: none"> <li>• Are other parties able to contribute to capital and/or operating costs</li> <li>• Will the facility or programs generate full-time use</li> <li>• Resourcing – are the right skills available in-house</li> <li>• Ability to retain and mitigate risk including ownership, financial, construction and ongoing operational</li> <li>• Who pays the operational costs</li> </ul>	<input type="checkbox"/>
	Set principles for design of the facility that address functionality, user experience, access and sustainability	<input type="checkbox"/>
	Provide strategy for ongoing asset management	<input type="checkbox"/>
	Prepare concept design including preliminary costing	<input type="checkbox"/>
	Identify funding opportunities and sources	<input type="checkbox"/>
	Prepare Business Case	<input type="checkbox"/>



### Assess against the Strategy

Assess against Strategy and provide a recommendation	For Consideration	Tick box when completed
	Assess against available funding criteria (including a site visit)	<input type="checkbox"/>
	Prior to a recommendation being made, endorsement from NSOs will be required	<input type="checkbox"/>
	Provide a recommendation to Funding Parties	<input type="checkbox"/>

## Establishing the Need

An aquatic facility aims to meet the needs of the community. A facility's financial sustainability is also linked to how well it services existing and future sport and recreation needs. Initial clarity about the needs of the community that will be met by the Aquatic facility, and the setting of clear objectives to reflect needs is a key ingredient for success.

Understanding need may involve, defining the facility catchment, undertaking a strategic view of community facilities in the long term in the area, and identifying what role the facility can play in addressing the need. It is important that the drivers for a facility in terms of community need can be clearly articulated and where possible quantified.

Key Step	For Consideration	Possible method
Establish the catchment of the facility	Distance Population density Physical barriers such as rivers and major roads Accessibility	Circular catchment analysis
Establish the demographic and socio-economic profile of the catchment area including	Key characteristics of the population <ul style="list-style-type: none"> <li>- Age, gender, income, ethnicity, employment</li> <li>- Access to transport modes</li> </ul> Cultural values and needs Participation levels	Review Census data Review participation data (Gemba, SNZ activity survey, Comunitrak) Engage sports clubs and associations
Audit existing facilities and services	Existing facilities and programs in the area Key user and representative groups in recreation and sport provision Identify desired standard, and gaps or deficiencies in existing provision Identify opportunities for organisations to co-locate Identify the participation of the sport/activities Past and future growth in sport/activities	Review records Site inspections Review Sport and Recreation Plans
Identify any future growth areas or urban regeneration areas that may be connected to the facility.	What will the future needs of the community be?	Review District, Regional and local strategic plans
Demonstrate how the facility fits into the strategic and policy framework for the region and the relevant sport and recreation plans (including SSO plans)	Strategic planning	Review State and local policy, sport and recreation plans

## Vision and Objectives

To determine the meaning of success facility providers must identify what they want to achieve through their proposed facility. Setting objectives for the facility should also clearly determine the relative commercial and community focus of a facility. Some facilities may have greater focus on commercial success, while other facilities may weight delivery on social objectives (social inclusion, health, participation, safety).

Key Step	For Consideration	Possible method
Scale and function	Facility catchment Activities the facility will host Formal and informal groups that will use the facility Mix of facilities and services that will be offered	Stakeholder consultation Review relevant plans
Objectives	Links to needs identified in the catchment Participation outcomes Particular groups to be serviced Social inclusion Social capital Sports pathways Broader community benefits Safety outcomes	Stakeholder consultation
Environmental	ESD considerations	Design opportunities
Financial and commercial	Financial sustainability Revenue generating activities Lifecycle asset management and future upgrade Recurrent costs of running programs	Detailed analysis

## Site Selection

Selection of the appropriate site is critical and will be a significant factor in the success of the facility. Where possible, co-location with existing infrastructure including public transport, education, health and community services, existing local sports clubs, business and shops can contribute significantly to the success of facilities.

Key Step	For Consideration	Possible method
Location	Areas of demand Accessibility for pedestrians, cyclists, private vehicles and public transport (including those with a disability) Physical barriers such as rivers and major roads Existing infrastructure	Engage stakeholders Site inspections
Availability	Land ownership Land tenure Land cost and affordability	Maps and GIS data Stakeholder consultation

Key Step	For Consideration	Possible method
Site analysis	Size and shape Topography Vegetation Exposure to wind Views and visibility of the site Watercourses Geotechnical Land contamination Compatibility with surrounding land uses	Maps and GIS data Site inspections
Linkages	Proximity to and ability to link with adjacent or nearby complementary facilities or services (e.g. schools, childcare, existing sport and recreation facilities, libraries, community centres, shopping centres, medical centres etc.). Transport links (to all modes) are important.	Urban design framework
Functional and iconic potential	Gateway site Site well known to the regional community Extent of support and interest in the site as an Aquatic facility by stakeholders and the community; network of existing clubs and organisations willing to participate Interest of potential private sector partners – are there areas of the site that will be attractive to them?	Urban design framework

## Identify and Engage Partners, Stakeholders and the Community

Good relationships and common values between Facility partners are a key component of the success of facilities. A relationship of trust and common purpose between partners is a characteristic of facilities that operate well. Engagement of stakeholders and the community should be undertaken at targeted points throughout the various stages described above.

In principle, early awareness and involvement of stakeholders and community in the process will provide greater “buy in” and ownership of the Aquatic facility, and allow best management of potentially complex relationships between stakeholder groups.

Key Step	For Consideration	Possible method
Identify and engage potential partners	<p>Partners in the successful development and operation of an Aquatic facility can include user groups, clubs and associations and commercial service providers.</p> <p>A particular operating model such as a shared use will involve particular partners</p> <p>Do all partners share the vision? If not how can they be aligned?</p> <p>Are there any partners missing that are needed to deliver on the vision?</p> <p>Is there potential for a shared use model and if so who should be engaged?</p> <p>Consider site selection and operating and management models</p>	Prepare and implement Community Engagement Plan
Engagement Strategy	<p>Identify communities of interest</p> <ul style="list-style-type: none"> <li>Who will have input and who will be informed</li> </ul> <p>How the community will be engaged and when</p> <p>The organisations, groups, and individuals to be consulted with may be different at different stages of the project.</p>	Community Engagement Plan may include individual meetings/briefings, group workshop

## Management and Operation

Selection of a management model will depend on a range of factors including:

- The facility objectives
- The in-house expertise and resources of the facility owners. Are they able to deliver on the objectives?
- The scale and nature of activities undertaken at the Facility
- The level of control of operation the Facility owner wants to maintain
- If considering a contract management model, the availability of suitable contractors.
- Capacity to fund, to operate, to maintain and improve
- Establishing who will have responsibility for the decision making process

It is preferable that an early decision is made on the preferred Management Model.

In line with the identified users and uses of the facility is the need to explore the best management arrangement to ensure all needs are met while the centre is operated in the most cost effective manner. This includes an assessment of the rationale for service delivery and a clearer understanding of whether or not the facility will be a centre catering solely for community groups; expected to operate commercially, or a mix of both.

This is best explained in terms of a 'community' facility that offers maximum access but may require on-going subsidy, through to a commercial centre that may be viable but not fully accessible to the broader community.

Understanding why the precinct is being developed and clearly articulating the community benefit is a key outcome of the overall process. Clearly identifying the intended level (local, regional or state) will also assist in the type of management best suited to the facility with smaller localised facilities tending to have more of a social outcome and therefore more suited to lease and licence arrangements with

local groups through to larger more commercial facilities that may be outsourced under strict contractual and procurement arrangements.

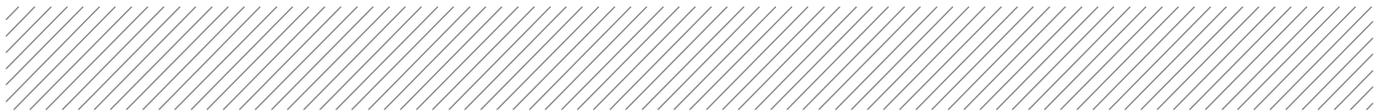
Key Step	For Consideration	Possible method
Are other parties able to contribute to operating costs	Contribution to operating costs will partly determine the financial sustainability of a facility. The following will inform the selection of the operating model: <ol style="list-style-type: none"> <li>1) Will operating costs be met almost entirely by the host LGA with little or no contribution from operating income</li> <li>2) Will operating costs be met by operating income from multiple partners and some subsidy required from LGA</li> <li>3) Will operating costs be met entirely from user fees and operating income</li> </ol>	<ol style="list-style-type: none"> <li>1) Direct Management (depending on resource skills and requirements)</li> <li>2) Consider Joint Management Shared Use Agreement</li> <li>3) Multiple options for operation</li> </ol>
Will the facility or program facilitate full-time use	<ol style="list-style-type: none"> <li>1) Facility/program is primarily out of hours</li> <li>2) Facility/program requires all hours</li> </ol>	<ol style="list-style-type: none"> <li>1) Shared use with an educational institution (shared use)</li> <li>2) Multiple options</li> </ol>
Resourcing	<ol style="list-style-type: none"> <li>1) There will be very minimal staff input required for facility/program and skills are available</li> <li>2) There will be considerable staff requirements and local employment/training requirements and resources needed to administer the facility, and specific skills are not readily provided in-house</li> </ol>	<ol style="list-style-type: none"> <li>1) Self-management</li> <li>2) Outsourced delivery</li> </ol>

## Design

The design of an Aquatic facility will involve consideration of the size, location and nature of the site and its surrounds, the facilities to be developed, the objectives of the facility, who the primary user groups will be, and the budget.

Implementing a facility design that suits the activities and the users is also a component of success. Responsive design can create a place where people come to play, meet and connect with the local community, and that is inviting and stimulating, visually sensitive and expressive, and has a feel good atmosphere for people of all ages and cultures.

Key Step	For Consideration	Possible method
Definition of objectives	Design objectives in relation to the look, feel and function of the facility may be in addition to the objectives for the facility overall. Ensure alignment to the agreements on objectives and scope from the Business Case.	Partner, stakeholder and community engagement



Key Step	For Consideration	Possible method
Concept design	Site analysis <ul style="list-style-type: none"> <li>- Size and shape</li> <li>- Topography</li> <li>- Vegetation</li> <li>- Exposure to wind</li> <li>- Views</li> <li>- Watercourses</li> <li>- Land contamination</li> <li>- Compatibility with surrounding land uses</li> <li>- Opportunities and constraints</li> </ul> User requirements <ul style="list-style-type: none"> <li>- Facility users' needs in terms of total pool area, characteristics of spaces, linkages between spaces, accessibility requirements</li> </ul> Identity of facility <ul style="list-style-type: none"> <li>- User groups, club identities, desired facility outcomes</li> </ul> Flexibility and changing functions Shared use Passive surveillance and Crime Prevention Through Environmental Design (CPTED) Cost estimates Approvals	Architect's brief to address all components
Asset Management Planning	Whole of life economic and financial costs associated with constructing, procuring and operating a facility	Life cycle cost planning

# Appendix C

## Methodology

### Overview of approach

The approach of the project has been to focus on consultation and facilitation of key facility stakeholder views. In particular it leaned heavily on the National Sporting Organisations which provide leadership within their sporting codes. In addition further input was gathered from local authorities to understand their needs and focus as the major provider of facilities.

The predominant framework for the methodology was to focus on the needs of the sector, before investigating the facilities available. The intention was to understand the drivers for the use of aquatic facilities and the usage trends that are developing with time. The needs are then compared to the existing facilities to identify the gaps and shortfalls. A key element of the approach is to recognise in a small country such as New Zealand with limited resources that there is a need to ensure the maximum efficiency in the provision of facilities. For that reason the methodology considered the difference between the mismatches of existing infrastructure to demand and also the reasons that decision making may have resulted in poor allocation of resources. The methodology is presented in the graph below.





## Assessing Needs

The Strategy consulted with the National Sporting Organisations (NSOs) to understand the current and future needs of the sports they represent. Toward that objective we interviewed the national organisations which have explicit demand for aquatic sports facilities.

Although consultation was limited to those organisations which are major users of facilities it included commentary on those who do not compete in aquatic facilities, but use them for training and some event purposes eg triathletes. In these cases we investigated strategic documents of the relevant NSO, including Strategy Plans, Annual Reports and Government reviews and submissions.

