

A SUB-REGIONAL APPROACH TO HAMILTON'S INTEGRATED THREE WATERS MANAGEMENT

*C. Scrafton, A. Clore, J. Bradley, and J. Puddephatt, MWH New Zealand Ltd
T. Harty, Hamilton City Council*

ABSTRACT

To achieve smart and efficient outcomes in the management of urban three waters (water supply, wastewater and stormwater) resources and infrastructure services Hamilton City, Waipa and Waikato District Councils and other Waikato regional 'Future Proof' partners along with consultants MWH have worked together to develop a Waikato Sub Regional Three Waters Strategy.

The purpose of the Strategy is to provide an over-arching vision and series of measurable goals to facilitate an integrated, efficient and responsive sub regional approach to urban three waters management across these three Councils. Working across jurisdictional boundaries, the Strategy demonstrates how the Partner Councils are taking a smarter approach to integrated Three Waters management.

Using the Strategy, Hamilton City Council is well advanced in developing a Three Waters Management Plan that will give effect to the vision of The Strategy by defining implementation tasks and work-streams defined in the context of The Strategy.

KEYWORDS

Regional integration, Three Waters, Strategy, Management, Future Proof, Hamilton City

1 INTRODUCTION

Hamilton City Council, Waikato Regional Council and Waipa and Waikato District Councils, in partnership with Tangata Whenua, released a Sub-Regional Growth Strategy (Future Proof) in 2009. Future Proof recognised that, with the sub-region population predicted to nearly double in a 50 year period, from 223,000 – 437,000 people, collective planning and action between local and regional government, residents and businesses was critical to its long term viability. The Vision of the Future Proof Strategy being:

In 2061 the sub-region:

- *Has a diverse and metropolitan centre strongly tied to distinctive, thriving towns and rural communities.*
- *Is the place of choice for those looking for opportunities to live, work, invest and visit.*
- *Is the place where natural environments, landscapes and heritage are protected and a healthy Waikato River is at the heart of the regions identity.*
- *Has productive partnerships with its communities, including tangata whenua.*
- *Has affordable and sustainable infrastructure.*
- *Has sustainable resource use.*

Within the context of the Three Urban Waters (being potable water, stormwater and wastewater) Future Proof identified the following key action:

Develop Terms of Reference for a technical group involving the partner councils and tangata whenua that:

- *Comprises officers from each council*
- *Includes share funding of joint projects*
- *Has a share funding regime where appropriate and cost effective to provide joint infrastructure*

to consider sub-regional water supply matters including the consideration of alternative supplies, joint infrastructure provisions and other water supply matters.

Through the terms of reference referred to above, the Future Proof partners developed this action further by integrating consideration of stormwater and wastewater matters, recognising that Future Proof addressed each of the Three Waters independently rather than holistically.

The Sub Regional Three Waters Strategy (The Strategy) was developed as a result of Future Proof partners recognising the increasing need to manage the Three Waters in a sustainable and integrated way to ensure availability of services to growth areas and protection of the environment for future generations.

The Strategy sets a long term strategic focus and direction on critical Three Waters issues for the Waikato sub region. It addresses the concept that Three Waters management crosses jurisdictional boundaries, and that there are efficiencies in establishing management actions in an integrated way.

This paper provides a discussion of the approaches and methods adopted in the development of a sub-regional strategy with the involvement of a number of stakeholders and disciplines often with differing aims, issues and perspectives. The paper then goes on to discuss how a sub-regional strategy can be implemented at a local level.

2 DRIVERS FOR A SUB-REGIONAL THREE WATERS STRATEGY

Whilst Future Proof set a clear mandate for the Future Proof partners to develop a sub-regional three waters strategy (The Strategy), at the outset of the project, significant thought was given to ensuring a common understanding of the drivers, both statutory and non-statutory, of relevance to the Three Waters. There are a wide range of drivers that support, underpin and provide guidance for the development of The Strategy and the following is a brief summary (and is certainly not exhaustive) of some of the more pertinent drivers.

2.1 RESOURCE MANAGEMENT ACT 1991

The regulatory environment for the management of water is established under the RMA. The purpose of the RMA is to promote the sustainable management of natural and physical resources, sustainable management being defined as:

“...managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –

- a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- b) *Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
- c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

Functionaries under the RMA when managing the use, development and protection of natural and physical resources shall recognise and provide for matters of national importance. These include:

- The preservation of the natural character of the wetlands, lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.
- The relationship of Maori and the culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

Functionaries under the RMA when managing the use, development and protection of natural and physical resources shall have particular regard to other matters. These include:

- The efficient use and development of natural and physical resources.
- Maintenance and enhancement of the quality of the environment.

2.2 LOCAL GOVERNMENT ACT 2002

The LGA promotes the accountability of local authorities to their communities. It provides for local authorities to play a broad role in promoting the social, economic, environmental and cultural wellbeing of their communities, taking a sustainable development approach. The LGA sets a range of functions for local authorities with regards to the Three Waters.

2.3 WAIKATO-TAINUI RAUPATU CLAIMS (WAIKATO RIVER) SETTLEMENT ACT 2010

As Future Proof relates to a sub-region of the Waikato Region, The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 is of particular relevance. The Act was enacted on 6 May 2010 (the assent date is 7 May 2010) and, except for ss 22 to 34, 88 to 91, and 96 and Schedules 4 to 6, and Schedule 8, came into force on 24 September 2010 pursuant to the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act Commencement Order 2010. The provisions that did not come into force on 24 September 2010 came into force on 25 November 2010 pursuant to the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act and Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act Commencement Order 2010.

As per the preamble to the Act: *The Resource Management Act 1991 gave regional and local authorities substantial functions and powers over natural resources, including the power to grant resource consents for River use. The Act did not, however, provide for protection of te mana o te Awa and te mana whakahaere of Waikato-Tainui. Since the Act came into effect, Waikato-Tainui have been involved as respondents in many consent hearings, seeking conditions which would protect the River...In summary the Crown acknowledges:*

- ...
- j) *that the deterioration of the health of the Waikato River, while under the authority of the Crown, has been a source of distress for the people of Waikato-Tainui; and*
 - k) *that the pollution, degradation and development of the Waikato River, its lakes, streams and wetlands have caused the decline of once rich fisheries that, for generations, had sustained the people's way of life and their ability to meet obligations of manaakitanga, and this is a further source of distress;*
- ...

