Section 32 Report – Part 2

Water Supply, Stormwater and Wastewater

prepared for the

Proposed Waikato District Plan

July 2018

Waikato
DISTRICT COUNCIL
Te Kaunihera aa Takiwaa o Waikato

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1 OVERVIEW AND PURPOSE

This Section 32 evaluation report addresses the Waikato Proposed District Plan (PDP) management of water supply, stormwater and wastewater (also known as the three waters).

This evaluation report pertains only to the three waters, all other aspects of infrastructure are evaluated in the Section 32 evaluation reports for:

1. Infrastructure;
2. National Grid;
3. Transport; and
4. Renewable electricity generation.

This evaluation report should be read in conjunction with Part 1 Section 32 Report – Introduction to the Evaluation Report, which provides the context and approach for the PDP as a whole.

1.1 Topic Description

The three waters network comprises water supply, stormwater and wastewater and Waikato District Council is largely responsible for the provision and management of this infrastructure. The provision of safe drinking water, the transport and treatment of wastewater and protection of people and property from stormwater are essential services and enable people and communities to provide for their social, economic and cultural well-being and for their health and safety.

Although Council's physical structures for water supply, wastewater and stormwater are included in the definition of "regionally significant infrastructure" in the Waikato Regional Policy Statement (RPS), the benefit of the network is not so much in the pipes and treatment plants themselves, but in the activity they enable. At its simplest level, the wastewater network enables the wastewater to be taken away from communities and treated, thus ensuring people's health. The stormwater network drains water and thus protects people's health and homes. The water supply network is essential for life by providing clean drinking water. Without the conveyance of the three waters, Council's infrastructure is merely pipes in the ground.

There are exceptions where wastewater treatment plants and stormwater management areas / structures that service more than one site are owned and operated privately. The provisions in the PDP do not distinguish between ownership of the infrastructure.

There is a split between responsibilities and ownership of the three waters network between private landowners and the Council. The connections from buildings are private up until the point they connect with the reticulated network.

Rural areas are different and mostly do not have any Council-provided servicing for the three waters. Water supply can be through bore, water takes from streams or roof collection. Wastewater is managed usually through septic tanks, biocycle or composting toilets. Stormwater is managed on-site.

Stormwater management is a key component of the roading network and is usually managed through swales in the more rural areas and kerb and channel in urban areas.

There is also a split in responsibilities for this issue. While the Waikato District Council may own and manage the network of wastewater pipes and the wastewater treatment plants and be managed by the Waikato District Plan, the Waikato Regional Plan addresses the discharges of treated wastewater and untreated overflow wastewater from the network. Similarly the stormwater pipes are managed by the Waikato District Plan, but the discharge of stormwater from those pipes is managed by the Waikato Regional Plan. The water takes for water supply are managed by the Waikato Regional Plan, but the treatment and distribution pipes for water supply are managed by the District Plan. There are exceptions to this where pipes are located in the beds of lakes and rivers and within the coastal marine area which falls under the jurisdiction of the Regional Plan.

Section 14.11 of the PDP manages the following activities associated with the three waters:

1. Servicing of new developments and subdivision
2. Managing stormwater through impervious surfaces
3. The underground network
4. Above ground pump stations, pipes and other network structures
5. Stormwater management
6. Wastewater treatment plants
7. Reservoirs

Section 14.2 and 14.3 of the PDP is relevant in terms of establishing standards for the design and operation of infrastructure and enabling maintenance, development and upgrading. While these rules are not specific to the three waters network, they apply.

1.2 Significance of this Topic

This is a significant topic that is relevant to all of the District to varying degrees. It is less relevant in the rural areas because they generally do not have reticulated three waters networks, but all of the urban areas are serviced for three waters. The management of the three waters directly affects people's health and safety and from this perspective it is significant.

This topic is particularly relevant for new development and growth areas to ensure that the three waters infrastructure is integrated with and appropriate for development.

1.3 Resource Management Issues to be Addressed

There are four main issues associated with the three waters:

1. Integration of three waters infrastructure with land uses

Land use activities including subdivision and development need to be appropriately serviced for three waters. Development in urban and rural areas will have different requirements, and different expectations.

There may be servicing constraints within parts of the District which may require development to be delayed until this infrastructure is funded and installed, or alternatively this infrastructure can be funded and constructed by the developer. Development must not progress until there is sufficient and appropriate infrastructure in place.

Most land use and development generate issues in relation to wastewater, stormwater and water supply. The on-site management of these issues will often be necessary in rural areas, as well as in un-serviced or partly serviced villages. Reticulated or on-site utilities are a means to avoid, remedy or mitigate the adverse effects of development. The provision of adequate services or on-site systems such as those for wastewater collection, treatment and disposal, and for stormwater collection and disposal, is a necessary prerequisite to subdivision, use or development of land if adverse effects are to be avoided.

2. Enabling maintenance and upgrades

Parts of the three waters network are very old, and replacement and upgrading is a continual process. In addition, the network can be compromised by trees and natural events such as erosion, meaning the remediation and maintenance is also ongoing.

3. Providing for new infrastructure and managing the effects

New infrastructure is often required, particularly to support new development. This can be of varying scales – some can be underground pipes, while others can be significant structures such as water reservoirs. Depending on the size and location, there can be a variety of effects including adverse effects on landscape values, amenity and cultural. The effects can also be short term such as construction and earthworks, to long term in the case of significant structures in sensitive locations.

4. Development increases impermeability and can create significant increases in stormwater

The very nature of development increases the area of impermeable surfaces and therefore decreases the amount of infiltration into the soil. In the natural environment, this is managed through vegetation and permeability of the soil, with runoff occurring straight into watercourses only when the soil is at capacity or the rainfall exceeds infiltration rates. Lack of management of stormwater can create significant effects, that are not constrained to just a single site. It can cause poor drainage and flooding and adversely affect the health and safety of people and their property.

1.4 Current Objectives, Policies, Rules and Methods

The policy framework for infrastructure in the Waikato Section of the Operative District Plan is contained in three separate sections - the built environment (Chapter 6), energy (Chapter 7) and the land transport network (Chapter 8). These chapters contain the existing issues, objectives and policies for infrastructure.

The key themes of the objectives and policies are:

- Development that is connected or grouped around infrastructure
- Growth occurs in towns and villages
- Recognition that the location and scale of infrastructure can degrade the natural and physical qualities and characteristics of environments
- Adverse effects of use and development are avoided by provision of wastewater and stormwater disposal, supply of water, energy and telecommunications.

The rules relating to infrastructure are contained within the chapters for each zone; however there are additional rules and development standards contained within appendices:

- Appendix A – Traffic
- Appendix B – Engineering Standards

Appendix B contains engineering standards relating to subdivision, use and development of land, covering the following topics:

- Wastewater;
- On-Site Wastewater Disposal;
- Trade Waste;
- Water;
- Stormwater;
- Earthworks;
- Road Standards;
- Other Utilities;
- Structure Plans - Te Kauwhata and Ohinewai Country Living Zones;
- System Development; and
- Construction Monitoring.

The standards are performance based (i.e. "shall meet these objectives") with an emphasis on outcomes and effects, with an advice note referring to the Hamilton Infrastructure Technical Specifications as an acceptable method to achieve compliance with the appendix.

In terms of the Franklin Section of the Operative District Plan, general district-wide rules relating to Network and Other Utilities and Essential Services are contained in Part 15. These apply unless an activity is specifically listed as permitted in the zone activity rules. The key themes in the objectives and policies are;

- Recognition of the importance to the economic and social well-being of the district and the essential nature of infrastructure.
- Provide for their development, operation and maintenance while managing effects.

Underground infrastructure is permitted in Part 15. Above ground structures can also be permitted if they comply with the standards for cross section dimension, otherwise they cascade to a controlled, restricted discretionary or discretionary activity status depending on the size.