As part of the needs assessment we also interviewed the major metropolitan local authorities. Our focus in this phase was on community interests and demand. This was augmented by an extensive library of reports commissioned by local authorities to evaluate facilities and needs within their communities.

Local authorities have two general roles in the provision of sporting facilities:

- The first predominant role is as developers and owners of facilities which are typically used by their community. In that regard they undertake a highly transparent process before developing assets through the Long Term Planning process in response to the perceived needs of the community.
- The second role is evaluating the needs of the community and developing initiatives and programmes to support these, using the facilities they have developed.

The discussions with local authorities are separated into two areas; meeting the needs of the community and issues of asset management. Our process included one on one interviews with the metropolitan local authorities. However we also used internet survey tools to contact all local authorities and provided the opportunity for any who were developing or rationalising assets to be interviewed in the process.

## Assessing Facilities Profile

Independently from the needs analysis we developed a national database of aquatic facilities. We incorporated aquatic facilities large enough to include six lanes with a 25 metre pool length. The analysis of this information was dependent on the adequacy of both Yardstick<sup>19</sup> and Water Safety New Zealand (WSNZ) databases.

The assessment of facilities however did deal with detailed discussion with a range of local authorities. The focus of the analysis was not only how they perceived asset maintenance and management but also what were the key drivers for their investment in aquatic assets. Part of this process was to understand their decision making processes and the multiple objectives they are targeting with their investments.

The individual discussions targeted the metropolitan local authorities, as they are the predominant investors in assets. However, in addition to the metropolitan local authorities, we surveyed provincial local authorities with an internet questionnaire to ensure a balanced scale of viewpoints were received.

In addition to local authorities, interviews were conducted with major owners of aquatic facilities in Central Government. This is predominantly represented by the Ministry of Education, which is a major owner or guardian of pools through its school network. In addition, we had broad discussions with both

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<sup>19</sup> Yardstick is an asset benchmarking tool developed in consultation with New Zealand Recreation Association(NZRA)



the New Zealand Defence Force (NZDF) and the Tertiary Education Institutes to understand the wider 'whole of government' components of the facilities network.

## Identifying the Gaps

An analysis identifying any gaps between the existing facilities was derived from comparing the needs and future demand for facilities against the existing network. The result was an overview of the areas where the range of facilities which New Zealand needed to address identified gaps and further recommendations of the challenges for future facility development. This considered the profile of the existing assets and how these differed from the potential future needs of aquatic facility users.

In developing the gap analysis we highlighted the failures in planning for facility development which had been identified during the consultation phase. This linked to the commentary by NSOs and the local authorities on the successes of some developments and the areas where changing processes may have improved the end result.

## Developing the Road Map

The conclusion of the strategy provides a framework for developing the facilities required. Its focus is on improving decision making and creating opportunities for central Government, local Government and community organisations to work together.

The overall approach aims to promote efficiency in the provision of assets, and establish the best network which New Zealand can obtain from its limited capital available.

The resulting strategy goes on to outline the roles of the respective partners in ensuring an efficient network, and the toolkit required to ensure this development process is carried out in a cost-effective manner.



# Appendix D

## International Models

### Overseas Models for how Agencies Work Together

Clarifying the balance between centralised strategies and local delivery is a challenge throughout the world. In developing the way in which local and central Government should operate, it is important to compare and possibly learn from overseas experience.

Much of the overseas efforts toward establishing a network of sporting facilities are around funding models and creating facilities of sufficient scale to provide income generating opportunities. The underlying drivers for this are common world-wide trends with user expectations around the quality of facilities needing to be higher and their preparedness to travel being higher to such facilities.

#### United Kingdom

The patterns of indoor sports facilities in the United Kingdom parallel the New Zealand experience.

The British indoor facilities have highly developed strategies around developing swimming and evaluating the need for facilities. The underlying approaches of Sports England and its sister agencies in Wales, Scotland and Ireland, is more prescriptive than the New Zealand frameworks. It particularly advocates for:

- A range of tools and guidelines to shape the development of sporting facilities
- A National Sports Facility Calculator which outlines the sporting needs
- The active promotion of shared facilities; commonly through sports hubs or 'sports villages'
- National development of the specialist sports college network in promoting "dual" use operational model between education and local providers

Sport England has also identified significant areas for sport and recognises the most important sites for individual sports. These sites have been identified by the individual national governing bodies of sport in partnership with Sport England. However, generally these are natural environments such as those used for canoeing, rather than built facilities.

Many of the approaches being adopted in the United Kingdom are focussed toward Public Private Partnerships (PPP's) and the establishment of Trusts to manage local authority infrastructure and in some cases the sport and recreation services of the Council itself.

#### Guidance Tools

The United Kingdom makes extensive use of guidance tools to promote the planning and development of facilities. It includes tools and protocols for improving facilities, design and funding options. As with Sport NZ, Sport England is a facilitator and advocate and the approach is to guide local authorities and key agencies in their provision of facilities.



A component of the process is benchmarking tools, which allow local authorities to compare their provision of facilities against similar 'clusters' of communities. For example QUEST is adopted by Councils to assess their performance and identify areas for improvement. Further tools include a database of over 50,000 sports facilities in the United Kingdom to assist with the selection of venues.

A number of the tools are based on demographic analysis by Edinburgh University. It includes complex supply and demand modelling tools. Part of this process is to consider the levels of deprivation and estimate how far people are prepared to travel.

The model uses census information at output area level to help establish the profile of the population, including, age, gender, access cars, 'Index of Multiple Deprivation'<sup>20</sup> (IMD) scores. These are all used in the model to estimate the potential and nature of demand for sports facilities.

A strong framework in the United Kingdom is the Sports Facility Calculator. This uses demographic profiles for locations and calculates the number of facilities which would be appropriate. The model was developed by the University of Edinburgh for Sport England and is updated based on demographic changes and changes to participation rates. As an example, the Sports Facility Calculator would predict a population may require a specific number of pools, sports facilities; and artificial sports pitches.

While the process highlights its role as a guide, the approach is significantly more prescriptive than the current New Zealand mind-set.

## **Australia**

The Australian Sports Commission (ASC) was established in 1989, to provide national strategies for the development of sport. The Australian Institute of Sport is part of the ASC and provides focus for high performance sport. However, largely the development of facilities operates at a State level in Australia.

The various States have individual, but largely parallel models for seeking integrated facilities strategies.

The focus of the Australian State models is to establish alignment between the sporting organisations and the funding agencies. In particular, central funding agencies will not consider a business case until there is endorsement from two of the NSO (equivalent) organisations which assure the facility has a major role in their venue usage.

Similarly, there has been a drive for charitable organisations to match this process. This framework relates not only to clarifying the role within the hierarchy, but also how the overall viability of the facility will be achieved, in terms of a variety of income sources and realistic expectations regarding utilisation.

A further component of the Australian models is to pursuit of specific opportunities for shared facilities. Effectively these are the equivalent of 'sports hubs' or 'Sportsvilles', in the NZ context.

## **United States**

American models for sporting facilities need to operate in both a different democratic process and a different culture of private provision that user pays.

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<sup>20</sup> Tool development by UK Government as a measure of comparing deprivation on different counties.



The democratic process is more complicated by the structure of federal, state and local authority government. This creates greater potential for competition between public bodies to attract the economic benefits of aquatic facilities.

The increased culture of user pays and competitions results in a greater tendency for 'themed' water parks or aquatic facilities. These may be 'pirate adventure lands' or similar which operate on higher commercial models and greater dependence on revenue income.

The role of benchmarking the provision of facilities would commonly fall to the National Parks and Recreation Association (NPRA). This organisation would provide both guidelines and recommendations on the provision of facilities, the management process and the employment of staff. The organisation is therefore an advocacy organisation which is promoting the interest of its membership, rather than wider community benefits from sport and activity. However, it does consist of a membership dedicated to these objectives.

The NPRA does provide guidelines for the provision of pools. It usually differentiates these between counties and major cities. However, comparisons are difficult in that American cities are generally so large that the potential for efficiencies of scale are significantly larger. The expectation of scale is also significantly greater, with discussion of fitness centres ranging up to 50,000 m<sup>2</sup>.



# Appendix E

## Summary of Network

### Sources of Data

The understanding of the broader picture of current facilities was critical to determining what additional facilities were needed and where they should be located. However, given the scale of the network of facilities, and the broader policy role of the strategy, it was appropriate to adapt and develop existing databases of facilities.

The most significant database was developed by Water Safety New Zealand (WSNZ) to provide an understanding of the accessibility for learn to swim programmes to facilities. The WSNZ database captured information on individual pools within a facility, including the location, size and age of the pools. The WSNZ database also details the type of construction of the pool as well as information about the plant associated with the pool. This database identifies community pools, which may include local authority pools and also pools owned by sports clubs, trusts or community organisations. The critical feature was that these were commonly available to the wider public.

In addition to the WSNZ information, the project was given access to the 'Yardstick' database of facilities. This is a benchmarking database, where individual councils provide data on both pools and operating costs. While 'Yardstick' is a commercial operation, it was established in close consultation with the New Zealand Recreation Association (NZRA) and is endorsed by partner organisations in Australia, South Africa, and has relations in the United Kingdom and Canada. Although around 80% of New Zealand local authorities subscribe to 'Yardstick', this includes many smaller entities so the total coverage of facilities is less than 50%. So while it is a comprehensive tool for benchmarking performance, it does not have complete coverage of facilities.

The approach we chose was to focus largely on the WSNZ database, but use both the Yardstick database and internet research to extend the database and provide further information in areas where there was significant gaps.

The resulting database may have gaps in both the identification of pools and the understanding of size and condition. However, the overall focus is to establish policy guidelines and strategies at a National level, rather than identify issues as a local level. Therefore the focus was on the critical elements required to inform good strategy development. The intent is that this database will be updated as available information improves

An important component of the process was not only to understand the size and range of the aquatic network, but also its current condition and ability to adapt to changing needs. The WSNZ database provided information on the age, whether indoor/outdoor, heated/unheated and depth. The WSNZ database also included a grading of the condition of pumping and filtration plant. This information was provided by an independent engineering firm. We used this grading as an indication of the quality of the maintenance and upkeep of the pool and thus the condition of the pool generally

## Regional Distribution of Facilities

### Community Facilities

To analyse the provision of pools around New Zealand we looked first at the number and size of council pools in each region and compared the total pool area to the region's population.

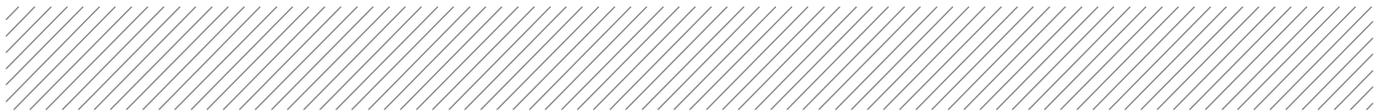
The number of pools in the table below is based on the number of pools 300 m<sup>2</sup> or larger. 300 m<sup>2</sup> represents the size of a pool required for 6 lanes of 25 meter length. However the total pool area includes pools of all sizes.

Provision of Council Pools by Region				
Region	Number of Pools	Total Pool Area (Sq.M)	Population	People per Square Metre of Pool
Northland	4	2,132	159,100	75
Auckland	24	20,490	1,488,000	73
Waikato	12	10,400	416,600	40
Bay of Plenty	12	7,883	279,600	35
Gisborne	2	1,000	46,900	47
Hawke's Bay	7	4,592	155,300	34
Taranaki	8	4,993	109,600	22
Manawatu-Wanganui	12	7,682	233,500	30
Wellington	14	9,033	489,100	54
Nelson-Tasman	4	3,124	93,800	30
Marlborough	1	838	45,800	55
West Coast	3	2,250	33,100	15
Canterbury	24	1,1630	571,800	49
Otago	6	3,049	208,500	68
Southland	5	2,869	94,200	33
New Zealand Average			4,424,900	45

Table 21 | Provision of council pools by region

The availability of pools across New Zealand varies greatly. On average there are around 45 /m<sup>2</sup> of pools available. However, this varies greatly from around 14 /m<sup>2</sup> of water in the West Coast up to 75 people per square metre in Northland. Otago also has few council pools for its population.