2.4 NEW START FOR FRESHWATER

On 8 June 2009, the Government announced its new strategy “New Start for Fresh Water” to replace the former Sustainable Water Programme of Action. It outlines the Government’s new direction for water management in New Zealand and sets out some of the choices the nation faces and the implications of those choices. A programme of work has been developed to run beyond 2011.

The Government has indicated that issues that need to be addressed include:

- Sound water management is essential to provide for New Zealand’s economic development and growth, and to maintain social and cultural values.
- In some parts of New Zealand, water resource limits are being approached, which is seen in deteriorating water quality, water demand outstripping supply, and constrained economic opportunities.
- The right balance needs to be found between the different interests and values in water, as not all values and expectations can be met in all places at all times.
- Some other contributing issues that need to be addressed are the interests of Maori in New Zealand’s fresh water.
- Many New Zealanders do not understand the limits of water resources – information about how much water we use is poor, and there is limited institutional capacity and expertise needed for sound water management.

Much of the work that was being undertaken by the Sustainable Water Programme of Action is continuing. The Government has detailed a programme involving:

- a stakeholder-led collaborative process run by the Land and Water Forum that will develop shared outcomes, goals and long term strategies for fresh water;
- engagement between Ministers and the Iwi Leaders Group to advance discussions on resolving high level freshwater issues, including iwi / Maori rights and interests, particularly in freshwater management and allocation initiatives; and
- a concurrent officials programme on matters including freshwater allocation, quality and infrastructure, science and monitoring and effective decision making.

2.5 REPORT OF THE LAND AND WATER FORUM

The Land and Water Forum was asked by Government to recommend potential reform of New Zealand’s fresh water. The Forum’s recommendations, goals and principles are set out in the Report of the Land and Water Forum: A Fresh Start for Freshwater (September 2010).

The Report makes very clear linkages between land use, soil and water and recognises that:

8. *Water must be managed in the context of the hydrological cycle as a whole. Water is taken from natural sources (such as lakes, rivers, aquifers) for use in households, on land, and in industries.*
9. *Rain finds its way to our waterways over land and soils or through them, carrying sediments, nutrients and contaminants. Therefore, the way we use land and manage soil affects the quality and availability of fresh water.*
10. *Understanding the hydrological cycle and the influences of land use on water is critical to the development of sound water management.*

The goals developed by the Forum for water policy include:

- b. *maintaining and improving the quality of freshwater*
- e. *ensuring efficiency in the use of water*
- h. *restoring, maintaining and protecting the mauri of freshwater resources*

To achieve these goals the Forum identified a number of principles including that sustainable reform must:

- a. be built on an understanding of the hydrological system as a whole, and the relationship between land and water*
- d. embrace innovative solutions and technologies, and make good use of knowledge*
- h. involve continuous improvement and adaptation.*

2.6 NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT

The NPS for freshwater management came into force on the 1 July 2011 and thus was still a proposed NPS at the time that The Strategy was being developed. In this regard, at the time The Strategy was being developed, there was no way of knowing what the final content of the NPS would be.

The National Policy Statement for Freshwater Management (NPS) seeks to provide clear direction to regional councils to manage fresh water, in an integrated and sustainable way while providing for economic growth, within set resource use limits. The OECD, in its 2011 Economic Survey of New Zealand, recommended that national policy statements and national environmental standards should be established to better guide local decision making on natural resource management. As per the NPS Cabinet Paper:

The NPS sets objectives and policies that regional councils must address in their RMA planning and decision-making. It specifically provides direction on these key areas:

- a) setting and implementing limits for water quantity and quality are central to water management;*
- b) water that is available for 'out of stream' use (once limits are set) must be allocated fairly, efficiently, and maximise benefits to the country and local communities;*
- c) better integration of fresh water and land management is provided for;*
- d) outstanding freshwater resources should be protected (including wetlands);*
- e) existing over-allocation (for both water quality and quantity) must be reduced and further over-allocation avoided; and*
- f) councils should involve iwi and hapū in the management of fresh water, and in particular, work with them to identify their values and reflect this in freshwater planning.*

2.7 WAIKATO REGIONAL PLAN AND POLICY STATEMENT

The RMA devolves decision making on the allocation and use of water and the ability to discharge contaminants into water to regional councils. The regulatory context for guiding this decision making is provided by regional policy statements and regional plans.

It is worth noting that The Proposed Waikato Regional Policy Statement (notified on 3rd November 2010) recognises (amongst other things) the “increasing demand for fresh water” as significant resource management issue for the region.

In addition, Variation 6 of the then proposed Waikato Regional Plan (RPV6) was publicly notified in October 2006. RPV6 seeks to introduce new provisions relating to the taking and efficient use of water. Environment Court proceedings have recently concluded and many interested stakeholders are awaiting decisions.

RPV6 was promulgated because many stakeholders believed that the water allocation framework as reflected in the proposed Waikato Regional Plan (September 1998) was not structured to deal with current and future levels of demand or competition for water.

2.8 LOCAL GROWTH STRATEGIES

All three Future Proof partner councils have growth strategies (Hamilton Urban Growth Strategy, Waipa 2050, and Waikato District Growth Strategy) which provide visions for the respective territorial authority's growth.

3 DEVELOPING A SUB REGIONAL THREE WATERS STRATEGY

The Partner Councils (Hamilton City, Waikato and Waipa Districts) have been working together and exploring aspects of three waters management for a number of years and, as discussed above, in the context of Future Proof and a number of statutory and non-statutory drivers recognised a number of issues regarding Three Waters that require action beyond the scope of Future Proof.

In response, the Partner Councils developed and agreed to a Terms of Reference which committed the Partner Council's to (amongst other things) developing a Sub-Regional Three Waters Strategy.