1.5 Information and Analysis

A considerable amount of information has informed the development of the infrastructure and energy provisions in the PDP. While many of these are not specific to three waters infrastructure, they nonetheless are relevant.

1.5.1 Waikato District Council discussion documents

As part of the District Plan Review process, Council prepared a discussion document entitled: "Discussion Document - Infrastructure".

This document generally summarises the relevant statutory drivers for the Project, the relevant iwi management plans and the current approaches to infrastructure within the Waikato and Franklin Sections of the Waikato District Plan.

The discussion document identifies gaps between these aforementioned documents and provides (with an appendix) the key Waikato Regional Policy Statement provisions which the Project team will consider.

The discussion document also highlights the relevance of the following statutory documents:

- National Environmental Standards for Telecommunication Facilities;
- National Environmental Standard for Electricity Transmission Activities;
- National Policy Statement for Electricity Transmission; and
- National Policy Statement for Renewable Electricity Generation.

1.5.2 Infrastructure Issues/Desired State document

This document/table, which was dated 29 April 2016, set out the following headings and structure:

Topic Specific Desired State/Outcomes:

- The positive and negative effects of the use and operation of infrastructure are recognised and provided for.
- A district where growth is coordinated and infrastructure is efficiently provided and utilised.
- The road network on the Hamilton Urban fringe is managed to ensure it does not compromise the city's future road network.
- Development such as land use and land use intensification including subdivision is well serviced by utilities to avoid the adverse effects on the environment.
- Regionally significant industry, infrastructure, primary production and research sites can develop and continue to operate through the provision of supporting infrastructure and resources and the careful consideration of adjacent land uses.

- The road network and land use development are designed and managed to ensure the efficient and effective operation of the Land Transport Network.

7.1 ISSUE: Development and Operation of Infrastructure
7.2 ISSUE: Coordinating Growth and Infrastructure
7.3 ISSUE: Urban Expansion
7.4 ISSUE: Managing Growth Pressures
7.5 ISSUE: Scattered Development
7.6 ISSUE: Provision of Utilities
7.7 ISSUE: Significant Industry and Primary Production
7.8 ISSUE: Significant Infrastructure
7.9 ISSUE: Land Transport Network

It is however noted that the desired state/outcomes, numbering and issue topics listed above appear to have been superseded in subsequent documentation prepared by WDC.

1.5.3 Objectives document

This document assesses the current objectives within the Waikato and Franklin sections to determine if new objectives are required. It is noted the infrastructure desired states and issues identified in this document differ from those listed above:

Infrastructure Desired States:

- Infrastructure is designed, developed, maintained, managed and utilised in a way that support a safe, connected, accessible, sustainable, resilient and integrated built environment and enhances community wellbeing and amenity values.
- Development of the built environment is focused in and around settlement nodes in an integrated manner.

ISSUE: Development and Operation of Infrastructure

- The development and operation of infrastructure has the potential to positively or negatively impact on our ability to sustainably manage natural and physical resources and to provide for community wellbeing

ISSUE: Provision of Utilities Avoids Adverse Effects

- Land uses and land use intensification, including subdivision, can have adverse effects on the environment if wastewater and stormwater disposal, water supply, energy supply and telecommunications are not adequately provided for or managed.

ISSUE: Significant Industry, Infrastructure, Primary Production and Research Sites

- Regionally significant industry and infrastructure, primary production and research sites are important for community wellbeing and provide significant social and economic benefits, yet the continued operation and development of these activities can be constrained by the inefficient access to supporting infrastructure, resources and incompatible adjacent land use activities.

ISSUE: Operation of the Land Transport Network

- The integrated, safe, responsive and sustainable operation of the land transport network, particularly the road network, can be adversely affected by inappropriate design and construction, and connection between the network and adjoining land, as well as through the adverse effects of land use activities and subdivision.

ISSUE: Design, Construction, Maintenance and Operation

- Design, construction, maintenance and operation of the land transport network can adversely affect the environment through earthworks and structures, increases in sediment and stormwater run-off, and property and community severance.

ISSUE: Urban Expansion

- New roads on the Hamilton urban fringe may compromise the later future construction of an urban standard and density road network.

1.5.4 Designations discussion document

This document provides background on designations and how they are used under the RMA, details on time limits (lapse periods) for designations under the RMA, and outlines the link between the designating of land and the land acquisition processes under the Public Works Act.

The document provides the lists of the existing requiring authorities which have designations within both the Waikato and Franklin Sections of the Waikato District Plan. It is noted the names of two requiring authorities will require updating: Waikato Regional Council and KiwiRail Holdings Limited (currently listed as Environment Waikato and The New Zealand Railways Corporation respectively).

The document also outlines the engagement Council have already had with the requiring authorities with regards to whether the existing designations within both the Waikato and Franklin Sections of the Waikato District Plan need to be rolled over. This section of the document notes that requiring authorities from the Franklin Section (Counties Power, Spark NZ Ltd., Chorus NZ Limited, Auckland Council and Watercare Services Limited) will need to be added to the existing list of requiring authorities within Chapter 30 of the Waikato Section as part of the District Plan Review process.

1.5.5 Issues and Options Report

MWH (now Stantec) prepared this report on behalf of Waikato District Council in November 2016. The Issues and Options Report was prepared to inform the future drafting of transport, utility and energy provisions for the PDP and the associated preparation of Section 32 evaluation reports. The purpose was to:

- Provide a comprehensive summary of the baseline situation;
- Help clearly define any key issues;
- Identify and assess the benefits and disadvantages of various options to address key issues;

- Determine whether any new issue statements need to be added; and
- Provide a critical comparison of the options.

This is attached to this report as Appendix 2.

1.6 Consultation Undertaken

Council has been collating feedback from a range of stakeholders to inform the District Plan Review process since 2015. This feedback has been captured within a spreadsheet entitled the District Plan Issues Register and includes a tab for Infrastructure. There were five issues raised with regards to water, stormwater and wastewater. These were:

- Include reference to 3 Waters Strategy
- Look to address water quality within the District Plan
- Encourage rain tanks and low impact design
- Provide for pump stations as a specific activity
- Need stormwater control for rural zoned land in current Franklin area - something like Appendix B

Development of the water supply, stormwater and wastewater provisions were informed by two stakeholder groups:

1. infrastructure providers (which included Transpower NZ Limited) and surveyors; and
2. an internal Council group of planners and engineers.

Two workshops were held with both groups to initially identify issues with the Operative Waikato District Plan, then subsequent workshops to look at the proposed provisions in more detail and provide feedback.

The feedback is summarised below, with a focus on three waters.

Table 1: Summary of infrastructure feedback from the workshops

Date	Group	Subject Matter	Feedback
11 July 2016	Workshop with infrastructure providers and surveyors. McCracken Surveys; Counties Power; Blue Wallace Surveyors; NZ Transport Agency; Watercare Services; Auckland Transport; Waipa Networks; Hamilton City Council; Spark; Vodafone; and BCD Group Ltd.	What is working well with the Operative District Plan, and areas where the structure or rules could be improved.	The participants of the workshop identified the following as being key matters in respect to network utility provisions: • Try not to be overly prescriptive on utility dimensions as there are industry standards; • Early consultation in re-zoning is required, particularly in rural areas; • Support for a stand-alone chapter for transport and utilities; • District Plan needs to anticipate future land uses; • Standardise the utility layouts within road corridors; • Remove the exclusion of lightning rods as part of the height requirements; • The need to futureproof and enable constant changes to best-practice due to technological advances; • Alignment with Hamilton City Council Plan rules, particularly at the boundary.
14 July 2016	Council engineers and planners from consents, compliance and monitoring and policy.	What is working well with the Operative District Plan, and areas where the structure or rules could be improved.	The following were identified by the internal stakeholders in attendance as being key matters in respect to three waters and utility provisions: • Waikato Section should be clear and easy to use; • Support the approach of rules by zone; • The structure of the Waikato Section is good – tables of activity, what is permitted etc.; • Keep cross-referencing minimal; • Low impact design currently within the Waikato Section is good – extend to whole plan; • Earthworks provisions need to link to the Regional Plan; • Activity statuses need to reflect importance/focus of objectives and policies; and • District Plan outcomes need to be direct and quantitative.
14 July 2017	Council engineers and planners from consents, compliance and monitoring and policy	Review of the draft Infrastructure and Energy provisions.	• Cross over of the management of stormwater with the regional plan • Green infrastructure • Encouraging low impact design and the relationship with catchment management plans • The definitions of infrastructure versus regionally significant infrastructure • Temporary infrastructure