Inevitably more pools per head of population are available in provincial New Zealand, as small facilities are developed for and smaller provincial centres. The major urban areas of Wellington, Bay of Plenty, Waikato and Canterbury have a commonly high pattern of pool provision. These areas average 43 people per square metre of pools, and vary from Wellington with 52 people/m<sup>2</sup> to Bay of Plenty with 34. However, the pattern appears to reflect the level of conurbation, with regions such as Wellington consisting of predominantly major cities, where as the Bay of Plenty has a network of smaller provisions centres surround the major city of Tauranga.



Summary of Provision of Council Pools by Regional Type	
Area	Average People per Square Meter of Pools
Auckland	73
Major Metropolitan Centres <sup>21</sup>	47
Provincial North Island	35
Provincial South Island	29
New Zealand Average	54

Table 22 | Provision of council pools by regional type

The distribution in provincial centres does reflect the areas where regional charitable trusts have been active. This includes the TSB in Taranaki where pool provision is 21 people per square metre of pool and the West Coast which has benefitted from power company and licencing trusts, with a provision of 14 people per square metre of pool. Northland remains a significant outlier, with 72 people/m<sup>2</sup> of pools.

### Ministry of Education Facilities

School pools make up a large proportion of pools in all regions. This trend is even stronger in provincial regions. This may relate to the availability of space, compared to the tight urban environment, or the necessity of providing pools in schools in isolated communities.

Overall there is around 1 square metre of school pool for every 37 people in New Zealand. The following table shows the distribution of school pools by region compared to the population.

<sup>21</sup> Includes Wellington, Bay of Plenty, Waikato and Canterbury.

Provision of school pools by region			
Region	Estimated Area of Pools Sq.M	Population	Population per Square Metre of School Pools
Northland	10,260	159,100	16
Auckland	18,960	1,488,000	78
Waikato	15,980	416,600	26
Bay of Plenty	7,840	279,600	36
Gisborne	3,120	46,900	15
Hawke's Bay	7,740	155,300	20
Taranaki	7,200	109,600	15
Manawatu-Wanganui	12,640	233,500	18
Wellington	6,200	489,100	79
Nelson-Tasman	3,760	91,700	24
Marlborough	1,980	45,800	23
West Coast	1,520	33,100	22
Canterbury	13,360	571,800	43
Otago	4,900	208,500	43
Southland	2,820	94,200	33
New Zealand Average	118,280	4,422,800	37

Table 23 | Provision of school pools by region

Data for the school pools was obtained directly from the Ministry of Education. The data provided was a national list of facilities the district it is located in, the age of the pool and in some cases the size of the pool building. In order to draw meaningful comparisons between council and school pools we estimated the total area of school pools for each region. We based this on the number of primary and secondary schools listed as having a pool and an estimate of the average size of a primary and secondary school pool.

The Ministry of Education database tends to collect information on the buildings associated with pools rather than necessarily the pools themselves. In addition, the collection of information appeared to be variable between regions, with a lot of data in some regions and limited information in other a

The highly urban environments of Auckland and Wellington have a very high population relative to pool area, whereas provincial New Zealand has low population relative to pools. Overall the large metropolitan areas outside Auckland (Bay of Plenty, Waikato, Wellington Canterbury) average around 40 people per square metre. However, there is a marked contrast between the North Island and South Island provincial centres. In the North Island provincial centres there is an average of 17 people per square metre of pool, while in the South Island provincial centres the ratio is over 30 people per square metre of pool.

School pools tend to be very small compared to council pools. However their large numbers make them a majority provider of aquatic facilities in almost all regions. The following table shows the combined provision of school pools and Council pools.

To provide a more effective basis of comparison a standardised size of pool was used. Based on the size of the school pools for which we had good information we determined the average size of a

primary school pool to be approximately 12 m x 5 m or 60 m<sup>2</sup> and the average size of a secondary school pool to be 25 m x 8 m or 200 m<sup>2</sup>. In both cases there are larger pools, with some significant facilities available in some locations. However, for a basis of comparison the standardised pools size is more useful in understanding the overall and strategic nature of the portfolio

Combined provision of pools by region				
Region	Area of Council Pools Sq.M	Area of School Pools Sq.M	Total Area of Pools Sq.M	School pools as percentage of local network
Northland	2,132	10,260	12,392	83%
Auckland	20,490	18,960	39,450	48%
Waikato	10,400	15,980	26,380	61%
Bay of Plenty	7,883	7,840	15,723	50%
Gisborne	1,000	3,120	4,120	76%
Hawke's Bay	4,592	7,740	12,332	63%
Taranaki	4,993	7,200	12,193	59%
Manawatu-Wanganui	7,682	12,640	20,322	62%
Wellington	9,033	6,200	15,233	41%
Nelson-Tasman	3,124	3,760	6,884	55%
Marlborough	838	1,980	2,818	70%
West Coast	2,250	1,520	3,770	40%
Canterbury	1,1630	13,360	24,990	53%
Otago	3,049	4,900	7,949	62%
Southland	2,869	2,820	5,689	50%
New Zealand				56%

Table 24 | Combined provision of pools by region

A little over half of New Zealand's pool provision is provided by school pools.

In some areas such as Northland, 83% of the provision of pools is part of the school network. A similar pattern is evident in Gisborne (76%) and Marlborough (70%). These are areas with very low provision of council pools, and it suggests that communities have worked to provide pools in schools when council pools have not been available locally. The result is to greatly reduce the disparity between regions. This is shown in the following table.

### Combined Provision of Pools compared to Population

Region	Total Pools (Sq.M)	Population	People per Square Metre of Pools
Northland	12,392	159,100	12.84
Auckland	39,450	1,488,000	37.72
Waikato	26,380	416,600	15.79
Bay of Plenty	15,723	279,600	17.78
Gisborne	4,120	46,900	11.38
Hawke's Bay	12,332	155,300	12.59
Taranaki	12,193	109,600	8.99
Manawatu-Wanganui	20,322	233,500	11.49
Wellington	15,233	489,100	32.11
Nelson-Tasman	6,884	91,700	13.32
Marlborough	2,818	45,800	16.25
West Coast	3,770	33,100	8.78
Canterbury	24,990	571,800	22.88
Otago	7,949	208,500	26.23
Southland	5,689	94,200	16.56
New Zealand Average	210,245	4,422,800	21.04

Table 25 | Combined Provision of Pools compared to Population

It indicates that areas which were manifestly short of community pools, such as Northland are well provided when school pools are added to the equation. Some areas which were well provisioned on council provided pools remain well provisioned, such as Taranaki and the West Coast.

However, the inclusion of school pools does little to address the problems of fast growing areas such as Auckland.

The more significant element is the implication for the future provision of pools. Of the school pools 90% of them are associated with a primary school and are therefore likely to be in the order of 60 m<sup>2</sup> and relatively shallow. They may therefore usefully contribute to the learn to swim programmes but are not commonly available to the wider community and not of a depth or size which would be of interest to teen-ager or older demographics. Given the rapidly ageing population there is significant risk of a shortfall of facilities.



# Appendix F

## Consultation with NSOs

### Competitive and Club Needs

To understand the needs of club and competitive use of facilities consultation was undertaken with key NSOs. This includes

- Swimming NZ
- Diving NZ
- NZ Water Polo
- Underwater Hockey NZ Inc
- Surf Life Saving New Zealand
- New Zealand Canoe Polo Association

A full summary of the views of the NSOs is included as an appendix. However, there were a number of themes that were cited by all sporting stakeholders.

### Access to pool time

All NSOs cited access to pool time as the most significant limitation in growing skills and participation in their sport. In a number of examples of fast growing sports, such as Water Polo, the NSO argued that access to pools and availability of pool time immediately resulted in the ability to develop a new club.

A number of NSOs also cited the loss of facilities in Christchurch, following the Canterbury earthquakes. They highlighted how the lack of facilities for a period of a year or more could irreparably damage a local sport and the levels of participation.

A number of NSOs spoke about a need for greater partnerships between the sporting codes in access to pool time. A number spoke of overseas models where a variety of different sports, such as diving, swimming or lifesaving may be all part of one club. In these models there was better allocation of resources between the different club codes. For instance, lane swimming for fitness could be in shallower water, while the deep water was needed by sports which needed that such as water polo games.

The issue of access was also around critical peak times. For instance, school actively sought use of their pools outside school time, so as not to impact on academic studies. This made the pools available for morning training for other clubs.



## **Access to deep water**

A number of the NSO required access to deep water for training and sport. In the case of underwater hockey, lifesaving and water polo this was a requirement for competition. In the case of diving, required depths were greater but over smaller areas.

The access to deep water was a significant factor for a number of sports, but represented a significant additional cost to the pool operation, in filtering and energy costs.

The access to deep water is particularly important for competition.

## **Infrastructure**

The issues of Regional and National competition resulted in a variety of issues around infrastructure. In some cases NSO spoke of provincial centres which had the aquatic facilities to operation Regional or National events but lacked the surrounding infrastructure. For instance, the capacity of the local hotels to host the number of visitors.

For a number of organisations they spoke of the travel costs of getting to provincial centres for sporting fixtures, especially for school level sports. In the case of Canoe Polo, the issue was also complicated by the difficulty of getting kayaks to provincial centres, given only major airports would be able to have these travel as luggage.

## **Cost of Access**

Several NSOs spoke of the cost of access to pools, and the impact this could have on a multiple day event. In some cases this related to additional costs for keeping facilities open longer or separate admission, hireage costs, or staff costs.

A number of NSO spoke with surprise of the significant regional variations in cost for facilities. In some cases hourly costs for a pool exceeded the daily costs at other venues. However, the charges that they felt comfortable with appeared to be below a reasonable return on the asset costs. As such the industry expectations with reasonable access costs appeared to be out of line with the costs of providing the facilities, but were underwritten by local authorities which provided facilities at heavily subsidised levels.

## **Pool length**

The lack of availability of pool length was critical for a large number of the sporting codes. For many sports a 25 metre pool was adequate for training and could be adapted for use for club or school level competition. However, most sports required the 50 metre pool for National competition level sports.

In the case of canoe polo and water polo the 'field of play' requirements were less than the 50 metre size but also required space surrounding the play area. Similarly a number of sports required additional height of facilities, including diving and water polo.

## **International Events**

Generally the aquatic sports attracted relatively few international level events. In a number of occasions they were able to attract trans-Tasman or Pan-Pacific events or games.

A number of sports, especially Olympic sports, were likely to be part of a wider sporting competition, such as the Commonwealth Games or Master Games. There is a raft of smaller international competitions which local authorities were hoping to attract to a location, where provision of swimming and diving were an integral component of the package.



The location of any International level facility needs to be where there is sufficient commercial and tourism infrastructure to capitalise on the spectator venues. This is also likely to be in a location with an international airport and an extensive hotel and tourism network to maximise and enhance the visitors' experience.

## Swimming

### Organisation and Participation

The organisational structure of Swimming New Zealand (SNZ) has been recently realigned as the result of two major sector reviews. Firstly, an independent working group recently reported in *“Swimming in New Zealand – Growing a Cornerstone Sport”*<sup>22</sup>. This report recommended a new National governance board and altered the focus of Swimming New Zealand to greater emphasis on high performance and competitive swimming.

A parallel report was recently commissioned by the Government and Accident Compensation Corporation entitled *“Review of Swim and Survive programmes to establish a more unified approach”*<sup>23</sup>. The result of this study was to alter the emphasis of learn to swim to Water Safety New Zealand (WSNZ), which will become a funding agency for various private and community initiatives.

Swimming New Zealand currently has around 22,500 members in various categories, including 13,500 registered swimmers. Registered swimmers may compete in events with the other members tending to be coaches, officials and other supporters.

The underlying focus of Swimming New Zealand is reflected in its 2008-2012 Strategic Plan. This is encapsulated in *“World class in every pool”*. The strategy includes a tactical commitment to *“support members in their work with Territorial Local Authorities to develop new and improve existing facilities for learn to swim, swimming training and competitions”*.

### Nature of the Sport

Swimming New Zealand operates a range of competitive events each year, including:

- NZ Open Championship: This event could only previously been held at QEII or West Wave and because of the depth of pool required and access to Sky TV.
- NZ Age Group Championship: Since the demise of QEII this event can only be held in Wellington Regional Aquatic Centre (WRAC) due to the size of the competition, the spectator requirements and the need for warm down pools.
- Division II Competition: Hosting of this event is generally done in smaller NZ centre, but spectator facilities and the number of lands in the pool are considerations when selecting a venue.
- NZ Junior Championship: This event is held at two regional venues each year.
- New Zealand Short Course Championships: this is Swimming NZ's largest event.
- New Zealand Secondary School Championships.