To kickstart the process a "brain dump" workshop was held between the Partner Council's involving both strategic planners and engineers. At this session, it became clear from the outset that the first step to developing The Strategy needed to be to determine:

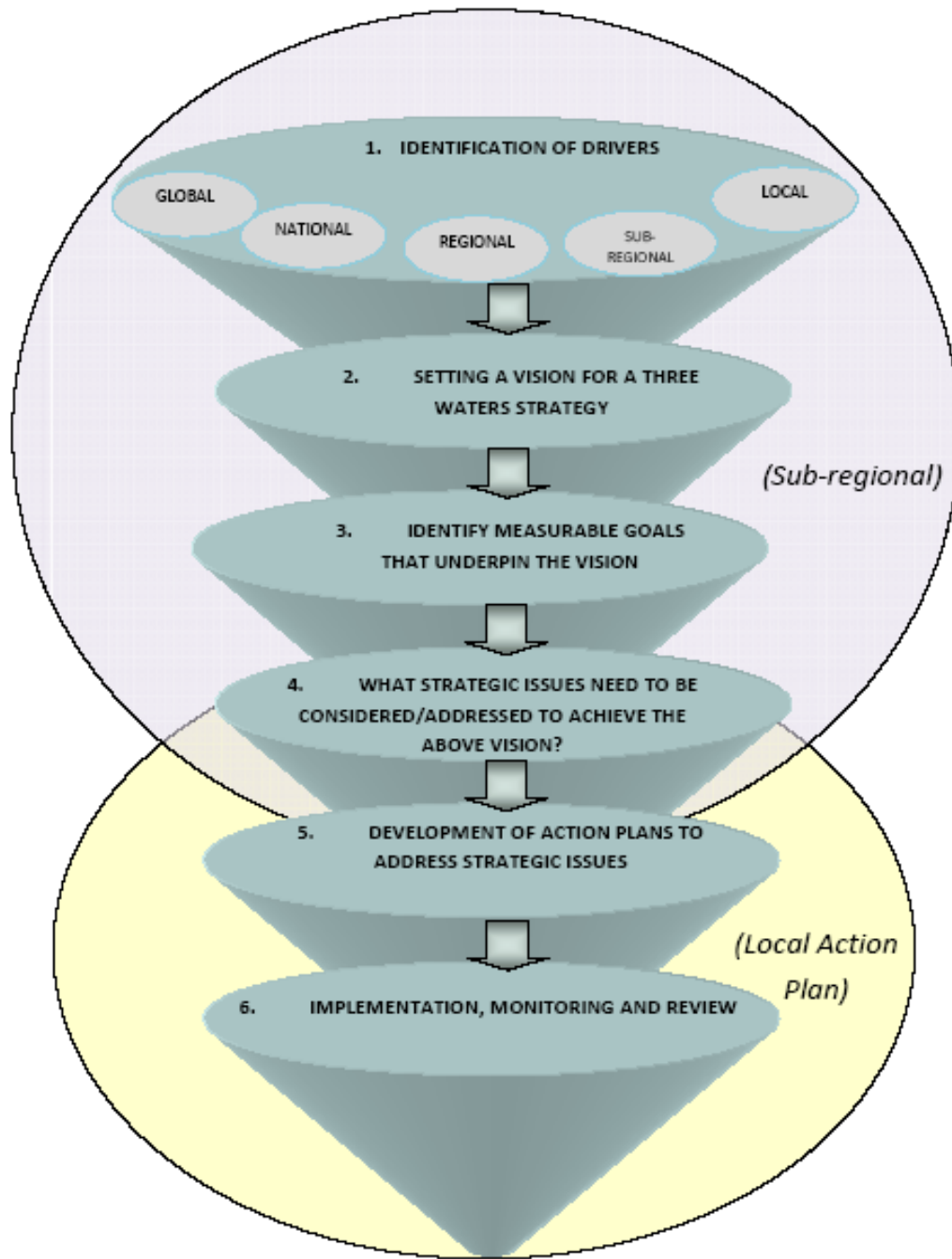
- 1) The purpose of the strategy;
- 2) The vision of the strategy;
- 3) The strategic issues facing the Partner Councils with regards to the Three Waters.

3.1 PURPOSE OF THE STRATEGY

Through the workshop session, the purpose of The Strategy was agreed to be simply: *...to set a long term strategic vision for Three Waters in the sub-region.*

Whilst a strategic document, it was anticipated that The Strategy should also provide a road map for delivery that reflects the differences faced by each of the Councils, whilst promoting the desire to work together where and when possible. In this regard, it was determined that The Strategy should provide direction on implementation as well as setting a strategic framework. The implementation aspect of The Strategy is discussed further on in this paper, however the following diagram illustrates how The Strategy sets the framework for and integrates with implementation mechanisms.

Figure 1: Framework for the Development of a Three Waters Strategy



3.2 VISION OF THE STRATEGY

Following on from determining the purpose of The Strategy, thought was given to what the Vision of The Strategy should be. This matter raised much discussion between the Partner Councils, and much “word-smithing” ensued. Most around the table agreed that a vision should be short and to the point, however, also ensuring that the vision is all encompassing and “all things to all people” generally means that it is difficult to get away from a long, wordy vision. As a result of the workshop, and after consultation with other stakeholders, including tangata whenua, the following vision emerged:

The delivery of integrated, sustainable and well managed Three Waters services (both in terms of resource and infrastructure) for the Waikato sub-region which ensures the protection and where possible the enhancement of public health and environmental quality today and into the future.

3.3 STRATEGIC ISSUES

The next stage of the initial workshop was to identify the key issues regarding Three Waters faced by the Partner Councils. A vast number of issues (well over 100) were identified, far too many to appropriately discuss in a strategic document. Two key aspects of the range of issues are considered to be the nature of the three Councils involved (both rural and city) and the significance of the Waikato River, however as noted from the review of key drivers, it is clear that even without these two aspects, there exists an extensive range of significant issues associated with the Three Waters in this sub-region

In response to the vast number of issues that emerged, an exercise was undertaken post workshop to group issues together whilst carefully ensuring non were lost. From this process nine **strategic** issues emerged, of which all of the initial issues could be considered a sub-category of. For example “providing infrastructure to service growth” and “ensuring water resources are available to service growth” falls under the strategic issue “Meeting future anticipated and planned for, growth demands” Consideration was then given to what outcome (or goal) would mean that the strategic issue had been adequately addressed, and what actions (responses) should be undertaken to achieve the outcome. Table 1 on the next page provides details of the strategic issues, the goals set to address these issues and the responses expected to achieve these goals.