			• Wastewater treatment ponds and whether this is municipal or rural • Impervious surfaces • Management of new roads and getting those into the Plan • Consider the use of rain tanks as rainwater collection tanks • Wastewater treatment ponds provisions are unclear about whether they relate to farm effluent or municipal council facilities. • The plan structure needs to allow for cross referencing with zone chapters. • Should the plan be written for the public or practitioners? • Impervious surfaces rule needs clarity about where it applies and what is considered to be impervious. • There is an increasing problem with run-off due to the coverage of sites with buildings and concrete.
21 July 2017	Workshop with infrastructure providers and surveyors. Madsen Lawrie Birch Surveyors McCracken Surveys; Counties Power; Blue Wallace Surveyors; NZ Transport Agency; Watercare Services; Auckland Transport; Waipa Networks; Hamilton City Council; Spark; Vodafone; Ultrafast Broadband BCD Group Limited.	Review of the draft Infrastructure and Energy provisions.	• Ensure consideration of scheduled areas, trees, heritage items, Maaori sites of significance. • Compulsory or mandatory kerb and channel in all residential subdivisions. • Details left for ITS? • Flexibility for on-site stormwater management for multiple lots in greenfield development. • Unintended problem with a definition – want to make sure that roads are not captured by the general infrastructure performance standard limiting above ground area performance standards need to be clear that roads are excluded from these (given the limits on above ground area). • No need for rain tank provisions specific to Te Kauwhata structure plan area • Impervious surface area requirements within Te Kauwhata structure plan area are not realistic. • Concern that vehicle access and manoeuvring areas, irrespective of type, will be considered impervious surface. • Support the single chapter. • Support alignment with neighbouring DPs. • Need row heading on the top of each page of the table.

			• Support identification of whole network, i.e. Regionally Significant Infrastructure + others. • Tables work well. • Like temporary infrastructure provisions, but questioned what happens if it is longer than 12 months. • Earthworks limits not workable for trenching, digging holes, near waterways. • Why have minimum lot size for network utility subdivisions • replacement is ok. • Subdivision and easements – clearance under s224. • Drilling included in trenching? • Would prefer permitted drilling and trenching for network utilities • Watch narrowing of road width and decent grass berm (not under footpath) and sufficient separation between electricity and gas etc. • Roadside equipment look at HCC. • Trees in road reserves need root guards as they are problematic for N/U. • Concern with layers e.g. Archaeological Alert Layers going into road reserves. • Need to specify which chapters will still apply for N/U, e.g. historic heritage, natural environment etc. • 12 – 15x more expensive for underground.

The draft PDP was made available for public comment in November 2017. The below table summarises the feedback that was received on the topic of three waters.

Table 2: Summary of feedback on the draft Proposed District Plan

Provision / Issue	Feedback
Management of stormwater	Request for stormwater detention to be addressed - water tanks/permeable surfaces/detention areas. DP needs to encourage low impact stormwater design and water conservation measures Concerned with impact from catchments that feed into HCC area. Stormwater management should be addressed prior to development. Supports inclusion of stormwater CMPs and structure plan processes.
Three waters structures	Missing activity status for aboveground pipes and onsite stormwater on two or more sites.

	Note the AUP provides for above ground structures of up to 20m^2 in area, whereas draft Rule 1(1) only provides for up to 4m^2 as a permitted activity. Suggest increasing this area to reduce consenting requirements for construction of relatively minor structures
Definitions	This definitions includes "water infrastructure'. Unclear whether this includes flood and drainage schemes.

1.7 Iwi Authority Consultation and Advice

1.7.1 Consultation

Clause 3 of Schedule 1 of the RMA sets out the requirements for local authorities to consult with tangata whenua through and iwi authorities. Clause 3 also requires Local Authorities to consult with any person, group or ministry that may be affected by changes made to the District Plan.

Council used the following methods to create an Iwi Reference Group.

- Joint Management Agreement
- Tai Tumu Tai Pari Tai Ao (Waikato Tainui Environmental Plan)
- Partnerships
- Collaboration

The purpose of the Iwi Reference Group was to provide Council with a single forum to socialise the proposed changes to the Operative District Plan.

The Iwi Reference group was made up of all iwi and hapuu within the district that council currently consults with via the Resource Consent Process.

Engagement and consultation with the Iwi Reference group took place between December 2014 and December 2017. (See Part 1 Section 32 Report – Introduction to the Evaluation Report)

1.7.2 Advice

Under Clause 4A of Schedule 1 of the RMA sets out the requirements for local authorities to consult with iwi authorities before notifying a proposed plan. Clause 4A(1)(b) requires Council to have particular regard to any advice received on a draft proposed policy statement or plan from those iwi authorities.

Council with discussions with the relevant Iwi and Hapuu and through Te Kahui Mangai website:

Council undertook consultation with:

Iwi authorities within Waikato District:

- Waikato Tainui
- Ngaati Tamaoho

Iwi for the purpose of RMA list on Te Kahui Mangai

- Tainui o Tainui

Iwi that have relationship from other districts

- Hauraki
- Ngaati Maniapoto
- Ngaati Paoa - Hauraki

The above Iwi groups were consulted with and a summary of their comments issues and Council's consideration are listed in Part 1 Section 32 Report – Introduction to the Evaluation Report.

The following amendments have been made in response to iwi advice with regards to three waters (additions are underlined):

1.4.4 The Urban Environment

(a) Costs and inefficiencies can increase significantly, where development patterns are dispersed. For example, unplanned development, which increases vehicle traffic, may reduce roading efficiency and road safety, compromise rail operations and result in unplanned roading upgrades. Costs can be minimised, and better performance of infrastructure and services achieved, where infrastructure provision is timely in relation to demand, and optimally-sized and located. This may mean that it is necessary to stage infrastructure provision relative to growth in demand as well as ensuring that the natural environment is maintained and enhanced through Low Impact Design infrastructure.

1.5.7.3 Water

E) Water for industry located outside municipal supply areas is sourced from a combination of surface water (mostly the Waikato River catchment) and groundwater. Recently, new allocation limits and minimum flows have been set for surface water resources across the whole Waikato region (as a result of a change to the Waikato Regional Plan). Greater scrutiny of, and restrictions on, groundwater takes have also been introduced. While the availability of surface water will depend on the point of abstraction, the level of allocation at the bottom of the Waikato catchment is the overriding constraint on water availability. The majority of Waikato district is within the Waikato catchment. As at the beginning of 2015, 87% of the flow that was able to be allocated at the river mouth was already allocated for the summer months. Although more water is available in winter, demand for water is either year round for industrial processing and municipal supply, or for the summer season for irrigation. Therefore, unless winter water can be stored, the use of water tanks should be encouraged as the available winter water is practically unavailable for economic use.