A Trans-Tasman Competition is held bi-annually, which Swimming New Zealand aims to host every six years. The spread of facilities is shown by the fact that the 2009 series was held at Bay Wave in Tauranga, AC Baths Taupo, and Genesis Energy Aquatic Centre in Masterton. The ability to host spectators is a factor in many venues, as is the ability of the local township to host the number of visitors. New Zealand has also previously hosted the Oceania Championships. This is a biannual

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<sup>22</sup> Report of the Independent Working Group for The Review of Swimming New Zealand – June 2012

<sup>23</sup> Review of Swim and Survive programmes to establish a more unified approach' – UMR Research and April 2012



event that Swimming NZ is seeking to host every 6 to 8 years. New Zealand last hosted it in 2008 and are currently considering hosting it in 2014.

While growth in swimmer numbers has been relatively strong in the last few years, the trend data is not sufficiently long to predict future growth. What is more useful is the commentary that swimming numbers are growing in the high growth areas such as Auckland, but static in population growth areas such as Southland. It is difficult to isolate the various components of the growth trends, as:

- Auckland is working to develop aquatic facilities. Increased availability of facilities inevitably links to increased participation on rates,
- Auckland is the only region with growth in the younger age groups which have a higher participation in swimming,
- The availability of other aquatic activities, such as wave pools and hydroslides attracts a different grouping of users,
- The growth of 'learn to swim' may in part relate to the limited provision of school pools and facility operators focussing on it as a cost recovery option.

Swimming New Zealand's High Performance Centre is based at the Millennium Institute of Sport and Health (MISH), and is focused on international success. High performance athletes seek both high quality coaching and support services such as sports science and medicine. Their needs are partially supported by the pool size and the facilities at MISH, although plans to extend that facility will anchor the high performance programme.

## Facilities and the Future

Swimming New Zealand developed a national strategy for facilities in 2011 which outlines what it believes are the needs of the sport to meet future demand. The strategy incorporated consultation with Water Safety New Zealand, Surf Lifesaving, Water Polo and a range of other aquatic sports groups as well as regional and local swimming groups.

Swimming New Zealand believe that the limited availability of time for lap pools is constraining demand for these activities. However, with this has been the growth in a range of other aquatic activities based in the pools. Part of this represents the diversity of aquatic sports now being developed. An example highlighted by Swimming New Zealand is the emergence of Canoe Polo in Hawkes Bay.

Swimming New Zealand undertook significant research through its network of regional associations before completing the strategy. The most common commentary from regional swimming organisations is around:

- Accessibility to lane swimming, and
- The standard of facilities, including depth, length and width, compared to FINA regulations and modern competitive facilities.

Traditionally swimming has been largely focused on younger users. However, Swimming New Zealand is aware of a growing demand from an aging population. This demographic has strong support for low impact fitness and recreation. However, the growth of participation is dependent on the comfort of warmer pools, indoor facilities and higher quality changing rooms. Swimming New Zealand also highlights how non-weight-bearing sports are increasingly being recommended by medical professionals, especially for elderly.

The challenges of the aged network of facilities are more fully covered in the evaluation of the assets component of this report. However, there is a significant and obvious link between the ability and interest in participation and the quality of the facilities.



## Water Polo

### Organisation and Participation

Participation in the Water Polo sport is strong and growing quickly. However the sport is largely anchored in schools.

- Participants number around 15,000, of which
- 10,000 in schools includes flippa ball

Competition is age-group based, with: Under 12, Under 14; Under 16; U 18 and U 20. Further there are junior and secondary school competitions.

The sport is well supported by parents. It provides more useful skills for water survival, because it is head-above-water, upright skills. It is also popular as a competitive but low impact sport.

Currently the sport is dominated by flippa ball. The Association highlight that if only 5% of flippa ball participants continue to water polo there would be a significant shortage of facilities.

The sport is evenly spread between the sexes but significantly represented in the under 16 age group. The sport is also around 60% Auckland based. This growth in demand for facilities appears likely to be largely based in the larger metropolitan areas.

### Nature of the Sport

From the NSOs perspective access to pools is a major factor in limiting participation in water polo and because of this participation numbers are largely static. In addition, the sport is competing against a growing range of other sports and a tendency for parents interested in trying everything.

The sport is involved in a 'National teams' programme, rather than high performance. The national Women's' team is in the top eight in the world, although the Men's' team is further away from being internationally competitive.

The major completions are the National secondary school championships. This involves 22 National championships:

- 11 male/female age group National finales
- National league
- National finals

NZ Water Polo has also hosted a number of international events in the past. This includes the Pan Pacific Youth Water Polo tournament which involved Australian and the USA and attracted 131 teams. The sport has a strong culture of user-pays. This is both for pool access and competition. Commonly athletes would raise the US\$5,000 to US\$15,000 entrance fees for international events.

The funding support for international competition is relatively minor. Historically NZ Water Polo has received contributions in the range of \$30,000 to \$40,000 from local trusts and the Auckland Council. More commonly support is in the form of discounted pool hire.

### Facilities and the Future

The sport is active in a wide range of pools including school and local authority facilities. The flippa ball variation is playable in shallower pools; however water polo requires a minimum of 2 meters depth. It is this access to deep water which is the major constraint on the growth of the sport. Because of the challenge of access, NZ Water Polo has been instrumental in acquiring access to private and school pools for training.



NZ Water Polo believes that it demonstrates a strong commitment to working with other aquatic sports. Although everyone competing for same the core hours from 4pm till 7 pm, they feel there is potential for better sharing of resources. For instance, a 50 metre pool can be split and shared between users with swim training in shallow waters, while the deep water is reserved for those sports which require it. NZ Water Polo highlights that overseas models are for swim clubs to be involved in variety of sports; including water polo, swimming and diving and therefore there is a greater culture of shared training.

NZ Water Polo is not in a position to make commitment of funds but they are able to provide case studies indicating usage. They were instrumental in promoting Sacred Heart's new school pool to achieve higher utilisation and the pool is now full on mornings and every evening.

The issue of water depth is central to their sport. NZ Water Polo would like to investigate options of adapting pools to make them deeper. Potentially they would like to see a model for raising heights of walls to make pools more usable for water polo.

For the sport to grow further it requires a strong club structure, with relationships between the pools and the clubs. Overall there is a need to achieve a balance of Regional facilities, community facilities and national facilities. This could result in academies and specialist training available at regional level.

## Diving

### Organisation and Participation

Diving New Zealand is an incorporated society. It has six affiliated clubs: two in Auckland and one each in Waikato, Canterbury, Wellington, and Otago. The governance and management is currently in good structure, which has been the focus of recent work. However management of the sport is volunteer based, which restricts its ability to deliver activities or lobby effectively.

Canterbury Diving Club is currently under pressure because of the lack of facilities, which highlights how significantly access to pools can directly affect the health of the organisation.

The shortage of facilities for diving was also reflected in the non-metropolitan survey of local authority managers, over three-quarters of whom (83%) rated the availability of diving facilities poor or very poor.

The sport is largely Pakeha and strongly female, although recently there has been an increase in interest from Maori and Asian cohorts. The sport has a strong presence in private girls' schools through the country.

Diving New Zealand's recent strategic plan places a focus on participation. This participation needs to be driven largely by engagement at school and local authority level. Participation levels have recently been improving after a long period of decline. For five years the sport had minimal involvement with youth but now has 250-400 young participants. The NSO suggests the pattern is: a good facility, results in good coach, which results in good participation.

### Nature of the Sport

Diving New Zealand is developing from a currently very low base. It has a limited number of high performance divers, probably less than five. The issue of access is central to limiting the training potential. The training times need to allow for recovery between sessions.

Currently there are both club championships and National championships. The sport does not host international events other than as part of major international events, such as the Masters games. They are currently sending New Zealand divers to Australia to compete in Australia's Regional events.



There is little interest from sponsors, and the limited participation numbers create challenges in attracting charitable funding.

Much of the current focus is on training life guards to teach diving, with the belief that this will identify young participants. The current focus is on spring board diving, but ideally there would be a range of facilities. Competitors would commonly train for a variety of boards and platforms. Some training can be on dry land, and the sport has had strong links with gymnastics in the past, using their foam pits for training. Facilities required include:

- Deep water,
- A variety of board and platform heights:
  - 1 metre,
  - 3 metre,
  - 10 metre,
  - Twin boards for synchronised diving.

Diving has a history of working with other clubs and codes. In the past swimming and diving clubs were linked and they had a culture of sharing facilities. However, the sector is now more fragmented. There is strong competition for deep water access and there is a tendency for the small numbers involved in diving to be outweighed by team sports such as water polo.

## Facilities and the Future

The availability of facilities has been compromised by what are seen as risks by pool managers. The pools network commonly had diving pools as part of facility. However, increasingly local authorities have reduced or removed spring boards as a risk and use deep pools for water polo.

The biggest issue for Diving New Zealand is access to existing facilities such as the diving pool at Waitakere's 'Westwave', rather than seeking new facilities. They see facilities which were previously available now being reduced or used by other sporting codes.

Their preferred model would be a network of facilities throughout NZ, which would allow for regional competitions. Diving New Zealand highlights that New Zealand has been internationally competitive in the past. There is capability in New Zealand for divers to be competitive on the world stage; however the number of internationally competitive divers is very small.

## Surf Life Saving New Zealand (SLSNZ)

### Organisation and Participation

Surf Life Saving New Zealand consists of five affiliated regions. The northern region is technically an independent structure but largely operates under the same branding and programmes.

Jointly the structures have 73 associated clubs, with total membership of around 15,000. However, only around 4,000 are active members who would be available for patrolling.

The core service of Surf Life Saving New Zealand is protecting people in the water and this remains its predominant focus. It is therefore primarily a service organisation with a significant sporting engagement.

To ensure development and retention of skills there is a competitive element as a sport. This allows the organisation to practice and develop skills and test individual and team readiness. The competitive element of the sport is divided into open water and still water. The still water component requires aquatic facilities.



Participation is either largely static or growing slowly at a rate of 1-2% per annum to match population growth. The Northern Region is probably growing most strongly, reflecting strong population growth especially in the younger demographics.

Surf Life Saving NZ recognises that they tend to be a Pakeha and middle class interest group. However, they also recognise that to be sustainable in the long term they need to be representative of society. They are therefore running a number of programmes to diversify the membership base.

- Growing Asian presence and interest
- Male 57%/Female 43%
- Big base at bottom/narrower at higher levels

## **Nature of the Sport**

There is a strong commitment to fitness in the sport, reflecting its anchor as a community service. Life Savers are expected to pass an annual accreditation swim test. This is based on swimming 400 m in nine minutes. This fitness commitment places demands on aquatic facilities as the most common swim training facility.

The sport component of life saving is always subject to change, with a range of new options for participants. As well as pool skills there is equipment capability such as:

- Inflatable rescue boats
- Patrols
- Surf ski
- Surf boat

While there changing variations, the focus remains on patrolling, being part of a roster and providing commitment. This is the underlying objective of the organisation and they cannot opt for merely swimming pool competition.

The competitive element of Surf Life Saving is based at a regional level. Each club has programmes to promote preparation for carnivals. The sport hosts four selection carnivals each year, which are the basis of selection into National teams or development squads.

National and international competition has a history of public interest and television coverage of competitions. There is limited competition from local authorities to host major events. Surf Life Saving NZ does run a bid programme for events. However, local authorities with the right beaches are commonly already popular destinations over summer anyway.

The most significant barrier to participation remains access to training lanes and swimming pool access. Part of this is a significant requirement for deep water training.

## **Facilities and the Future**

While the delivery of surf lifesaving services is predominantly at the beach, access to swim training facilities remains a critical requirement. The requirement for swim training does not require deep water to promote the fitness. However many of the sport training elements require deep water.

The international guidelines for surf lifesaving training environments are 1.8 to 3.0m. The recovery drills and competitions require a minimum length of 25m and a sufficient depth to recover a manikin.