3.4 SUB REGIONAL STRATEGY IMPLEMENTATION

The process described above constituted the development of a consistent Sub-regional Strategic framework. From this point, consideration was given to how to actually implement The Strategy in an appropriate manner at the territorial authority level. Given the statutory responsibilities of a territorial authority, and the different nature of the Partner Councils, it was clear that each of the Councils would be likely to interpret the strategic issues both in terms of what the issue means to them, and in terms of the priority of that issue as opposed to other strategic issues, differently. At the same time, it was also considered likely that there would be aspects where a consistent approach could be established, however to ensure a purity of approach, it was considered appropriate for each of the Councils to undertake the next stages of the process independently and to then compare results at a later date (this process is discussed in more detail below).

Table 1: Sub Regional Three Waters Strategic Issues, Goals and Responses

Strategic Issue	Goal	Response
Ensuring the protection and improvement of public health and providing appropriate water sanitary services.	Proactively protect, promote and improve public health	<ul style="list-style-type: none"> • Proactively review and implement Water Supply Risk Management Plans. • Proactively prepare and disseminate to their communities consistent and user friendly information on water supply, safe sanitation, household plumbing matters etc. • Plan and where necessary, implement emergency procedures in respect to Three Waters services that are coordinated and make best use of the joint resources of all three Councils. • Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on public health. • Explore ways of improving the monitoring and management of on-site wastewater systems in large un-serviced communities.
Meeting future anticipated and planned for growth demands	<ul style="list-style-type: none"> • Provide for the water needs for the sub-region for the next 60 years in an efficient and sustainable manner. • Ensure an understanding of and the provision for changing future needs, demands and issues within the sub-region. 	<ul style="list-style-type: none"> • Have regard to and align with the direction and implementation of Future Proof. • Ensure that the potential implications and effects of growth pressures on the Three Waters are appropriately understood and that Three Waters management decisions are informed by accurate and relevant information. • Ensure that growth and infrastructure planning are appropriately integrated and that the respective District Plans (and other management tools): <ul style="list-style-type: none"> ○ Have appropriate and consistent methods of ensuring that development occurs cognisant with infrastructure ○ Are flexible enough to adapt to unforeseen influences, changing markets and changing growth pressures.
Planning for and adapting to climate change	Promote an understanding of and ensure appropriate planning for the effects of climate change.	<ul style="list-style-type: none"> • Ensure that Three Waters infrastructure and resource use decisions are informed by and respond to the potential effects of climate change. • Ensure that their respective District Plans, Development Manuals, design codes, emergency preparedness plans and other planning and management tools sufficiently address and respond to the potential effects of climate change. • Work together to develop and implement other methods (statutory and non-statutory) for managing the potential effects of climate change.

Strategic Issue	Goal	Response
Ensuring that decisions relating to the Three Waters are underpinned by sufficient research and knowledge	Ensure that decisions relating to the Three Waters are underpinned by sufficient research and knowledge.	<ul style="list-style-type: none"> • Ensure that decision making is informed by appropriate research and knowledge and that information used to inform the decision making process is: <ul style="list-style-type: none"> ○ Reliable and consistently updated and reviewed. ○ Made an integral part of the strategic and collaborative processes that underpin Three Waters decision making. ○ Disseminated in an accessible form to relevant stakeholders both within and outside of the Three Councils.
Ensuring quality, efficient and sustainable infrastructure	<ul style="list-style-type: none"> • Promote the sustainable and economic use and delivery of Three Waters resources and services. • Ensure the efficient utilisation of existing assets. 	<ul style="list-style-type: none"> • Work together to develop and implement comprehensive planning tools (such as Water Conservation and Demand Management and Activity/Asset Management Plans) that ensure a sound understanding of current infrastructure and future needs. • Explore and implement opportunities for shared services and other methodologies to deliver efficient and sustainable infrastructure to the community such as opportunities presented by changing technology. For example: <ul style="list-style-type: none"> ○ The potential for energy efficient technology and low energy solutions. ○ Maximise current system efficiencies. ○ The potential benefits of adopting green infrastructure and low impact design solutions.
<p>The need for integration of:</p> <ul style="list-style-type: none"> • The Three Councils • Inter Council departments • The Three Waters • Land use and water planning and management 	Co-operatively manage and plan for Three Waters in the sub-region.	<ul style="list-style-type: none"> • Develop shared methods to ensure alignment and communication across and between Councils and Council departments to: <ul style="list-style-type: none"> ○ Achieve integrated management and regulation of Three Waters resources and infrastructure. ○ Ensure land use planning, growth planning and Three Waters planning processes are appropriately integrated and coordinated. ○ Deliver cost effective and collective solutions to Three Waters management. • Develop integrated approaches to the provision and operation of Three Waters services, including those associated with individual households, businesses and industries that: <ul style="list-style-type: none"> ○ Efficiently use water. ○ Produce less wastewater. ○ Manage stormwater in a way that reduces adverse environmental effects and efficiently uses the water resource.

Strategic Issue	Goal	Response
The availability and allocation of water	<ul style="list-style-type: none"> • Provide for the water needs for the sub-region for the next 60 years in an efficient and sustainable manner. • Promote the sustainable use of resources. 	<ul style="list-style-type: none"> • Ensure proactive and coordinated involvement in regional water allocation processes and ensure that any decisions are informed and supported by appropriate research and data and that the capacity of their respective water allocation is known. • Explore where future water needs can be sourced and identify what relationships will be required to enable the most cost efficient and effective utilisation of resources and whether the current approach to water allocation is appropriate. • Acknowledge and reflect the growing understanding of water as a precious resource and ensure efficient and effective use and environmental protection and enhancement is at the forefront of consideration and decision making. • Ensure that current and future potable water needs are considered in a collaborative manner (including responses to water shortages and droughts). The Three Councils will explore how they can/should align on consenting issues and will ensure that objectives, policies, rules and methods are in place to reflect a collaborative approach. • Explore ways and mechanisms (statutory and non-statutory) of improving the efficiency of water takes and use (e.g. integrated water approaches, technology, pricing, metering, legislation and education).
Ensuring that iwi and hapu are involved in the management of Three Waters, and Tangata Whenua values and interests are identified and reflected	Promote the recognition of cultural values.	<ul style="list-style-type: none"> • Ensure that there is a sufficient and common understanding of the implications and requirements of the Waikato-Tainui Raupatu (Waikato River) Settlement Act, 2010. In particular: <ul style="list-style-type: none"> ○ Ensure a consistent approach to the development of JMA's and consider whether water and wastewater Asset Managers should be involved in the JMA process. ○ Ensure that their District Plans give effect to the Waikato-Tainui Raupatu (Waikato River) Settlement Act, 2010 in a consistent manner. • Ensure a common understanding of who/how to engage with iwi and hapu and that there are consistent and well understood (both within and outside of Council) processes and protocols in place for engaging with iwi and hapu on Three Waters issues.
Ensuring protection and where possible the enhancement of the natural environment	<ul style="list-style-type: none"> • Promote the restoration and protection of the health and wellbeing of our waterways and their catchments. 	<ul style="list-style-type: none"> • Advocate at a National and Regional level for appropriate (or if applicable changes to) water quality rules and regulations. • Ensure that water quality and ecology are appropriately understood and monitored and where beneficial share water quality data, investigations and outcomes. • Ensure that their respective tools (e.g. District Plan, Development Manual, Technical Standards etc.) achieve appropriate and consistent environmental outcomes. • Address the need for wastewater reticulation and community treatment or other solutions where onsite wastewater systems are creating inappropriate adverse effects on the environment.