6.4.7 Policies – Stormwater

(a) Ensure that stormwater and drainage infrastructure for subdivision, land use and development:

(i) Adopts, where appropriate, a best-practice low impact design approach to the management of stormwater;

(ii) Manages stormwater in accordance with a drainage hierarchy, with a preference for on-site treatment;

(iii) Minimises impervious surfaces to reduce stormwater run-off;

(iv) Retains pre-development hydrological conditions as far as practicable;

(v) Does not increase the flow of stormwater runoff onto adjoining properties or flood plains, or reduce storage capacity on-site;
(vi) Provides a stormwater catchment management plan for future urban development; and
(vii) Promotes clean water reuse and groundwater recharge where practicable.

1.8 Decision-making

The issue of three waters was not taken to a formal Council meeting, but it was workshopped with the Councillors as park of the package of Infrastructure and Energy provisions. A summary of the matters addressed at the workshops is set out below.

Table 3 Summary of decision-making processes

Meeting / Feedback	Document	Decision/direction
23 August 2016 Presentation to Councillors	• The Infrastructure chapter will include what was previously the utilities and land transport network provisions; • The Infrastructure provisions are required to address a number of higher order planning documents; • New provisions relating to 'Essential Infrastructure' are proposed as well as amendments to the existing infrastructure objectives; • The Significant Industry, Infrastructure, Primary Production and Research Sites issue requires further refining; • A new issue and objective relating to Reverse Sensitivity of Land Use with Regionally Significant Infrastructure is proposed; • The existing Urban Expansion issue and objective within the Waikato Section is no longer required specifically for the Infrastructure chapter; and • The existing objectives contained within in Appendix B of the Waikato Section are either covered by the other objectives or they can be developed as policies.	Support for the stand alone Infrastructure chapter An understanding of the directives of the RPS and other relevant issues.
7 August 2017 Presentation to Councillors	• Update on progress • Feedback from the stakeholder workshops • Findings from the Issues and Options Report • Principles to guide development of the chapter • Statutory considerations including the RPS, NPS, NES, NZCPS • Broad approach of objectives • The draft issues, objectives and policies • Draft definitions	Principles that guide development of the chapter Statutory considerations including the RPS, NPS, NES, NZCPS Draft objectives and policies
15 August 2017 Presentation to the Councillors	• Structure of the rules • Organisation of chapter by the type of infrastructure • Approach to the chapter • General themes	Draft rules

	• Rules associated with general infrastructure • Rules associated with National Grid • Electricity distribution • Electricity generation • Small-scale renewable electricity • Wastewater, water supply and stormwater • Infrastructure standards • Development standards • Telecommunications • Transportation • Parking and access • Liquid fuels and gas • Meteorological • Matters that were still being worked on	

1.9 Reference to Other Relevant Evaluations

This Section 32 topic report should be read in conjunction with the Section 32 evaluations for:

- Infrastructure;
- Historic heritage;
- Landscapes and natural character;
- Biodiversity; and
- Tangata whenua
- Strategic direction and management of growth

2 ISSUES, OBJECTIVES, POLICIES AND RULES

2.1 Higher Level Planning Documents and Legislation

Under section 75(3) of the RMA, a district plan must give effect to the following:
(a) any national policy statement; and
(b) any New Zealand coastal policy statement; and
(c) any regional policy statement.

In respect to three waters provisions, these statutory documents are discussed in terms of their relevance to the Project.

2.1.1 New Zealand Coastal Policy Statement

The purpose of the New Zealand Coastal Policy Statement (NZCPS) is to state objectives and policies in order to achieve the purpose of the RMA in relation to the coastal environment of New Zealand. The NZCPS 2010 took effect on 3 December 2010.

The NZCPS has relevance to the water supply, stormwater and wastewater; recognising the provision of infrastructure and energy generation within the coastal environment is important to the social, economic and cultural well-being of people and communities, and addressing issues such as the risk to existing infrastructure from coastal erosion and coastal hazards, coastal water quality, discharge of contaminants and sedimentation.

The identification of the extent of the coastal environment (as required by Policy 1 of the NZCPS) will be critical for application of the NZCPS. Indeed, Objective 1(2)(i) recognises that the coastal environment contains physical resources and built facilities, including infrastructure, that have modified the coastal environment.

The King Salmon Supreme Court decision has had wide ranging consequences and has changed the way policies are interpreted. This decision has set a precedent that applying an overall judgment of is not appropriate when giving effect to provisions in higher order planning documents and prescriptive policies are likely to be awarded more weight than flexible ones (e.g. highly directive verbs such as avoid, protect etc). The decision has indicated that the use of the word "avoid" adverse effects is an absolute for the matters listed. This is of particular relevance to policies which require adverse effects to be *avoided* (Policies 5, 11, 13 and 15). What this means is that infrastructure activities in the following areas in the coastal environment will need to be managed differently from the rest of the district:

- land or waters in the coastal environment held or managed under the Conservation Act 1987 and any Act listed in the 1st Schedule to that Act; or other Acts for conservation or protection purposes (Policy 5)
- areas of outstanding natural character (Policy 13(1)(a))
- outstanding natural features and outstanding natural landscapes in the coastal environment (Policy 15(a))

In order to protect indigenous biological diversity in the coastal environment, Policy 11 requires activities avoid adverse effects on:

> *(i) indigenous taxa* that are listed as threatened** or at risk in the New Zealand Threat Classification System lists;*
> *(ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;*
> *(iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare***;*
> *(iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;*
> *(v) areas containing nationally significant examples of indigenous community types; and*
> *(vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and*

(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:

(i) areas of predominantly indigenous vegetation in the coastal environment;
(ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;
(iii) indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;
(iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;
(v) habitats, including areas and routes, important to migratory species; and
(vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy.

All of the NZCPS policies referring to activities or use and development are relevant to infrastructure. However there are a number which are specific to infrastructure including:

- Policy 6(1)(a) and (b) – which recognises the provision of infrastructure, including the generation and transmission of energy, are important activities; and considers the rate at which infrastructure should be enabled to provide for the reasonably foreseeable needs of population growth without compromising the other values of the coastal environment;
- Policy 25(d) – where practicable, encourage the location of infrastructure away from areas potentially affected by coastal hazards over at least the next 100 years.

2.1.2 National Policy Statement for Freshwater Management 2014 (amended 2017)

The purpose of the National Policy Statement for Freshwater Management (NPSFM) is to state objectives and policies in order to achieve the purpose of the RMA in relation to freshwater management in New Zealand. The amended NPSFM 2017 took effect on 7 September 2017.

The NPSFM has relevance to the water supply, stormwater and wastewater in relation to water quality, water quantity and involvement of tangata whenua in the management of freshwater. The objectives and policies primarily direct provisions in regional policy statements and regional plans which need to be given effect to in the District Plan. The most relevant provisions for the district plan are included below:

- *Objective A1 To safeguard: a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and b) the health of people and communities, as affected by contact with fresh water; in sustainably managing the use and development of land, and of discharges of contaminants.*
- *Objective A2 The overall quality of fresh water within a freshwater management unit is maintained or improved while: a) protecting the significant values of*

outstanding freshwater bodies; b) protecting the significant values of wetlands; and c) improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.

- *Objective A3 The quality of fresh water within a freshwater management unit is improved so it is suitable for primary contact more often, unless:*

  a) regional targets established under Policy A6(b) have been achieved; or b) naturally occurring processes mean further improvement is not possible.

- *Objective A4 To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits.*
- *Objective B1 To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water.*
- *Objective B2 To avoid any further over-allocation of fresh water and phase out existing over-allocation.*
- *Objective B3 To improve and maximise the efficient allocation and efficient use of water.*
- *Objective B4 To protect significant values of wetlands and of outstanding freshwater bodies.*
- *Objective B5 To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing fresh water quantity, within limits.*
- *Objective C1 To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment.*
- *Policy D1 Local authorities shall take reasonable steps to: a) involve iwi and hapū in the management of fresh water and freshwater ecosystems in the region; b) work with iwi and hapū to identify tangata whenua values and interests in fresh water and freshwater ecosystems in the region; and c) reflect tangata whenua values and interests in the management of, and decision-making regarding, fresh water and freshwater ecosystems in the region.*

2.1.3 National Policy Statement for Urban Development Capacity

The National Policy Statement for Urban Development Capacity (NPS-UDC) NPS-UDC recognises the national significance of well-functioning urban environments, with particular focus on ensuring that local authorities:

- enable urban environments to grow and change in response to the changing needs of the communities, and future generations; and
- provide enough space for their populations to happily live and work. This can be both through allowing development to go "up" by intensifying existing urban areas, and "out" by releasing land in greenfield areas.