The Surf Life Saving NZ preferred model for high performance would be a National centre. This could include potential links to university research and sports sciences. In addition, Surf Life Saving New Zealand would seek a regional and major national hierarchy of facilities. They welcome highly flexible



facilities, such as retractable floors and 50 metre pools with a boom. Any National facility is likely to be best placed in Auckland.

## Canoe Polo

### Organisation and Participation

Within New Zealand canoe polo is governed by the New Zealand Canoe Polo Association, which operates on behalf of its member associations. However, the sport is an integrated component of a wider canoe and kayak sporting code. This includes the Olympic class Canoe and Kayak sports. Some capability of the sport resides at Karapiro, alongside the New Zealand Rowing Association.

There is no profile of the participation, although the nature of the sport with high travel and equipment costs tends to ensure that it is largely higher socio economic groups. There are strong associations with secondary schools, with around 60% of players being at school. The distribution of the sport reflects pockets of interest. Overall the organisation has around 2,000 actively playing, of whom around 1,500 are members of the Association.

As with other aquatic sports, access to facilities is a major factor in participation. There is some greater representation among males, although females make around 30-40% of teams

### Nature of the sport

Canoe Polo is a competitive ball sport played on water, in a defined "field", between two teams of five players, each in a kayak. The object of the game, like most field sports, is to get the ball into the opponent's goal.

The field of play is a defined area of water and therefore can be played indoors or outdoors. The standard 'field' area is 35 m, plus surrounding pool area. As such it requires a pool larger than a standard 25 m pool.

There is also requirements on the height of the field, when played indoors, as the ball is thrown between players.

### Facilities and the future

Access to facilities remains a critical component.

And like many other sports, the loss of the critical QEII facilities has limited the availability.

Some facilities have concerns about the damage that kayaks are perceived to do to barrier arms and wall sidings.

An important element in the availability of locations is the accessibility for kayaks. Most competitive players have their own kayak and paddle. However, moving these around the country is expensive and there is a limit on the number of airports which accept the kayaks. For games in provincial centres there are therefore flights to a major centre, followed by rental car transport to the venue, adding to the total overall cost.



## Underwater Hockey

### Organisation and Participation

Since 1998, Underwater Hockey New Zealand has only counted registered (financial) members within its statistics as a measure of performance rather than participation estimates.

For the period of 2000 through to 2010, UWHNZ has witnessed growth in the order of 20% in the number of members, although during this time participation in registered secondary schools has doubled from 411 members in 1998 to 821 in 2010. This large increase has also been reported in the NZ Secondary School Sports Council collected data.<sup>24</sup>

Currently, Underwater Hockey New Zealand (UWHNZ) has 1110 members registered in 2012. This is a 10% drop from 2011 due to the lack of registered members in Christchurch. Secondary School students make up 780 of these members. In addition, around 300-400 primary school age students participate in 'mini Underwater Hockey' events.

Adult participation is currently down on past levels due in the main, to the loss of Christchurch based membership although like all sports, UWHNZ experiences a massive loss of members as secondary school players transition into tertiary institutes and employment.

The representation is largely evenly spread between the sexes, although potentially higher representation of girls in the school leagues. This may reflect the low contact nature of the games and the strong aquatic presence in a number of girls' schools.

In line with other aquatic sports, the culture of the sport is 'pay to play' and this tends to limit the socio-economic profile of participants. It is also heavily pakeha in the participation.

UWHNZ is developing strategies to address the following barriers to participation:

- Volunteers to coach and administer the sport.
- Access to deep water training space
- Sufficient swimming pool access at suitable times for school students
- Limited sponsorship and funding

### Competitions

Underwater Hockey New Zealand operates a range of competitive events each year, including:

- NZ Regional Underwater Hockey Championship
- NZ U18 Regionals Underwater Hockey Championship
- NZ Secondary Schools Underwater Hockey Championships
- NZ Interclub Underwater Hockey Championships
- North Island Interclub Championship
- Northern Secondary Schools Regional Qualifying Tournament
- Central Secondary Schools Regional Qualifying Tournament

With the loss of QEII Aquatic Centre, UWHNZ has not held:

- South Island Interclub Championship
- Southern Secondary Schools Regional Qualifying Tournament

The loss of QEII, which was an excellent venue for the sport, has had a major impact on the sport in Canterbury. In 2009, QEII hosted the NZ Secondary School Nationals with 62 teams and over 560

<sup>24</sup> <http://www.sportsground.co.nz/files/site/192/59/Pdf/130213213512MZKXFW.xls>



players. This is the currently the Guinness Book of World Records largest recorded Underwater Hockey event.

Wellington UWH Association has developed a 'mini-underwater Hockey' event series which is played by 9-12 year olds. Each event has 12 teams with up to 144 players participating. Six to 8 events are played throughout the year. Initial mini programmes are under development in Tauranga and Auckland.

Internationally<sup>25</sup>, New Zealand is seen as a powerhouse in Underwater Hockey with the Elite Men's team being World Champion in 2004 and 2006 and runners up in 2002 and 2008. The Elite Women's team as steadily risen up the rankings from 7<sup>th</sup> in 2000 to 3<sup>rd</sup> at the 2011 World Championships. At Age Group level since 2002, New Zealand has never placed lower than 1<sup>st</sup> or 2<sup>nd</sup> in either the U19 or U23 Women's or Men's Grades entered.

At world level the sport continues to grow with the last survey showing worldwide approximately 15,000 players in over 40 countries, with 76 teams likely to attend the World Championships in Hungary in 2013. If a suitable venue in New Zealand was available, UWHNZ would be in a position to host a world championship depending on a suitable venue being built.

There has been occasional sponsorship from community trusts, but that is limited and relates largely to venue hire around tournaments and championships

## Facilities

Access to facilities remains a key aspect of the sport. The requirement is for a water depth of over 2 m and a court size of 15 m x 25 m. Commonly this requires the deep half of a 50 m pool.

There is also a requirement for the pool to be tiled to allow for the rubber coated puck. However, in recent pool developments there has been a trend for designers to specify tiles on the wall on the lowest 500mm to intersect with the pool floor. This has resulted in cracking of tiles due to pool settlement and pucks. This can be easily corrected by the use of a smooth sealed concrete finish on the lower 500mm of the pool walls.

Cost of access to facilities is also seen as a major limitation. In addition the access/ hireage costs for facilities are also a major factor. In Wellington these are around \$50 per hour plus pool entry, but in Auckland pool charges are commonly over \$100 per hour, and can be over \$200 per hour in some locations.

## Future

The 'mini underwater hockey' variation is playable in shallower pools; however underwater hockey requires a minimum of 2 meters depth. It is this access to deep water which is the major constraint on the growth of the sport.

Due to the strong secondary school programme, New Zealand will continue to obtain international success at underwater hockey.

For the sport to grow further it requires a strong club structure, with relationships between the pools and the clubs.

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<sup>25</sup> <http://www.underwaterhockey-archive.com/>



## Synchronised Swimming

### Organisation and Participation

Synchronised swimming is member of Aquatic New Zealand, which was established to provide an appropriate linkage with FINA.

There is a club structure which is affiliated with Synchronised Swimming NZ. The clubs are commonly independent from other swimming clubs. There are nine clubs with registered 400 members, of which around 300 sport participants and the remainder are officials,

As an Olympic sport it has increased appeal and there is commonly an interest after a summer Olympics. The sport is generally female,

The organisation is dependent on volunteer contributions and there is no paid staff, and limited total funding. Growing participation remains a challenge, with a number of initiatives to currently promote activity.

The sport is recruiting more actively, especially in the years 7/8/9 at schools and it is believed that this will build capacity in the future.

The sport is evolving very fast and is increasingly technical. A number of European countries have developed lifting technics which results in a very complex but increasingly spectacular sport.

A number of the internationally competitive representatives need to spend years overseas to develop their sport. It is not unusual to see participants relocate to work with other athletes. For instance, a number of swimmers have recently relocated to Invercargill to form a National team. This has meant they have had to change school and be boarded within the community. Similarly a number of players are competing and training overseas and then return for the Olympics or Commonwealth games.

### Facilities

The predominant requirement of Synchronised Swimming is to deep water. However, the space requirements are relatively minor and can be met by many pools in New Zealand. The spectator interest is currently relatively low.

### Future

The sport has the potential to compete at an international level, even with the strong competition from European and Asian nations. However, it is the existing capacity of the sport, rather than access to facilities which is the limiting factor at present.

## Tourism and Event Based Activities

### Organisation and participation

Outside the organisation of the major NSOs there is a number of central and local government initiatives which seek to attract major sporting events to New Zealand. The most significant programme is the Auckland City Council which has major events as part of its economic development strategy. This follows the success of the Rugby World Cup and the previous Commonwealth Games.

The promotion of this activity is facilitated by the Auckland Tourism Events and Economic Development Agency (ATEED) which is a Council Controlled Organisation appended to Auckland City



Council. In addition the Ministry of Building Innovation and Employment promotes New Zealand as a venue for major international events.

The focus is on attracting events where the scale of activities which can be managed within the local economy. For example the current focus is on bids for the Masters Games and Fire and Police Games. In both cases, the number of participants is relatively small 3,000 to 5,000 range and potential spectators is a relatively smaller multiplier of 3-5 per participants. The scale of the events can fit largely within the sporting infrastructure of Auckland.

There are signals of a similar strategy for Canterbury, and there is the potential for this to play a major role partnering with the potential convention market. Previously Canterbury has hosted the Commonwealth Games, and there may be a role in the future for Canterbury to host events.

### **Facilities and the future**

The predominant needs are a range of internationally viable facilities. Commonly the range needs to extend over all of the sports activities inherent in a games bid.

The more significant demands are a range of social and tourism infrastructure, to obtain economic gains from the events. This would include hotels, motels, international airport and supporting transport infrastructure

# Appendix G

## Community Demand for Facilities

### Overview

Projections of the combined recreational and non-competitive demand for facilities are difficult to estimate purely on a demographic basis. Inevitably participation follows facilities with access to aquatic facilities being a major determinant on whether a population take part in aquatic activities. This is likely to be a major factor in New Zealand, where the population is unevenly distributed.

### Participation rates

In an attempt to separate the issues of accessibility from demand, we considered participation rates in aquatic sports and recreation. This is based on the New Zealand Active Survey, which is based on detailed analysis of 5,000 individuals who maintain records of their activities. This reflects the population who actively participated in swimming, rather than those who may have participated if facilities were easily available.

The following table shows participation by age group for aquatic participation. The only figures available for participation levels were swimming. Other sports identified in the study such as water polo and surf lifesaving had too few responses to provide an indication of participation. However, the nature of the survey and the response of 'swimming' is likely to include all pool activities, from active recreation through to competitive training.

Participation in Swimming by Age Group	
Age Group	Participation in Past year
15 and under	85.2% <sup>26</sup>
16-24	47.3%
25-34	44.0%
35-49	40.9%
Over 50	20.5%

Table 26 | Participation Rates in Swimming by Age Group

Similar but slightly lower participation rates were defined in the 'Gemba<sup>27</sup>' study of sport participation. However, the Active New Zealand study is more comprehensive and covers a wider age distribution.

<sup>26</sup> Derived from youth participation study

The Gemba study also outlines the frequency of participation in swimming. Neither the Gemba or Active New Zealand study provides measures of participation for '15-years and under', however this information is available in the Sport NZ Young Persons Survey.

The following table shows the frequency of participation in swimming. It shows around one-third of swimmers are using swimming as a major sporting and recreational activity and are attending at least once a week. However, close to half the swimming participants are swimming less than once a month but more than once a year.

Frequency of visits for swimming participants	
Frequency	Percentage
At least once a week	32%
Once every two or three weeks	10%
Once a month	11%
Less than once a month	46%

Table 27 | Frequency of visits for swimming participants

The average participation rates are strongly influenced by the high number of individuals attending once or more per week. The distribution of this visit rate will vary greatly with the age distribution, but there is no further information to clarify this pattern. Given this information the implied average of 20 visits per annum was used as a benchmark.

The implications of this age distribution and the level of visitation is shown in the following table. It suggests that the total 'swim-visits' by New Zealanders at around 40 million per annum. 'Swim Visits, in this context includes visits to beaches and rivers, private pools and school pools. The total swim visits therefore is therefore around six times the level of Council pool visits. As such it does not equate with the number of visits to the Council pools, but it does provide a base level understanding on the volume of demand, and how the demographic shifts will alter the location of aquatic activity.