In this regard, it was recommended that each of the Partner Councils develop their own Three Water Management Plans (independently of the other Partner Councils) that fit into the context of the sub-regional three waters strategic framework as set out in The Strategy, but are each tailored to the specific local context of their respective territorial areas. Once developed, further analysis for alignment between these documents will be undertaken.

The individual Three Waters Management Plans will outline actions to support the ‘implementation’ of The Strategy. Each of the Partner Councils will accordingly be able to address specific actions relevant to their district/city. At a later date these individual action plans may be totally or partly integrated into an expanded Sub-regional Three Waters Strategic Action Plan. Examples of where consistency may occur include:

- Development of common consistent approaches to codes of practices, bylaws, water demand and conservation, waste management, design practices etc.
- Sharing of operational resources.
- Consistent approaches to material supply and bulk purchase.
- Consistency in and cost effective use of community education material.

4 HAMILTON CITY COUNCIL - THREE WATERS MANAGEMENT PLAN

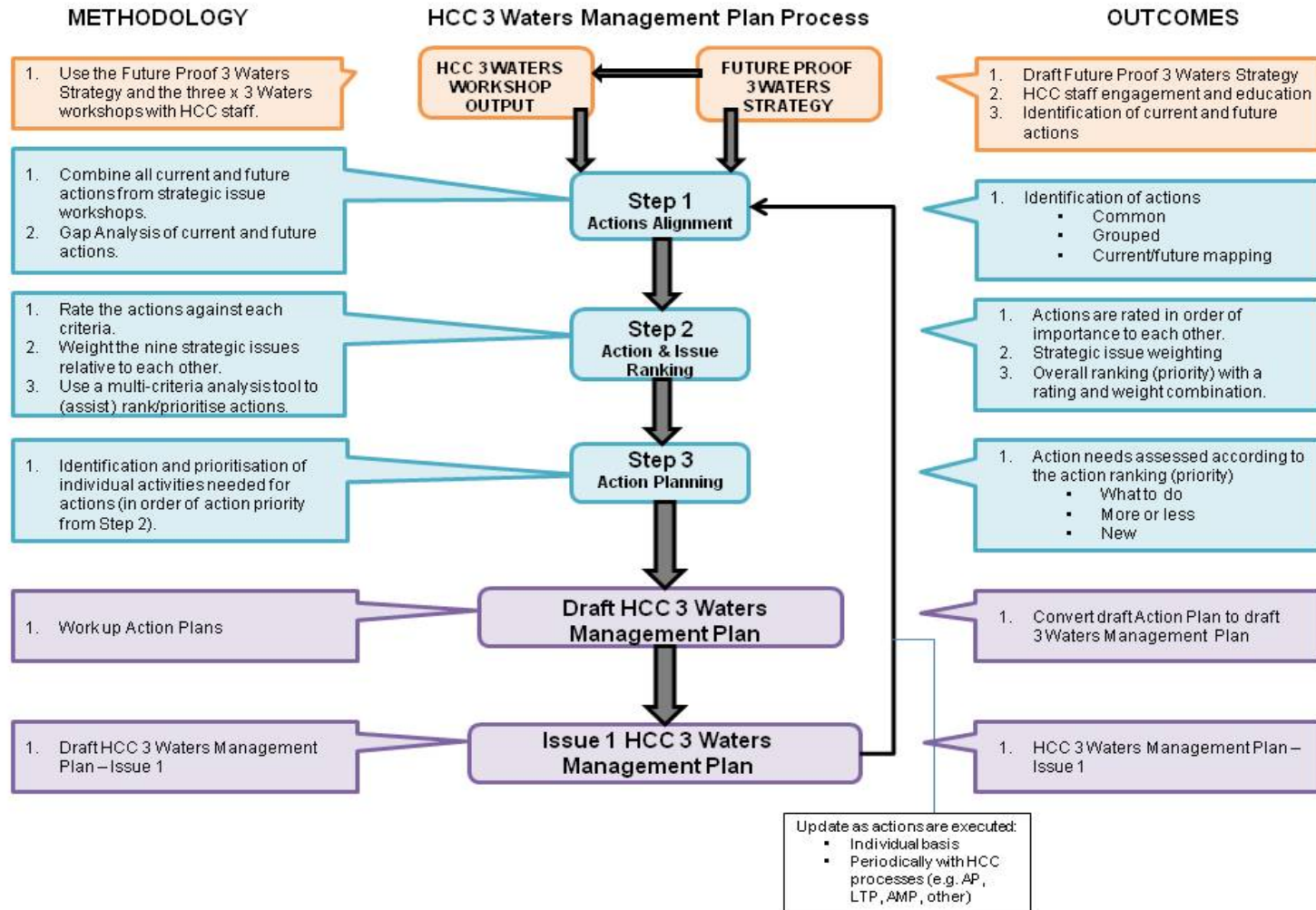
Hamilton City Council’s (HCC) Three Waters Management Plan, whilst not yet complete, is sufficiently progressed to be able to comment on the approach taken and the issues faced.

4.1 METHODOLOGY

HCC’s Three Waters Management Plan constitutes HCC’s implementation of The Strategy. The purpose of HCC’s Three Waters Management Plan is to enable HCC to improve the integration of urban three waters management, continue the delivery of efficient and sustainable services for Hamilton and align with Future Proof partners and the Sub Regional Three Waters Strategy.