This national policy statement covers development capacity for both housing and business, to recognise that mobility and connectivity between both are important to

achieving well-functioning urban environments. Planning should promote accessibility and connectivity between housing and businesses. It is up to local authorities to make decisions about what sort of urban form to pursue.

This national policy statement recognises that the benefits of the statement are greatest in urban areas experiencing the highest levels of growth. It takes a tiered approach to the application of policies using the Statistics New Zealand urban areas classification, and population projections to target different policies to different local authorities. This classification also informs local authorities that they must work together. The boundaries of the urban areas do not restrict the area in which the local authorities apply the policies.

Local authorities that have a high-growth urban area within their jurisdiction are expected to meet all of the requirements of policies in this national policy statement, while local authorities with medium-growth urban areas in their jurisdiction, and all other local authorities, have lesser requirements, as per the table below.

Waikato District Council is identified as a high growth Council in relation to the NPS-UDC. There is strong objective and policy support in the NPS-UDC for land use and infrastructure to be co-ordinated, and for growth to be serviced by appropriate infrastructure.

The most relevant provisions in relation to water, stormwater and wastewater provisions are:
OD1: Urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other.

PA1: Local authorities shall ensure that at any one time there is sufficient housing and business land development capacity according to the table below:

Short term	*Development capacity must be feasible, zoned and serviced with development infrastructure*
Medium term	*Development capacity must be feasible, zoned and either:* • *serviced with development infrastructure, or* • *the funding for the development infrastructure required to service that development capacity must be identified in a Long Term Plan required under the Local Government Act 2002.*
Long-term	*Development capacity must be feasible, identified in relevant plans and strategies, and the development infrastructure required to service it must be identified in the relevant Infrastructure Strategy required under the Local Government Act 2002.*

PA2: Local authorities shall satisfy themselves that other infrastructure required to support urban development are likely to be available.

PA3: When making planning decisions that affect the way and the rate at which development capacity is provided, decision-makers shall provide for the social, economic, cultural and environmental wellbeing of people and communities and future generations, whilst having particular regard to:

b) Promoting the efficient use of urban land and development infrastructure and other infrastructure;

PD4: Local authorities shall work with providers of development infrastructure, and other infrastructure, in preparing a future development strategy under policy PC12.

2.1.4 Waikato Regional Policy Statement

The Operative Waikato Regional Policy Statement (RPS) provides an overview of the resource management issues in the Waikato region, and the ways in which integrated management of the region's natural and physical resources will be achieved.

The provisions of the RPS which are considered to be applicable are outlined below.

The RPS highlights providing for effects of climate change, managing the built environment and the health and wellbeing of the Waikato River, as key issues for the Waikato Region.

A large number of the issues, objectives and policies of the RPS are relevant to the management of infrastructure to some degree, but the most relevant are discussed below. The definition of "regionally significant infrastructure" includes municipal wastewater treatment plants, water supply treatment plants and bulk water supply, wastewater conveyance and storage systems, municipal supply dams (including Mangatangi and Mangatawhiri water supply dams) and ancillary infrastructure.

Provision	Relevance / main message
Objective 3.1	Natural resources are managed to protect natural processes, acknowledge complex interactions between natural resources and the built environment and meet the needs of current and future generations.
Objective 3.2	The sustainable use of resources includes maintaining and where appropriate enhancing the availability of water for municipal and domestic supply to people and communities.
Objective 3.4	The health and wellbeing of the Waikato River is restored and Te Ture Whaimana o Te Awa o Waikato (the Vision and Strategy for the Waikato River) is achieved.
Objective 3.6	Land use is managed to avoid the potential adverse effects of climate change induced weather variability and sea level rise on the built environment including infrastructure and public health and safety.
Objective 3.12	Development of the built environment occurs in an integrated, sustainable and planned manner which enables positive environmental, social, cultural and economic outcomes including d) integrating land use and water planning, including to ensure that sufficient water is available to support future planned growth; e) recognising and protecting the value and long-term benefits of regionally significant infrastructure;

Objective 3.14	Maintain or enhance the mauri and identified values of fresh water bodies including by: a) maintaining or enhancing the overall quality of freshwater within the region; b) safeguarding ecosystem processes and indigenous species habitats; c) safeguarding the outstanding values of identified outstanding freshwater bodies and the significant values of wetlands; d) safeguarding and improving the life supporting capacity of freshwater bodies where they have been degraded as a result of human activities, with demonstrable progress made by 2030; e) establishing objectives, limits and targets, for freshwater bodies that will determine how they will be managed; f) enabling people to provide for their social, economic and cultural wellbeing and for their health and safety; g) recognising that there will be variable management responses required for different catchments of the region; and recognising the interrelationship between land use, water quality and water quantity.
Objective 3.15	The allocation and use of fresh water is managed to achieve freshwater objectives (derived from identified values) by: a) avoiding any new over-allocation of ground and surface waters; b) seeking to phase out any existing over-allocation of ground and surface water bodies by 31 December 2030; c) increasing efficiency in the allocation and use of water; and d) recognising the social, economic and cultural benefits of water takes and uses
Policy 6.1	Subdivision, use and development of the built environment, including transport, occurs in a planned and co-ordinated manner which: a) has regard to the principles in section 6A; b) recognises and addresses potential cumulative effects of subdivision, use and development; c) is based on sufficient information to allow assessment of the potential long-term effects of subdivision, use and development; and d) has regard to the existing built environment.
Policy 6.3	Management of the built environment ensures: a) the nature, timing and sequencing of new development is co-ordinated with the development, funding, implementation and operation of transport and other infrastructure, in order to: i) optimise the efficient and affordable provision of both the development and the infrastructure; ii) maintain or enhance the operational effectiveness, viability and safety of existing and planned infrastructure; iii) protect investment in existing infrastructure; and iv) ensure new development does not occur until provision for appropriate infrastructure necessary to service the development is in place; c) the efficient and effective functioning of infrastructure, including transport corridors, is maintained, and the ability to maintain and

	upgrade that infrastructure is retained; and d) a co-ordinated and integrated approach across regional and district boundaries and between agencies; and e) that where new infrastructure is provided by the private sector, it does not compromise the function of existing, or the planned provision of, infrastructure provided by central, regional and local government agencies.
Policy 6.6	Management of the built environment ensures particular regard is given to: a) that the effectiveness and efficiency of existing and planned regionally significant infrastructure is protected; b) the benefits that can be gained from the development and use of regionally significant infrastructure and energy resources, recognising and providing for the particular benefits of renewable electricity generation, electricity transmission, and municipal water supply;…
Policy 6.7	Protect the Mangatawhiri and Mangatangi municipal water supply bodies and associated infrastructure by: a) ensuring that any adverse effects on municipal water supply bodies from land uses and land management activities are avoided, remedied, or mitigated; b) recognising the primary purpose of the Mangatawhiri and Mangatangi municipal water supply bodies is for the supply of water for municipal needs; and c) providing for the ongoing operation, maintenance, upgrading and development of municipal water supply infrastructure so as to provide for the justified and reasonably foreseeable needs of current and future generations.
Policy 7.2	Discharges to marine waters shall be managed to maintain or enhance the mauri and health of marine water and to protect ecosystem, amenity, and tāngata whenua values.
Policy 8.3	Manage the effects of activities to maintain or enhance the identified values of fresh water bodies and coastal water including by: a) reducing: i) sediment in fresh water bodies and coastal water (including bank instability) that is derived from human based activities; ii) accelerated sedimentation of estuaries; iii) microbial and nutrient contamination; iv) other identified contaminants; and b) Where appropriate, protection and enhancement of: i) riparian and wetland habitat; ii) instream habitat diversity; iii) indigenous biodiversity; and c) providing for migratory patterns of indigenous freshwater species up and down rivers and streams and to the coastal marine area

	where practicable; and e) managing: i) groundwater and surface water flow/level regimes, including flow regime variability; ii) linkages between groundwater and surface water;
Policy 8.5	Recognise Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River – as the primary direction-setting document for the Waikato River and develop an integrated, holistic and co-ordinated approach to implementation.
Policy 8.7	Ensure that the allocated water resource is used efficiently.