Participation in swimming by age group and implied annual swim visits			
Age Group	New Zealand Population 2011	Participation Rate	Implied Annual Visits
15 and under	898,900	85.20%	15,317,256
16 - 24	642,530	47.30%	6,078,334
25 - 34	573,180	44.00%	5,043,984
35 - 49	930,180	40.90%	7,608,872
Over 50	1,380,630	20.50%	5,660,583
Total	4,425,420	44.86%	39,709,029

Table 28 | Participation in swimming by age group and implied annual swim visits

The most significant element of the resulting analysis is the high proportion of 'swim visits' by younger age groups. The Under 15 year age group represent 38% of implied annual visits to pools. It is therefore this age group which represents a very high element of the demand for aquatic facilities. The

<sup>27</sup> Telephone survey commissioned by Sport NZ April –September 2011 conducted by survey firm Gemba Group Ltd



extent to which this group drives pool demand is an important element in predicting future public demand for facilities especially when access times (eg the peak 4 pm to 7 pm timeslots) are considered.

While the pool visits data provides an indication of trends it is not useful in attempting to translate these into numbers for square metres of pools. The profile of demand is inevitably around peak pool visit times, and given the dominance of under-15-year-olds, is commonly based around after school hours.

## Application of the Facility Calculator

Translating participation into demand for facilities is an issue many National bodies have struggled with but there is little information directly comparable to the New Zealand experience.

The most robust tool for translating population profile into demand for facilities is the *Sport England Sport Facility Calculator*. This is a tool developed by the University of Edinburgh for estimating the broad range of facilities which are required to support a community, including artificial sports turfs, sports halls and swimming pools. Given it is a tool used for a variety of sporting facility needs it is only intended as a broad scoping comparison.

There are the basic fundamental problems in using this tool in a New Zealand context. These being:

- It appears participation rates in sports including aquatic sports is significant higher in New Zealand than in the United Kingdom. However, there are significant difficulties making comparisons given different bases of measurement
- The level of urbanisation within the United Kingdom is significantly greater than in New Zealand. As a result the issues of proximity to facilities are significantly different. This results in more potential efficiencies in pool usage and the ability to fit the scale of facilities to different city sizes. This is reflected in many New Zealand townships which may have a pool, despite being relatively small because of the distance to a major centre. Some regions in New Zealand have a high proportion of small townships all of which seek their own facilities.
- The prevalence of school pools and private pools in New Zealand is significantly higher. This alters the extent to which there is potential duplication of resources and a sole use function exists within the network.

Never the less, the *Sport England Sport Facilities Calculator* appears to be the best tool for establishing a base level of facilities required, and considering how changing demand will translate into changes in the number of pools required. However, to adapt this to the framework for the New Zealand environment we undertook the following modifications to its predictive framework:

- The age profile of New Zealand demographics was added to the calculator to adjust for the difference in age profile from the United Kingdom
- An adjustment was made to the participation, of 30% to allow for the greater participation in aquatic sports within New Zealand as this matches the Sport NZ activity indices which indicate higher participation in New Zealand

The resulting conclusion allowed a basis for estimating the square metres of pools required to meet the overall population demand.

Within the analysis the square metres of surface water for pools was used as the predominant indicator of needs. This is inevitably a risky measurement basis, but has advantages in that it provides a consistent basis of comparing the large urban pools with the smaller provincial pools in smaller centres.

For context, a 25 m 8 lane (typically 2.5 m wide) pool has a water surface area of 500 m<sup>2</sup>.

The following table provides an estimate of the square metres of pools required to meet the needs of the population in each region, based on the *Sport England Sports Facility Calculator*. This analysis is intended to provide an indicator and distribution of the demand rather than a definitive indicator of pool requirements.

<b>Estimated Aquatic Facility Required by Region based on Sport England Calculator</b>		
<b>Region</b>	<b>2011 Population</b>	<b>Needs Sq.M Pool</b>
Northland Region	159,100	2,129
Auckland Region	1,488,000	19,918
Waikato Region	416,600	5,568
Bay of Plenty Region	279,600	3,742
Gisborne Region	46,900	627
Hawke's Bay Region	155,300	2078
Taranaki Region	109,600	1467
Manawatu-Wanganui Region	233,500	3125
Wellington Region	489,100	6,667
Tasman Region	47,900	642
Nelson Region	45,900	614
Marlborough Region	45,800	613
West Coast Region	33,100	443
Canterbury Region	571,800	7,654
Otago Region	208,500	2,791
Southland Region	94,200	1,260
<b>Total New Zealand</b>	<b>4,425,400</b>	<b>62,289</b>

Table 29 | Estimated Aquatic Facility Required by Region based on Sport England Facilities Calculator

Comparisons with actual provision of pools are evaluated in the gap analysis section. However, in simplistic terms, the Sports Calculator appears to be a satisfactory predictor of need in the major centres, but is inadequate in provincial centres where pools need to cater to a population spread over a large region. For this reason we use the calculator to inform discussions of the need but developed benchmarks which differentiate between provincial and urban areas. The square metres of pools estimated to be needed for the Wellington region is close to the current provision (97%). The *Calculator* predicts demand in Auckland of about 15% above the current provision, which fits with additional demand from a rapidly growing population.

## Estimate Benchmark for Facilities based on Population

The estimate of a benchmark provision of pools per head of population is of limited application in a New Zealand environment. The predominant difficulty is the proximity of pools to the population, especially in geographically diverse regions. Many provincial regions in New Zealand have a network of small rural townships, commonly with a population of around 10,000 which are providing servicing support for a hinterland of farming communities. It is realistic for these communities to have aquatic facilities or expectations for them which service not only the township but the surrounding rural areas.

The Sports England Facilities Calculator would equate with 1 to 1.5 25 metre pool for every population centre of 40,000 persons, depending the activity weighting. The more common model is around 2 pools in the New Zealand context.

The American National Recreation and Parks Association would show an average of one open air pool and one covered pool per population centre of 40,000 persons<sup>28</sup>, which reflects efficiencies achieved in highly urban areas. The implicit benchmark in both these measures is in the range of 50-75 people per square metre of Council pools. 70 people per square metre of pool was selected for Auckland as the population densities for Auckland are at the lower end of the range when compared to UK and American city population densities.

As a guideline we have therefore worked on a ratio of 60 people per square metre of pool for metropolitan centres in New Zealand except Auckland, where the greater urbanisation would allow for greater efficiencies in the use of space.

A number of provincial New Zealand centres have ratios of pools higher than this benchmark. However, this may be appropriate where there is a community commitment to support pools in smaller provincial centres. The ratio of 35 people per square metre was used for provincial centres.

Therefore, for the purpose of estimating demand we have adopted benchmarks as follows:

Benchmark Estimates of Demand for Community Pools	
Type of Region	People per square metre of pool
Auckland	70
Urban Centres	60
Provincial Areas	35

Table 30 | Benchmark estimates of demand for Community Pools

The higher estimates for ratio of people per pool in Auckland reflect the greater efficiencies that can be obtained from greater urbanisation. However, Auckland is in part able to obtain efficiencies because of the number of large school pools available, which offer availability for competitive sports such as water polo. This ratio may also not be appropriate in more suburban locations of the City.

The ratio for other areas is based on largely urban regions such as Waikato, Wellington or Canterbury. In all these cases the population is highly centralised. The lower ratio for provincial areas reflects the models of lower efficiency which are required in smaller centres. This equates with one 25 m eight lane pool for a population of 7,000 - 10,000.

<sup>28</sup> National Parks and Recreation – National Database Report 2012

## Future Demand Based on Changing Trends in Participation

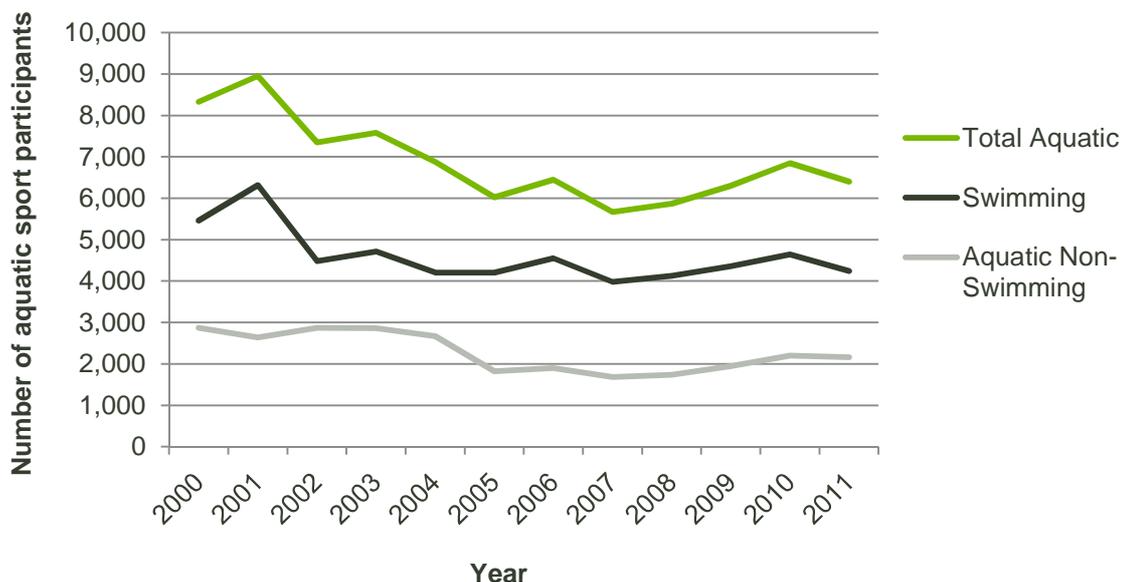
The only current estimate of participation in aquatic activities which provides the ability to track trends over time is the New Zealand Secondary School Sports Council reports of participation. This is based on physical education teachers reporting 'meaningful engagement'<sup>29</sup> by students. The figures cannot be used to indicate levels of participation or activity in sport. However, they do indicate changing preferences for sport and shifts between the codes.

The figures need also to be interpreted carefully, as the analysis is based on activities around secondary schools. As such, it does not reflect activities which the school is not aware of, although it does include analysis of the sports which the school may not be actively involved in as a school activity. For instance ten-pin bowling may be pursued completely independently of the schools.

The following graph shows the number of students actively engaged in aquatic sports over the period 2000 to 2011. The analysis is based on both swimming and other aquatic sports. For the sake of the analysis the aquatic sports included canoe polo, water polo, diving and surf-lifesaving.

The trends show that overall all pool based aquatic activities are reducing. Total activity was a little over 8,000 in 2000 and has tended downward to around 6,500 in 2011. The major part of this decline has been in swimming, which has declined from around 5,500 in 2000 to a little over 4,000 in 2011. The trend downward in other pool-based aquatic sports has seen them decline from just under 3,000 participants to a little over 2,000.

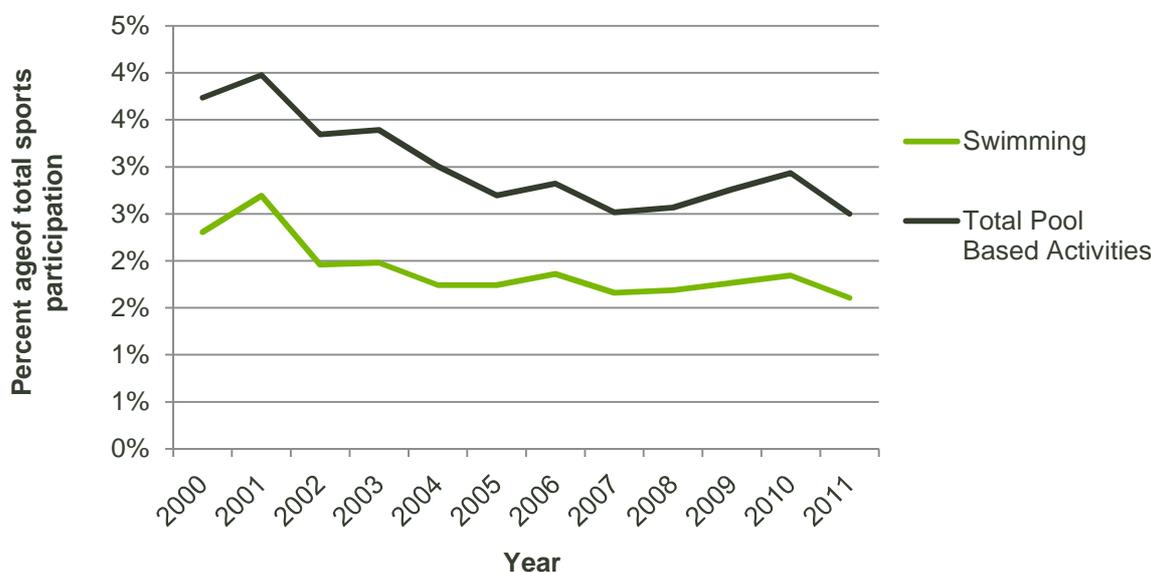
**Graph 1: NZSSC Participation in Aquatic Sport 2000-2011**



The more significant element is the decline in pool based sports as a percentage of school-age sports activity. Generally secondary school participation in sports was increasing in line with the population growth. In fact, the total pool-based activities halved from around 4% of reported school sports to around 2% of school sport activity. This is shown in the following graph.