Figure 2 on the following page represents the methodology being undertaken by HCC to develop the Three Waters Management Plan. A description of HCC’s Three Waters Management planning and development process is also provided.

Figure 2: HCC Three Waters Management Process



4.1.1 HCC THREE WATERS MANAGEMENT PLAN STAFF WORKSHOPS

As illustrated in Figure 2, a key element of HCC's Three Waters Management Plan methodology was a series of staff workshops held in the early stages of the Three Waters Management Plan development process. The workshops were designed to draw on staff knowledge and experience to understand the relevance of the Sub Regional Strategic Issues in a Hamilton context.

The Sub Regional Strategic Issues were discussed at the workshops in order to understand the following:

- What the Sub Regional Strategic Issues mean to HCC
- What HCC is currently doing about the Sub Regional Strategic Issues
- What HCC could be doing about the Sub Regional Strategic Issues
- What the constraints are to taking action
- What linkages the Sub Regional Strategic Issues have with other HCC activities.

Workshop participants constituted a broad Council representation including staff from HCC's City Waters, City Development, City Planning, Building, Parks and Gardens and Strategy and Research units. A number of external stakeholders (Waipa District Council, Environment Waikato and Waikato-Tainui) were also invited to present and participate at some workshops based on their knowledge/interest in topics being discussed.

The staff workshops provided a list of approximately 150 responses of what HCC currently is doing and what HCC could be doing to address the Sub Regional Strategic Issues. This list of actions is the foundation of HCC's Three Waters Management Plan and provides the input into the evaluation methodology to produce HCC specific Action Plans. A Discussion Paper (Hamilton City Council, February 2011) documents the workshop process and outputs.

4.1.2 STEP 1: ACTION ALIGNMENT

The first step of the evaluation process is the Action Alignment. This step was undertaken in order to rationalise the staff workshop output into a format appropriate for ranking and prioritising. The current and future actions from the staff workshops were combined into one list to enable the ranking of actions to encompass a full picture of what Three Waters activities HCC *should* be prioritising. Duplicate actions were eliminated and common themes emerged.

The edited list of current and future actions were structured into 38 Grouped Actions that covers the range of Three Waters activities HCC undertakes, e.g. LTP reviews, District Plan development and resource consent compliance.

HCC classified the 38 Grouped Actions into nine methods for implementation to provide further structure to the Grouped Actions. The nine methods for implementation cover the range of Three Waters management work HCC undertake and include:

Research & Analysis, Strategies, Policy, Education & Advocacy, Designs, Bylaws, Resource Consents and compliance with conditions of consent, Management and Plans

Table 2 shows the alignment of the 38 Grouped Actions under the 9 methods for implementation.

Table 2: HCC Actions Alignment Output

Research and Analysis	Strategies	Policy	Plans	Resource Consenting	Management	Designs	Bylaws	Education and Advocacy
Demographic analysis and forecasting	Engagement with Waikato River initiatives	Engagement in Regional Three Waters Policy processes	The District Plan and Development Manual	Appropriateness of existing resource consents and compliance with consent conditions	The efficiency and effectiveness of HCC staff, team structures and management	Modelling and mapping work	The effectiveness of bylaws	HCC education programmes
Investigating new technologies and new ways of doing things	Ensure alignment with the Sub Regional Three Waters Strategy	Giving effect to the Waikato River Settlement Act	Stormwater Catchment Management Strategy and Plans		HCC engagement with iwi	Provision of new and review of capacity of infrastructure		HCC engagement with central government and other stakeholders
Review and consider factors relevant to decision making processes	Implement action plans developed from HCC's stormwater strategy	Engaging with iwi other than the Waikato River Settlement Act	Three Waters related management plans		Trade waste process	Technology options for improving efficiency and reducing adverse effects		Set up of Water Advisory Group to monitor and advise on water conservation measures
Individual topic analysis/reviews	Align with HCC's Environmental Strategy	Current and potential engineering solutions	Improved integration of plans		Valuing water			Smart Water campaign
	Implementation of Future Proof	Suitability of Levels of Service	LTP reviews		Southern water agreement			Build Hamilton Eco-advisor
		Other potential Council policy options						Project Watershed
		Ensuring consistency with statutory requirements						
		Further integration of the national environment into Council policy						

4.1.3 STEP 2: ACTION & ISSUES RANKING

The second step in the Three Waters evaluation process is the prioritisation of the 38 Grouped Actions to identify where HCC should focus its efforts to address the Sub Regional Strategic Issues.

Multi-criteria Analysis tool

A multi-criteria analysis (MCA) tool provided a way to assist HCC prioritise the 38 Grouped Actions. The tool supports ranking a series of actions against a set of weighted assessment criteria to produce a prioritised set of results. Measuring and assessing on an absolute basis is not the point of an MCA. The aim of its use as a tool is to compare options against issues, which are both tangible and intangible factors, and use group participation to filter whether the group likes an option or doesn't like an option. An MCA ranks the actions against a predetermined set of assessment criteria.

MCA Action and Issue Ranking

The 38 Grouped Actions were taken through the MCA Action Ranking exercise. The nine strategic issues from the Sub Regional Strategy were utilised as assessment criteria for the MCA. For example, the Sub Regional Strategic Issue *Ensuring protection and, where possible, enhancement of the natural environment* became the MCA Assessment Criteria *The protection and enhancement of the natural environment*. The MCA tool was set-up for HCC to rate the 38 Grouped Actions against the Assessment Criteria by asking how important the Grouped Action could be in achieving the criteria. Scores were set-up to range from 1-5 using the following scale:

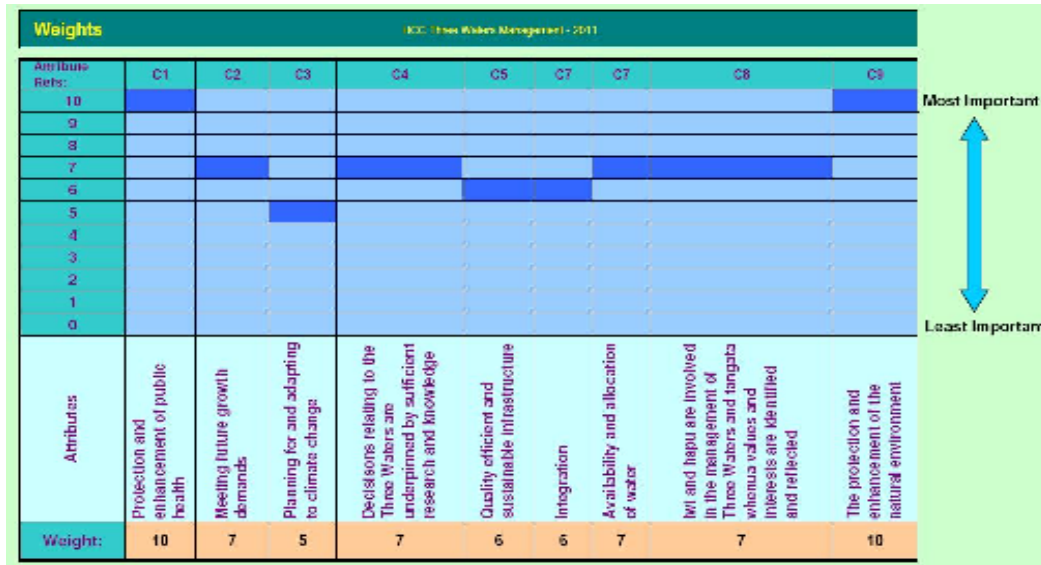
- 1 – No Importance
- 2 – Little Importance
- 3 – Some Importance
- 4 – Important
- 5 – Very Important

The MCA tool allows for the Assessment Criteria to be weighted accounting for varying levels of relative importance to each other. The weighting is assigned on a scale from 1 to 10, with 10 being classified as the most important criteria and 1 being the least important criteria. Relative weightings can match and therefore two criteria can be assigned the same relative weighting. The relative weighting of the nine Assessment Criteria was determined as a group at the workshop after the 38 Grouped Actions were taken through the MCA. The reason the process was undertaken in this order was to minimise bias. The participants were unaware that weighting of the assessment criteria would be undertaken and thus were more likely to take a consistent and honest approach to the MCA process. In addition, the weighting of the strategic issues reflects how HCC priorities the strategic issues at the time the review was undertaken. It is worth noting that:

- 1) The other Partner Councils may prioritise the Strategic Issues (from The Strategy) differently; and
- 2) Over time, HCC's priorities may change.

The results of the relative weighting of the nine Assessment Criteria for the 2011 Three Waters MCA exercise are shown below.

Figure 3: HCC's Relative Weighting of Assessment Criteria (Sub Regional Strategic Issues)



“Protection and enhancement of public health” and “The protection and enhancement of the natural environment” are the two most important criteria according to the group. “Planning for and adapting to climate change” was ranked as the least important criteria, relative to the others, which indicates that at the time the assessment was undertaken it was not as much of a priority to HCC in regards to Three Waters management initiatives as the other eight criteria.

It is envisioned that the relative weighting of the Assessment Criteria will be assessed each time the MCA tool is used to evaluate HCC’s Three Waters priorities. This recognises the importance to periodically review how the Sub Regional Strategic Issues relate to HCC.

MCA Results

HCC’s Three Waters Management Plan MCA workshop included HCC representation from the City Planning, City Waters, City Development, Parks & Gardens and Strategy & Research units. Waikato-Tainui was not present at the Action and Issue Ranking workshop, however representatives have provided input into the assessment criteria weighting. The outcome of the MCA evaluation was a prioritised list of the 38 Grouped Actions based on the weighted Assessment Criteria. The top ten Grouped Actions from the 2011 Actions and Issues Ranking exercise are shown in Table 3 below.

For purposes of HCC focussing efforts for the term of its’ first edition of the Three Waters Management Plan, the top ten ranked Grouped Actions have been taken forward into the next step of the evaluation process and developed into Action Plans. Action Planning is the third step of the HCC Three Waters Management Plan evaluation process. HCC developed ten Action Plans relating to the top ten prioritised Grouped Actions from Step 2.

Table 3: HCC Top Ten Grouped Actions - 2011

Rank	HCC Top Ten Grouped Actions - 2011
1	Ensure alignment with the Sub Regional Three Waters Strategy
2	The District Plan and Development Manual
3	Improved Integration of Plans
4	Three Waters related Plans
5	LTP Reviews
6	Engagement with Waikato River initiatives
7	Appropriateness of existing resource consents and compliance with conditions of consent
8	Engagement in Regional Three Waters Policy processes
9	The efficiency and effectiveness of HCC staff, team structures and management
10	The effectiveness of Bylaws

4.1.4 STEP 3 ACTION PLANNING

Action Plans will map specific measures HCC will undertake over the course of the Three Waters Management Plan's duration and include metrics such as timeframes, funding requirements and responsibility assignments. The relevant current and future actions scoped by HCC staff of what HCC *is, could be and should be* doing to address the Sub Regional Strategic Issues are used to help inform the Action Plans.

HCC's Three Waters Management Plan will be a living document that will evolve over time in response to changes in HCC and sub regional Three Waters priorities and management requirements. HCC's Three Waters Management Plan must be reviewed and updated regularly to ensure it remains useful and is relevant to work undertaken by HCC.

As each of the Partner Councils develop their Three Waters Management Plans and as action plans emerge, consideration will be given to whether there is an overarching Future Proof implementation and monitoring procedure approach or template that Three Waters activities could be integrated into.