The main focus of the RPS in relation to three waters is:

- Integration of infrastructure with land use
- Maintaining the quality of waterbodies (this is relevant to the management of stormwater)
- Providing for the ongoing operation and maintenance of water supply
- Recognising the importance of regionally significant infrastructure

2.1.5 Vision and Strategy

As set out in Section 2 of the RPS, the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 (the Settlement Act) gives effect to the Deed of Settlement signed by the Crown and Waikato-Tainui on the 17 December 2009. The Settlement Act has an overarching purpose to restore and protect the health and wellbeing of the Waikato River for future generations. Section 9(2) of the Settlement Act confirms that the vision and strategy for Waikato River (Te Ture Whaimana o Te Awa o Waikato) applies to the Waikato River and activities within its catchment affecting the Waikato River.

The Vision and Strategy expresses concern about the development of water supply, stormwater and wastewater:

Objective – Water quality	19.4.2 Water quality is such that fresh waters within the rohe of Waikato-Tainui are drinkable, swimmable and fishable in all places (with water quality to the level that Kiingi Taawhiao could have expected in his time).
Policy – water quality	19.4.2.1 regulators to set clearer and higher water quality targets, and to develop and incentivise methods to achieve these targets.
Objective – water quantity and allocation	19.4.4 Water allocation is consistent with restoring and protecting the health and wellbeing of water bodies within the rohe of Waikato-tainui.
Policy – water quantity and allocation	those regulating the use of water (including water take, and direct and indirect discharges to water): 19.4.4.1 ensure that any water allocation framework operates under consistent principles, is equitable and efficient and restores and protects the health and wellbeing of Waikato-Tainui water bodies.

Objective – The relationship between Waikato-Tainui and water	19.4.1 Waikato-Tainui engage and participate in the highest level of decision-making on matters that affect waters in the Waikato-Tainui rohe.
Policy - The relationship between Waikato-Tainui and water	19.4.1.1 to ensure that Waikato-Tainui engage and participate in the highest level of decision-making on matters that affect waters in the Waikato-Tainui rohe.
Objective – achieve integrated catchment management, including floodplain and drainage management	21.3.4 Integrated catchment management occurs across the entire rohe of Waikato-Tainui, including in catchments that impact on, or flow into the Waikato-Tainui rohe. Integrated catchment management includes the effective and sustainable management of floodplains and drainage areas to promote natural habitat enhancement.
Policy – integrated catchment management plans and land use	21.3.4.1 to promote the development and use of integrated catchment management plans that adequately considers land use, floodplain and drainage management and that promotes habitat restoration.
Objective – Waikato-Tainui engagement	26.3.1 Infrastructure development, upgrade, and maintenance within the Waikato-Tainui rohe occurs in partnership with Waikato-Tainui.
Policy – Waikato-Tainui engagement	26.3.1.1 To ensure that infrastructure development, upgrade and maintenance within the Waikato-Tainui rohe occurs in partnership with Waikato-Tainui.
Objective – infrastructure development, upgrade, and maintenance	26.3.2 Infrastructure development, upgrade, and maintenance manages economic, social, cultural, spiritual, and environmental effects.
Policy – infrastructure development, upgrade and maintenance	26.3.2.1 To ensure that infrastructure development, upgrade, and maintenance manages economic, social, cultural, spiritual, and environmental effects. Methods (a) Infrastructure development shall avoid land in Maaori ownership except with the agreement of the Maaori owners. (b) New infrastructure development shall take into account the enhancement principles contained in Chapter 7 "Te Whakapakari i Te Taiao - Towards environmental enhancement". As a minimum all existing infrastructure shall be managed to sustain the ability of the environment to provide for future generations. (c) Ensure that, in the development of new infrastructure, best practice approaches and appropriate environmentally sustainable and enhancing technologies are applied to ensure, as far as practicable, any adverse impacts on the environment or cultural and/or spiritual resources are avoided. (d) Infrastructure development and management shall be planned to manage adverse effects on water bodies, stormwater, water supply and wastewater systems. (e) The cumulative effect of infrastructure provision shall be considered as well as the effect of a single piece of infrastructure. (f) When assessing infrastructure needs or making decisions on

	designations or consents regarding infrastructure, the adverse effects should be managed so as to achieve the objectives in this Plan. In particular adverse effects should be avoided on: i. Land held in Maaori title or in the ownership of Waikato-Tainui; ii. Waahi tapu and other sites of significance to Waikato-Tainui; iii. Oceans, rivers, lakes, and wetlands that would hinder achieving the objectives and policies contained in the water management, fisheries and cultural chapters of the Plan; iv. Areas of significant indigenous vegetation or habitats of taonga species; v. Customary activities or fisheries; vi. Natural hazards; and vii. Culturally and/or spiritually significant landscapes and view shafts. (g) In the event that adverse effects cannot be avoided, discussions shall be held with Waikato-Tainui to agree if the effects can be managed. (h) Any local adverse effects of infrastructure that cannot be avoided, remedied, or minimised should be discussed with Waikato-Tainui to discuss whether the effect can be mitigated and compensated near the locality where the adverse effects occur, or elsewhere as agreed with Waikato-Tainui.

2.1.6 Maniapoto Environmental Management Plan

The Maniapoto Environmental Management Plan was prepared by Maniapoto Māori Trust Board on behalf of the people of Maniapoto and is a high level direction setting document and describes issues, objectives, policies and actions to protect, restore and enhance the relationship of Maniapoto with the environment including their economic, social, cultural and spiritual relationships.

The objectives and policies most relevant to three waters are outlined below:

Objective: Recognition of the role of Maniapoto as kaitiaki and rangatira	The status of Maniapoto as rangatira and kaitiaki is recognised within resource management and decision making processes.
Policy	7.3.1.1 Maniapoto representation at the decision-making level recognises their unique status as tāngata whenua on matters that affect Maniapoto
Objective: recognition of the role of Maniapoto as rangatira and kaitiaki of Ngā Wai o Maniapoto	Ngā Wai o Maniapoto is healthy and enhanced to protect the relationship of Maniapoto and water bodies.
Policy	14.3.1.1 To give effect to the rangatira and kaitiaki role of