<sup>29</sup> Defined by teaching staff and based on

**Graph 2: NZSSC Participation in Aquatic Sports as Percentage of Total Sports 2000-2011**



The conclusion from this data is that the participation in the 0 – 15 year age group is declining and therefore when this age cohort moves through to adulthood their participation rates in aquatic activities are likely to be lower than the earlier age cohorts (i.e. lower adult participation rates than current adult participation rates).

One point of note is that the figures need to be interpreted with some caution as this was a period where the leadership in learn-to-swim and competitive swimming was unclear. The results of the refocus of Swimming New Zealand and the rationalisation of responsibility for water safety are likely to see some shift in this age group’s aquatic sport participation in the future. However, it would require a doubling of participation in pool-based sports to off-set the decline in relative participation compared to other sports.

The analysis used to extrapolate future demand assumed that current participation rates in the older age groups would continue when the current youth aged. However, if participation rates are lower in the 0 to 15 year age group then as this age group ages their adult participation rates will be lower again. This suggests that any estimates of future participation are more likely to err on the side of over provision rather than under over provision.

## Future demand based on changing population patterns

Given the importance of under-15-year-olds in the demand for facilities, it is important to understand the rapidly changing demographic profile of New Zealand on potential demand for aquatic facilities. The demographic profile of New Zealand is changing with strong growth in some locations and a static but aging population in other regions. While the population is slowly increasing it is more significantly aging, with higher proportion of older age groups in most regions.

To understand the potential impact of changes we applied the Statistics New Zealand demographic population projections for 2021 and 2031. This ten and twenty-year timeframe is appropriate given the permanence of aquatic facilities and the timeframe for planning and construction. The medium growth projections from the Department of Statistics were used.

The following table shows the estimated population in each of the age groups for 2011, 2021 and 2031.

<b>Demographic Profile of New Zealand: 2011, 2021, 2031</b>			
<b>Age Demographics</b>	<b>2011</b>	<b>2021</b>	<b>2031</b>
14 and under	898,900	936,500	928,000
15 - 24	642,530	611,030	656,930
25 - 44	1,182,870	1,263,080	1,320,570
45 - 64	1,114,820	1,195,520	1,171,240
65 and over	586,300	811,800	1,071,800
<b>Total</b>	<b>4,427,431</b>	<b>4,817,930</b>	<b>5,148,540</b>

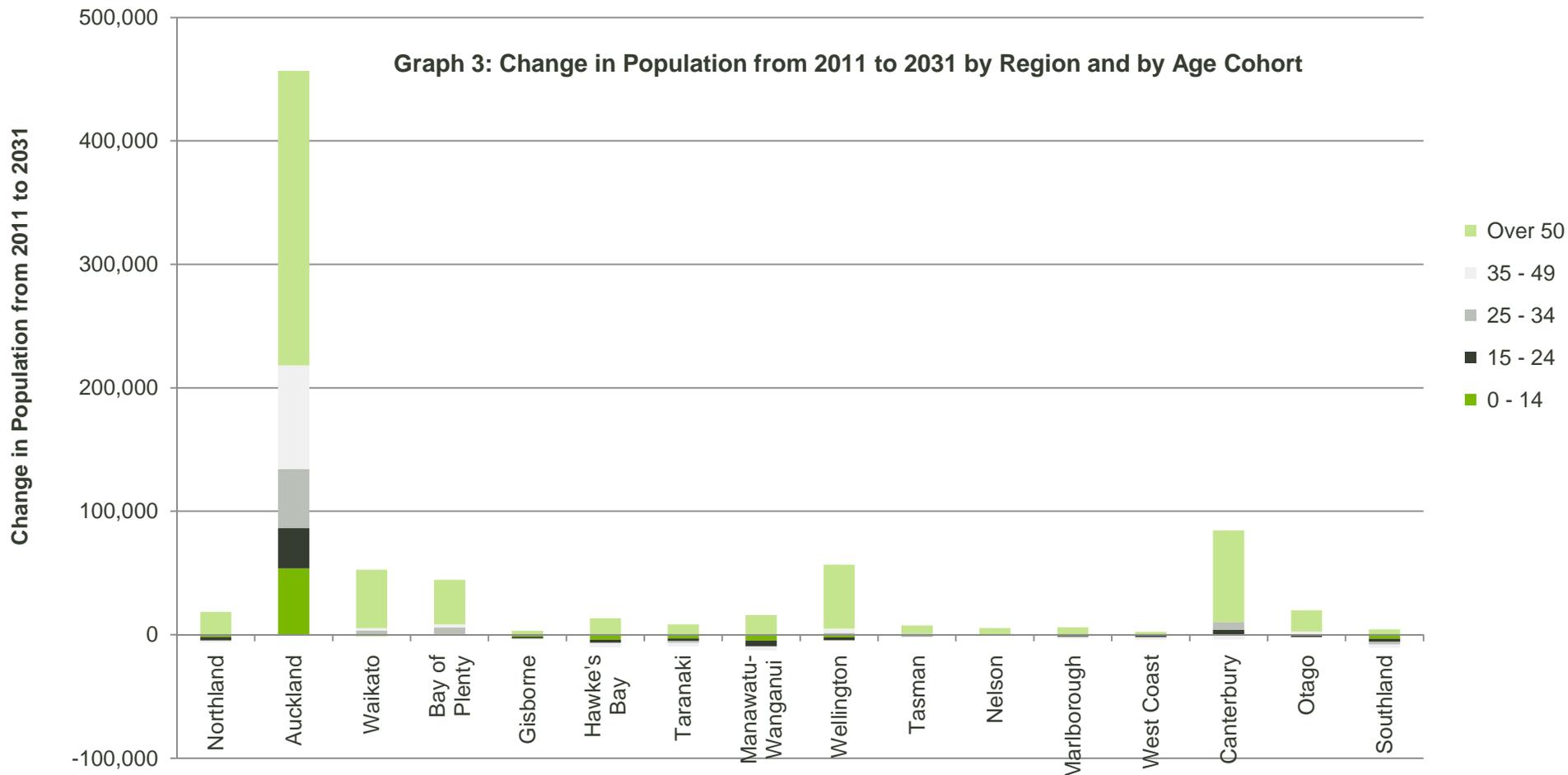
Table 31 | Demographic Profile of New Zealand: 2011, 2021, and 2031

The table highlights that the population in the 24 years and younger age groups is relatively stable, increasingly slowly over the next two decades. However, what is significant is the near doubling of the population aged 65 or over.

However, the challenge for demand is highlighted when the evaluation of impact of the aging population on different regions. This is illustrated in the following graph which shows distribution of the change population, categorised by age. It shows the change in population, by region, over the two decades between 2011 and 2031. In each case the distribution of age is colour coded.

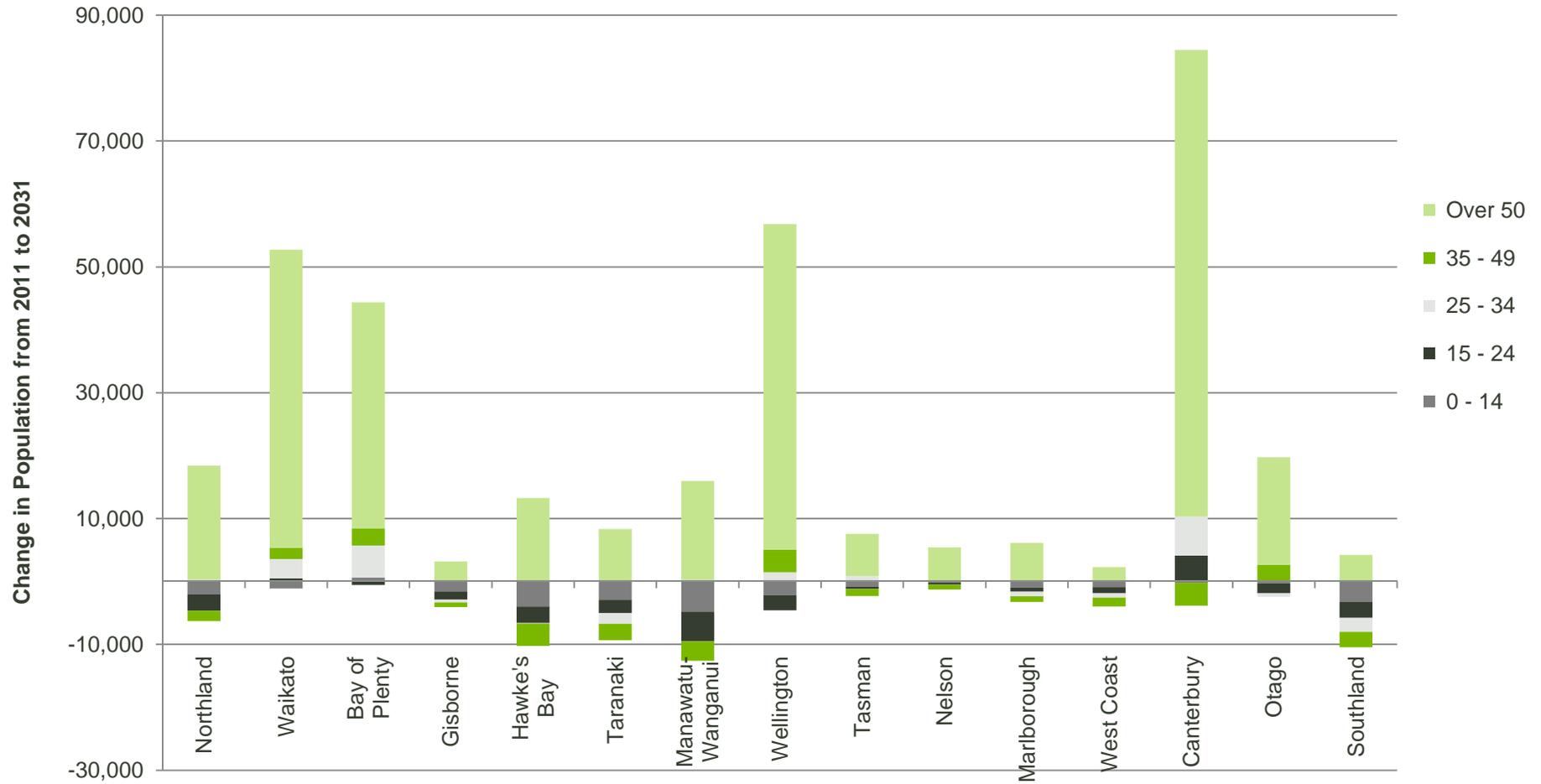
The graph highlights that the population in Auckland is increasing across all age groups. While Auckland is one of the few regions to gain population in the 0-14 and 15-24 age groups it is also the area gaining more 50 year olds and over than all other regions combined. This highlights that this region will, more than any other region need to consider the needs of this growing age profile.

In every other region the increase in younger age groups is minimal, or more commonly a slight decline. However, in every region the most significant gain is in the 'over-50-years age group'.



The significant growth in all age groups in Auckland masks the fundamental shift in other locations. To highlight the changes in other areas the following graph shows population shifts in regions excluding Auckland. It shows relatively small changes in the numbers in the younger age groups however the most significant factor is the rapid growth in over-50-year-olds in all regions.