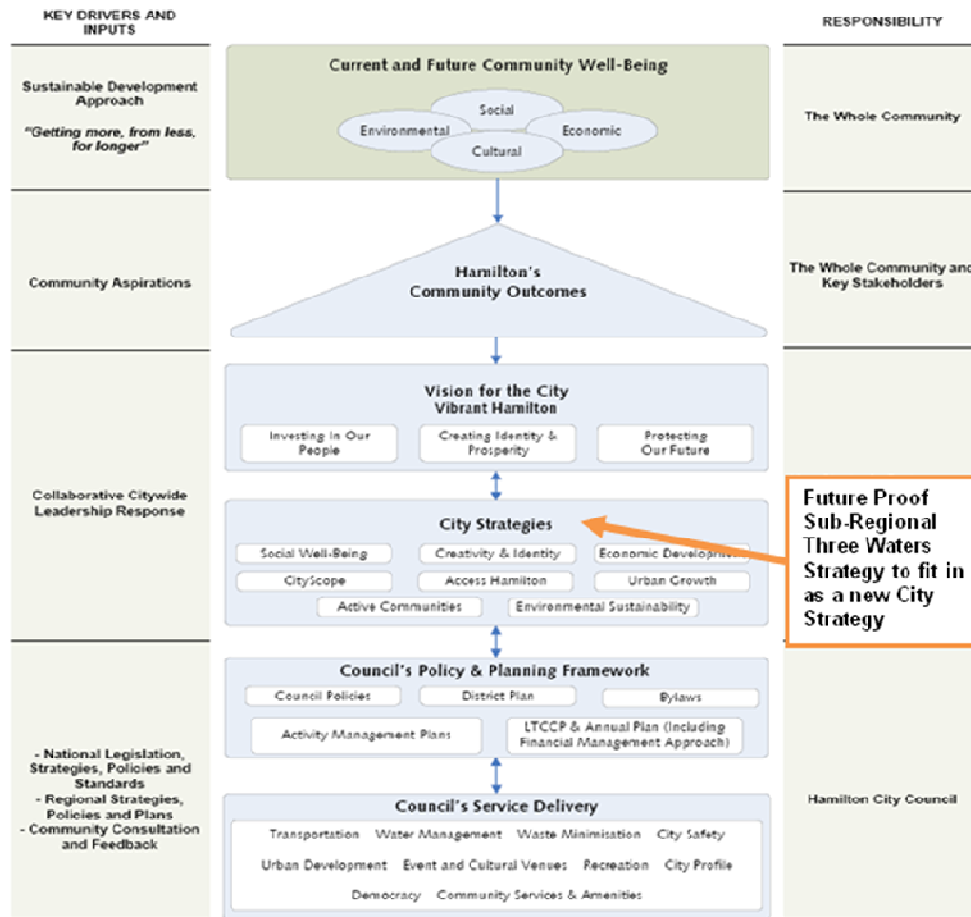
Monitoring of progress of the action plans and measurement against the goals is fundamentally important to ensure not only that the goals and vision are being achieved, but that changing circumstances can be dynamically adapted to. Following the above is therefore proposed that any action plans include a rigorous monitoring regime including the reporting of that monitoring to ensure future direction is confirmed and / or re-defined as may be appropriate.

4.2 IMPLEMENTATION

In addition to the above, HCC is proposing that the Sub Regional Three Waters Strategy joins the eight existing HCC City Strategies under HCC's Strategic Framework, as shown in Figure 4 on the following page and that it be integrated into a review of Future Proof. In this regard, The Strategy provides an evidenced platform for future actions that will implement the delivery of Future Proof policy.

In addition, the Goals of the Sub-Regional Strategy are proposed to be integrated into their Long Term Council Community Plan (LTCCP). When developed, the individual Action Plan workstreams will also be integrated into the LTCCP as relevant.

Figure 4: HCC Strategic Framework and relationship to Sub Regional Three Waters Strategy



5 CONCLUSIONS

Whilst there are many differences, the Three Partner Councils (Hamilton City, Waipa District and Waikato District) recognise the benefits of working together as much as possible in the Three Waters space. This collaborative working addresses the consistent issues associated with the Three Waters and ensures that decisions relating to its management are undertaken with and supported by, a sound evidence base. The Three Waters Strategy provides an evidence base at a sub-regional level and supports decision making at the local level thus influencing how the Partner Councils operate particularly in terms of Long Term Plan, Asset Management Plan and District Plan projects and Policy Frameworks.

In addition, it is anticipated that, as the project continues, the emerging opportunities for efficiencies between the Partner Councils will also be highly beneficial. Such opportunities for efficiencies are now beginning to emerge through the ongoing dialog and identification of possible areas of collaboration.

At the outset of this project, significant thought was given to the drivers behind the need for such a strategy. At the time, it was concluded that the need for a sub-regional strategy to provide an evidence based platform for Three Waters decision making was clear. Since this time, if anything the need for The Strategy has been further cemented by:

- The NPS on Freshwater Management coming into effect;
- The continued work of the Land and Water Forum and recognition of their output;
- The release of the National Infrastructure Plan 2011 – which rates (against its guiding principles) water infrastructure development consistently as “does not occur or is ineffective.” The Infrastructure Plan also consistently aligns with the direction of The Strategy.

The strategic approach provides a high level overview and a shared platform for acknowledging the many common issues across jurisdictional boundaries and establishing firm and agreed actions to address these in an integrated way. With regards to this integration, it is considered that the development of The Strategy involved integration on many levels. Integrated thinking in terms of three waters management, integration of the Partner Councils, and integration of multiple disciplines, particularly that of the engineers and planners.

With particular regards to the integration of disciplines, this is considered to be fundamental to the success of the project. Often those involved in three waters management on an operational basis have little time to think strategically, they are often, and understandably so, too busy with functional concerns to have the time for high level thinking. Whereas strategic planners, who are often the people responsible for the development of strategies are usually too far removed from the day to day issues and technical aspects faced by the engineers and operational experts. It is considered that understanding the abilities and values of the respective disciplines and being able to utilise these skills accordingly is a fundamental requirement to the success of the project.

REFERENCES

Hamilton City Council, Waipa District Council, Waikato District Council. (June 2009). Future Proof.

Hamilton City Council, Waipa District Council, Waikato District Council. (June 2009). Three Waters Working Group Terms of Reference

Hamilton City Council, Waipa District Council, Waikato District Council. (March 2011). Future Proof: Sub Regional Three Waters Management Strategy.

Hamilton City Council. (February 2011). Three Waters Management Plan Discussion Document – Strategic Issues Workshop.

Environment Waikato. (2008). The Health of the Waikato River and Catchment Information for the Guardians Establishment Committee.

Hunter PM, (2011). Integrated Land Use and Water Planning – the Role of the District Plan. Report for Hamilton City Council, MWH NZ Ltd.

Land and Water Forum, (2010). Report of the Land and Water Forum: A Fresh Start for Fresh Water

Ministry for the Environment, (2011). Freshwater Management National Policy Statement Section 32 Evaluation.

Ministry for the Environment, (2011). National Policy Statement for Freshwater Management.

New Zealand Government, Resource Management Act 1991