	Maniapoto in co-governance and co-management frameworks for Ngā Wai o Maniapoto. Actions (a) Ensure plans and policies are updated to give effect to Ngā Wai o Maniapoto Waipā River Act 2012 (b) Ensure Maniapoto have appropriate opportunities to be involved in the review, development and implementation of plans and strategies for freshwater management (c) Design policies and rules on taking, use, damming, diversion and discharge of water in a way that protects the relationship and values of Maniapoto towards fresh water as a matter of national importance (d) Engage and consult Maniapoto prior to the public release or notification of consents, policies, discussion documents, protocols, plans and/or regulations (e) Require joint statements determined by a relevant authority and Maniapoto on freshwater management (with recommendations), to be submitted to the respective decision-making board, council or committee
Policy	14.3.1.2 Ngā wai o Maniapoto continue to provide sustenance to Maniapoto (including physical and spiritual nourishment). Actions (a) Ensure regional councils prioritise the protection and enhancement of vulnerable water bodies and catchments (b) Enhance and protect the quality and integrity of Ngā Wai o Maniapoto and mahinga kai sources (c) Ensure resource users recognise and provide for Maniapoto access to water to facilitate customary activities, land use activities, and for other purposes (d) Ensure secure and reliable access to high quality drinking water for marae (e) Avoid discharges of untreated/treated effluent to Ngā Wai o Maniapoto (f) Identify and reduce sources of contamination that affect water clarity, nutrient levels, levels of dangerous microorganisms or any other contamination that is dangerous to human health to a safe level as defined by the highest national standards and Maniapoto objectives in this Plan. (g) Clean up rubbish in waterways and provide resources to manage and dispose of rubbish and recycling (h) Increase indigenous habitats and species

2.1.7 50 Year Wastewater Strategy

This document was develop in 2014 by Waikato District Council was part of the review of the three waters services to develop a long term strategic plan for infrastructure investment and service provision. It was in response to the need for longer term infrastructure planning and to ensure Council is in a sound position to meet the needs of anticipated growth (or changes in community requirements) across the District over time.

The report provides a high level wastewater strategy foundation document for the

WDC that is framed around understanding the future needs of each community and includes the development of wastewater treatment and disposal infrastructure options to meet the forecast wastewater flows. WDC provides wastewater networks to the community for domestic and industrial use. Council currently has wastewater treatment plants at Huntly, Meremere, Ngaruawahia, Raglan and Te Kauwhata with smaller treatment facilities at Maramarua, Matangi, Tauwhare Pa and Te Kowhai. The larger schemes primarily service the urban areas of the district. The smaller schemes service villages. WDC also owns a wastewater scheme in North Waikato (Pokeno and Tuakau). Sewage from the North Waikato scheme goes to the Pukekohe WWTP owned by Watercare.

In addition to urban and commercial customers, Brinks and the Spring Hill Corrections facility are key customers. Spring Hill Corrections is the only customer which has a current individual service agreement in place. A special agreement has been formed with Yashili which covers water and wastewater servicing for its site in Pokeno. Yashili is Council's largest trade waste customer.

2.2 Issues

The evaluation of objectives and provisions in the following sections relate to the resource management issue stated below:

Issue statement	Integration of three waters infrastructure with land uses
Land use activities including subdivision and development need to be appropriately serviced for three waters. Development in urban and rural areas will have different requirements, and different expectations. There may be servicing constraints within parts of the District which may require development to be delayed until this infrastructure is funded and installed, or alternatively this infrastructure can be funded and constructed by the developer. Development must not progress until there is sufficient and appropriate infrastructure in place. Most land use and development generate issues in relation to wastewater, stormwater and water supply. The on-site management of these issues will often be necessary in rural areas, as well as in unserviced or partly serviced villages. Reticulated or on-site utilities are a means to avoid, remedy or mitigate the adverse effects of development. The provision of adequate services or on-site systems such as those for wastewater collection, treatment and disposal, and for stormwater collection and disposal, is a necessary prerequisite to subdivision, use or development of land if adverse effects are to be avoided.	
Issue statement	Enabling maintenance and upgrades
Parts of the three waters network is very old, and replacement and upgrading is a continual process. In addition, the network can be compromised by trees and other natural events such as erosion meaning the remediation and maintenance is also ongoing.	

Issue statement	Providing for new infrastructure and managing the effects
New infrastructure is often required, particularly to support new development. This can be of varying scales – some can be underground pipes, while others can be significant structures such as water reservoirs. Depending on the size and location, there can be a variety of effects including adverse effects on landscape values, amenity and cultural. The effects can also be short term such as construction and earthworks, to long term in the case of significant structures in sensitive locations.	
Issue statement	Development increases impermeability and can create significant increases in stormwater
The very nature of development increases the area of impermeable surfaces and therefore decreases the amount of infiltration into the soil. In the natural environment, this is managed through vegetation and permeability of the soil, with runoff occurring straight into watercourses only when the soil is at capacity or the rainfall exceeds infiltration rates. Lack of management of stormwater can create significant effects, that are not constrained to just a single site. It can cause drainage issues and flooding and adversely affect the health and safety of people and their property.	

3 EVALUATION OF OBJECTIVES

Below is a summary of the objectives that have been identified as the most appropriate to address this resource management issue and achieve the purpose of the Resource Management Act 1991.

The following objectives are considered to be the most appropriate way to achieve the purpose of the Act. These objectives apply to infrastructure other than the three waters, so there is an assessment of them in the context of other infrastructure in the Section 32 report for Infrastructure.

Table 4 Summary of objectives

Objective	Summary of evaluation
6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district.	Infrastructure consists of the physical structures and networks that support and provide essential services to the communities of the district. The efficient use and management of three waters infrastructure as a physical resource is critical to the District's economic productivity, environmental outcomes and wellbeing of the community. The benefits of three water infrastructure to the functioning of the district are therefore substantial. A connected and reliable three waters network is vital to the functioning of the District. It enables people and communities to provide for their social, economic and cultural wellbeing in accordance with Section 5(2) of the Act. The efficient development, maintenance and operation of

	the physical resources of infrastructure is fundamental to both present and future communities. In this respect the Objective achieves Section 5(2)(a) of the Act. The continuing use of the three waters infrastructure through enabling the operation, maintenance and development enables people and communities to provide for their health and well-being in accordance with Section 5(2) of the Act. At its simplest level, the wastewater network enables the wastewater to be taken away from communities and treated, thus ensuring people's health. The stormwater network takes away flood water and thus protects people's health and homes. The water supply network is essential for life by providing clean drinking water. Having a fully functioning reticulated three waters network safeguards the life-supporting capacity of air, water, soil and ecosystem in accordance with Section 5(2)(b) of the Act. The adverse effects on these resources would be considerably higher if each site managed its own stormwater and wastewater individually. Community systems allow more effective management of stormwater and treatment of wastewater to a far higher level than is possible by a single site. Integrated and effective reticulated management of the three waters enables adverse effects on the environment to be avoided, remedied or mitigated in accordance with Section 5(2)(b) of the Act. This is considered the most appropriate objective to meet the purpose of the Act.
6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision, use and development.	The integration and coordination of land uses with three waters infrastructure will enable people and communities to provide for their social, economic and cultural well-being in accordance with Section 5(2) of the Act. This objective ensures that the network is appropriate (both existing and future) to service the current and future land uses. It also ensures that development is in appropriate and accessible locations to be serviced. Available and appropriate three waters infrastructure enables people and communities to provide for their health and well-being in accordance with Section 5(2) of the Act. The wastewater network enables the wastewater to be taken away from communities and treated, thus ensuring people's health. The stormwater network takes away flood water and thus protects people's health and homes. The water supply network is essential for life by providing clean drinking water. The integration of infrastructure and land uses is addressed explicitly in the RPS. Policy 6.3 requires the nature, timing and sequencing of new development is co-ordinated with

	the development, funding, implementation and operation of transport and other infrastructure. Similarly Policy 6.1 requires subdivision, use and development of the built environment, including transport, to occur in a planned and coordinated manner. Method 6.3.2 is explicit in its requirements for territorial authorities – *Territorial authorities should, in association with Waikato Regional Council, the NZ Transport Agency and other infrastructure providers, ensure infrastructure planning and land use planning initiatives are aligned, and should co-ordinate the provision of appropriate infrastructure and services for new development prior to development occurring.* The importance for integration of land uses and infrastructure is also explicitly recognised as an objective in the NPS-UDC: *OD1: Urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other.* The PDP gives effect to the RPS and NPS-UDC and is considered the most appropriate objective to achieve the Purpose of the Act.
6.1.8 Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.	This objective supports Section 5(2) of the Act which promotes the supports 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 well-being. Three waters infrastructure (and in particular large above-ground structure such as reservoirs and wastewater treatment plants) can detract from the character of an area. The matters of national importance are listed in Section 6 of the Act, and this objective will assist in infrastructure adversely affecting the values of those areas. In addition, Section 7 of the Act identifies matters to be given particular regard to. This includes (c) the maintenance and enhancement of amenity values. This objective will assist in achieving these parts of the Act.
6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.	This objective will assist in achieving 5(2)(b) and 5(2)(c) of the Act. This approach will safeguard the life-supporting capacity of water, soil and ecosystems by ensuring that development can manage stormwater on site and therefore not alter the overall natural drainage processes. This has the effect of enabling adverse effects of stormwater that arise from development to be avoided, remedied or mitigated in accordance with Section 5(2)(b) of the Act. In addition, this objective achieves Section 6(e), 7(a), 7(aa), 7(c), 7(d), 7(f), and 7(g) of the Act.