**Graph 4: Change in Population from 2011 to 2031 by Region and by Age Cohort excluding Auckland**





## Participation in the Regions

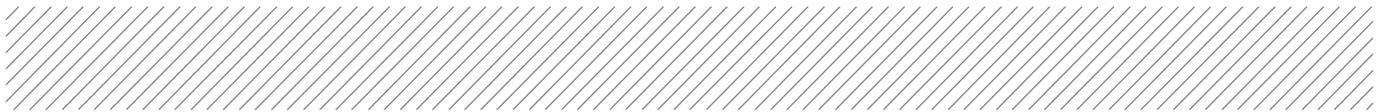
We applied the current participation rates for swimming to the projected populations in each region for 2021 and 2031. In simple terms, it assumes that the impact of a changing age population will result in a declining demand for aquatic facilities. Those areas with rapidly aging population profiles are likely to see a declining demand for facilities and/or demand for a different facility type. This may be off –set by providing new activities or identifying new user groups however the overall trend is downwards.

The changes in participation discussed below are a result of changing population, not changing interest. The potential for participation to be lower, as indicated by the analysis of the Secondary School Council figures, has not been evaluated in this analysis.

The country's participation in aquatic activities is expected to increase moderately over the next two decades, largely reflecting a slight increase in population. However this increase is largely due to the significant increase in participation in the Auckland region.

The Auckland region has both the impact of a growing population, and a growing number of under-15-year-olds. This compares with most provincial New Zealand centres where the under-15-year-old population is declining. The result is that the number of pool visits in Auckland is expected to increase by 12% over the next decade and grow by 24% by 2031.

In the North Island participation is expected to increase over the next 20 years, with this increase being particularly concentrated in the Auckland region as well as in the Bay of Plenty and Waikato. Participation in the Northland and Wellington regions is expected to remain relatively static over the next 20 years with participation in all other North Island regions expected to decline. In the South Island participation rates are largely static in are regions.



Estimated Swim Visits <sup>30</sup> by Major Region: 2011, 2021, 2031					
	Estimated swim visits by region			Change in Pool Numbers Needed <sup>31</sup>	
Regions	2011	2021	2031	2011-2021	2011-2031
Northland	1,402,320	1,412,180	1,406,620	0	0
Auckland	13,719,260	15,409,340	17,029,320	5	5
Waikato	3,777,340	3,913,880	3,999,180	1	0
Bay of Plenty	2,484,380	2,600,260	2,704,000	0	0
Gisborne	437,520	423,080	401,120	0	-0
Hawke's Bay	1,385,020	1,358,860	1,316,820	0	-0
Taranaki	965,620	942,480	893,720	0	-0
Manawatu-Wanganui	2,069,980	2,036,080	1,985,040	-0	-0
Wellington	4,389,060	4,521,400	4,583,360	0	0
Tasman	411,780	415,220	420,060	0	0
Nelson	391,920	399,860	401,400	0	0
Marlborough	378,400	378,620	366,980	0	-0
West Coast	281,540	266,580	248,560	0	-0
Canterbury	4,990,740	5,204,720	5,354,880	1	1
Otago	1,792,180	1,837,460	1,859,140	0	0
Southland	827,080	788,720	725,980	0	0
<b>Total New Zealand</b>	<b>39,712,111</b>	<b>41,914,100</b>	<b>43,700,660</b>	<b>8</b>	<b>7</b>

Table 32 | Estimated pool visits by major region: 2011, 2021 and 2031

<sup>30</sup> 'Swim visits' are based on participation for all types swimming for age groups, rather than pool visits

<sup>31</sup> Based on Sports England facility calculator to calculate pool areas then translated to a 'standard-sized' pool of 25m by eight lanes

# Appendix H

## Roles in the Network

### The Stakeholders in Planning and Providing Aquatic Sports Facilities

#### Overview

The provision and use of aquatic facilities is a complex and interrelated relationship between various key stakeholders. These organisations share a common commitment to the sporting and recreation needs of all New Zealand communities. However, understanding how they inter-relate and the respective roles they play in developing facilities is pivotal. The stakeholders include:

- Sport NZ
- Local authorities
- National and Regional Sporting Organisations
- Funders, trusts and charitable organisations

The following outlines the objectives of each of the parties and discusses different models for how they currently work together.

#### The Role of Sport New Zealand in Facility Planning and Development

Sport New Zealand’s mission is to create a world class sports system. This ranges *from more kids playing and enjoying sport; to more adults participating and getting involved; and more New Zealand winners on the world stage.*

The success of the strategy requires strong working partnerships with key organisations in the sport and recreation sector. Sport NZ is not primarily a delivery agency, but is responsible for setting direction and providing investment and resources to the sector. Sport NZ, role is summarised by three key objectives established in the Statement of Intent: Leading; Enabling and Investing.

The National Facilities Strategy for Aquatic Sports aims to contribute to all three of these key objectives and roles. The description and the way in which the Strategy aims to address these are shown in the following table:

Role of Sport New Zealand in National Facilities		
Role	Statement of Intent - Description	Link to National Facilities Strategy
<b>Leading</b>	Providing a clear sense of direction, challenging the sector to keep lifting its performance, recognising and sharing best practice, celebrating success, bringing the sector together and providing evidence and advocacy to point the way forward	<ul style="list-style-type: none"> <li>• Communicating the needs of the sporting sectors.</li> <li>• Promoting a vision for a hierarchy of recreational facilities.</li> <li>• Providing the “road map” and key information on “best route to take”</li> </ul>
<b>Enabling</b>	Building capability of partners in areas such as governance and management systems, information technology services, event management, facilities, commercialisation, human resources, research and monitoring and good practice.	<ul style="list-style-type: none"> <li>• Developing and sharing tools for the evaluation of facilities.</li> <li>• Sharing information and experience within the sectors.</li> <li>• Highlighting “good practice” case studies</li> </ul>

Role	Statement of Intent - Description	Link to National Facilities Strategy
Investing	Investing to produce results, monitoring the performance of the sector and reporting back on the use of taxpayer money.	<ul style="list-style-type: none"> <li>Investing in information and resources to monitor the delivery of strategies.</li> <li>Advising government of the frameworks and tests which would shape any investment they made.</li> </ul>

Table 33 | Role of Sport NZ in National Facilities

As well as the high level objectives outlined above, the National Facilities Strategy for Aquatic Sports contributes to tactical elements of Sport NZ's initiatives.

Elements of the philosophy are also repeated in the Strategy Plan 2013-2020 which has recently been released by High Performance Sport New Zealand. This document outlines six key drivers for implementing the strategy:

The role of facilities is covered under High Performance Environment which states:

*"Promote a culture of high performance excellence through our people, resources and facilities"*<sup>32</sup>

The key strategic priorities states<sup>33</sup>:

HPSNZ – Key Strategic Priorities		
Priority 3	Enhancing the daily training and competition environments – meeting targeted sports' high performance facility needs.	Provide an accessible training performance and recovery support environment through integrated facilities to meet the needs of athletes and coaches.

Table 34 | High Performance Sport – Key Strategic Priorities

## Local Authorities

Local authorities are the fundamental building blocks for how communities define and build community infrastructure.

The role of local authorities in providing community facilities is a mixture of long term public expectation, shaped in part by various legislative changes which at times define a larger role for local authorities, or curtail local authority involvement which Central Government determines is not a key focus for local government.

The process of clearly defining and aligning with the needs of the community has resulted in local government developing complex, but commonly transparent processes to identify needs and allocate costs. The fundamental base of this is the 'Long Term Plan' which outlines Council's investment in assets and funding programmes.

The drive to allow clarity around the capital cost of delivering facility development programmes, and the need to accurately account for the declining functionality of assets, means that local government is legally obliged to adopt rigorous asset management planning processes. While these are commonly regarded as providing a rigorous understanding of the future maintenance of the facility assets, the process of allowing for changing of core service focus is more complex. An earlier version of the Local

<sup>32</sup> High Performance Sport New Zealand (HPSNZ) Strategic Plan 2013-20, page 5

<sup>33</sup> High Performance Sport New Zealand Strategic Plan 2013-20, page 9



Government Act also required Councils to differentiate between ‘public good’ (such as community identity, local amenity value or economic benefits) from ‘private good’ (such as individual fitness or enjoyment). Many local authorities continue to use this differentiation in determining budget allocations.

In addition local authorities use a variety of survey’s to check public monitoring of their performance, especially where there is no market information from user pays systems. For instance many local authorities use the ‘ComunTrak’ survey to follow trends in public satisfaction with pools and the facilities provided.

The objectives of local authorities in investing in aquatic facilities vary, depending on public consultation. However, it is based around a series of ‘well-beings’ which includes both economic benefits and community benefits. The provision of aquatic facilities commonly spans a variety of these well beings’ with pools fitting within this framework. The Long Term Plan process requires expenditure to be linked to these strategic objectives.

A review of the recent local government consultation and analysis provided background to this analysis. A schedule of the reports evaluated is included as Appendix C. The objectives local authorities cite commonly link to these broader community objectives. For instance Wellington City Council links its investment in aquatic facilities to:

*“Building strong, safe, healthy communities for a better quality of life”<sup>34</sup>*

It subsequently differentiates its activities into: leisure and adventure; fitness and education; health and wellness; and hospitality.

## **National and Regional Sporting Organisations**

Effective National sport organisations (NSOs) are key partners for communities and Sport NZ in helping New Zealand promote activity and develop internationally competitive sports people.

NSOs play a critical role in increasing participation in sport at regional and community levels. Commonly the national structure of sports organisations is supported by Regional Sports Organisations (RSOs). However, the structure is not always hierarchical, with a number of organisations having clubs affiliated with the National bodies.

NSOs have a key role in understanding the specialist needs of facilities, especially with aquatic facilities which often require complex timing equipment or specific height or depth characteristics to meet National and international standards for competition. NSO and RSOs also play a major role in attracting and organising international sports events and competitions

However, the NSOs role is one of advocacy and lobbying for their specific interest groups. The extent to which they define their role in this way varies, but is important to understand in a wider planning context.

## **Charitable Trusts and Funders**

Much of the infrastructure of community recreational facilities has been developed by philanthropic and charitable donations.

At a base level, there is a network of school pools and facilities which were developed by ‘working bees’ and fund-raising by school boards over several decades. This was focused on delivering explicit assets to the community and was successful in ensuring local facilities for a generation of school students. Over time, the ownership of the assets may have migrated to Boards of Trustees at schools or the Ministry of Education.

At a Regional level there are a number of community trusts aiming to provide infrastructure to their communities. In some cases these were derived from the ‘savings bank’ network of small retail banks

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<sup>34</sup> Discussion Paper – 2012 Wellington Pools

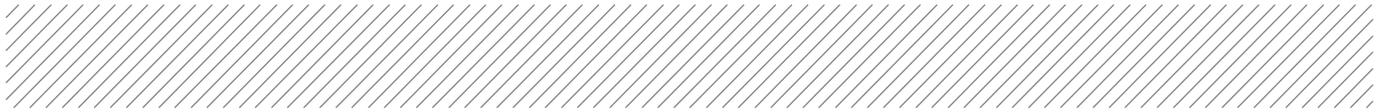


which invested back into their communities. The donations of the Taranaki Savings Bank and Auckland Savings Bank are the remnants of a previous network. In other cases there are charitable trusts relating to previous liquor licencing trusts, where the retail activities of liquor sales in some areas were kept within local trusts. The Invercargill Licencing Trust and the Johnsonville Licencing Trust are also remnants of a previous national network which provided community infrastructure. The regional trusts are commonly now replaced by 'pub charities' where the proceeds from gaming machines are placed back into the community.

In addition to the regional trusts there are national organisations which play a New Zealand-wide role in contributing to recreation facilities. This includes broad charitable trusts such as the Lion Foundation, through to the specific gaming based initiatives such as the Lotteries Grants Board.

Commonly these entities play a major role in supporting (funding) the development of community facilities. Their role is most commonly to complement, rather than replace local government facilities development. As a result a number of local authorities have established trusts or vehicles which can attract charitable donations to sit alongside council investment. The result is a network of investment vehicles and trusts which have funding from various sources.

The objectives of the charitable sector is varied, with some providing funding for event or programme based activities (such as learn to swim) whereas others opt to invest in major infrastructure (Stadium Southland).



# Appendix I

# Facilities Database





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