4 SCALE AND SIGNIFICANCE EVALUATION

The level of detail undertaken for the evaluation of the proposed District Plan provisions has been determined by an assessment of the scale and significance of the implementation of the proposed District Plan provisions. The scale and significance assessment considered the environmental, economic, social and cultural effects of the provisions. In making this assessment regard has been had to the following, namely whether the provisions:

(a) Are of regional or district wide significance;
(b) Have effects on resources that are considered to be a matter of national importance in terms of Section 6 of the Act;
(c) Adversely affect people's health and safety;
(d) Result in a significant change to the character and amenity of local communities;
(e) Adversely affect those with particular interests including Maori;
(f) Limit options for future generations to remedy effects;
(g) Whether the effects have been considered implicitly or explicitly by higher order documents; and
(h) Include regulations or other interventions that will impose significant costs on individuals or communities.

The evaluation has focused on those provisions that will result in a substantial change to the management of the three waters network and are of greater importance to ensure the objective is achieved. The majority of changes proposed to the current provisions involve a framework to more effectively coordinate three waters infrastructure with development and ensure that the infrastructure is appropriate to service the development. The provisions also establish a framework for new three waters structures.

Policies and rules have been evaluated as a package, as together they address a particular issue and seek to meet a specific objective.

The following table contains a summary of the policies and rules considered to be of a scale and significance to justify a more comprehensive evaluation of options.

Table 5 Scale and significance assessment

Issue	Provisions evaluated	Scale and Significance Reasoning
Integration of three waters infrastructure with land uses	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development 6.4.2 Policy – Provide Adequate Infrastructure 6.4.3 Policy – Infrastructure Location and Services 6.1.13 Policy –Future Growth Areas 6.1.16 Policy – Water Conservation 4.1.4 Policy – Staging of development 4.7.5 Policy – Servicing requirements 4.7.6 Policy – Co-ordination between servicing and development and subdivision Rule 14.11.1 Stormwater systems for new development or subdivision (P1) Rule 14.11.1 Wastewater servicing for new development or subdivision (P3) Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1) Consents and assessment criteria for subdivision and multi-unit developments in the urban zones. The extent and location of zoned new development areas / growth	This is a moderately significant matter for the District, although it is spatially limited in its relevance to the urban areas where there is development. It is moderately significant for the following reasons: (a) It is of regional or district wide significance; (b) Has the potential to adversely affect people's health and safety; (c) The effects have been considered implicitly or explicitly by higher order documents. This matter is explicitly addressed in both the RPS and the NPS-UDC; and (d) Include regulations or other interventions that will impose significant costs on individuals or communities. There can be significant costs associated with providing three waters infrastructure and servicing.

Enabling maintenance and upgrades	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure 6.1.2 Policy - Development, Operation and Maintenance 6.1.3Policy - Technological Advances 6.1.4 Policy – Infrastructure Benefits 6.5.6 Policy – Network Utility Location 6.1.9 Policy Environmental Effects, Community Health, Safety and Amenity Rule 14.3.1 The operation, maintenance, repair and removal of existing infrastructure (P1) Rule 14.3.1 Minor upgrading of existing infrastructure (P2) Rule 14.3.1 Earthworks activities associated with infrastructure (P4) Rule 14.3.3 Minor upgrading of existing infrastructure that does not comply with one or more of the conditions of Rule 14.3.1.1 which are relevant to the activity proposed (RD1) Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)	This matter has moderate significance due to the consequence of not enabling maintenance upgrades to the existing three waters network. This issue is most relevant to the urban parts of the District, with only maintenance of stormwater networks in the road corridors being relevant to the rural areas. It is moderately significant for the following reasons: (a) It is of district wide significance; (b) Potential effects on resources that are considered to be a matter of national importance in terms of Section 6 of the Act if maintenance is not undertaken to keep the network functioning; (c) Adversely affect people's health and safety; (d) Adversely affect those with particular interests including Maori; (e) There are significant costs to the community if maintenance and upgrades cannot be undertaken.
Providing for new infrastructure and managing the effects	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure 6.1.8 Objective – Infrastructure in the Community and Identified Areas 6.4.6 Objective – Stormwater and Drainage 6.1.4 Policy – Infrastructure Benefits 6.1.5 Policy –Natural Hazards and Climate Change 6.5.6 Policy – Network Utility Location 6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity	This matter has moderate significance due to the consequence of not enabling new infrastructure associated with three waters. This issue is most relevant to the urban parts of the District. It is moderately significant for the following reasons: (a) It is of district wide significance; (b) Potential effects on resources that are considered to be a matter of national importance in terms of Section 6 of the

	6.1.10 Policy – Infrastructure in Identified Areas 6.1.11 Policy – Undergrounding New Infrastructure 6.1.12 Co-location of Compatible Facilities 6.1.13 Policy –Future Growth Areas 6.1.14 Policy Electromagnetic and Radio Frequency Fields 6.1.16 Policy – Water Conservation 6.4.7 Policies – Stormwater Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4) Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5) Rule 14.11.1 Pump stations for the conveyance of water, wastewater and stormwater (P6) Rule 14.11.1 Stormwater treatment, detention and retention facilities or devices (P7) Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within: • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Reserve Zone (P8) Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9) Rule 14.11.1 Below ground reservoirs (P10) Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3)	Act if appropriate infrastructure is not constructed and installed; (c) Potential to adversely affect people's health and safety; (d) Adversely affect those with particular interests including Maori; (e) There may be significant costs to the community associated with new infrastructure.

	Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4) Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5) Rule 14.11.2 Stormwater ponds or wetlands, that serve more than one site, located within: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Country Living Zone • Road and unformed road • Identified Area (RD6) Rule 14.11.2 Outfall structures located within an Identified Area (RD7) Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8) Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9) Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1) Rule 11.4.3 Wastewater treatment plants located within the following: • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Country Living Zone • Reserve Zone (D2) Rule 14.11.3 Above ground reservoirs not located within an	

	Identified Area (D3) Rule 14.11.4 Water treatment plants located within the following: • Road and unformed road • Identified Area (NC1) Rule 14.11.4 Wastewater treatment plants located within the following: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Road and unformed road • Identified Area (NC2) Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3) Rule 14.3.1 Earthworks activities associated with infrastructure (P4) Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2) Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6) Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas: • That do not comply with one or more of the conditions of Rule 14.3.1.5; or • Are located within identified areas (RD4)	

Development increases impermeability and can create significant increases in stormwater	6.4.6 Objective – Stormwater and Drainage 6.1.16 Policy – Water Conservation 6.4.7 Policies – Stormwater Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision (P2) Rule 14.11.1 Stormwater systems for new development or subdivision (P1) Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1) Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.2 (RD2)	This issue is of moderate significance for the following reasons: (a) It is of district wide significance, but particularly relevant to urban and growth areas; (b) Potential effects on resources that are considered to be a matter of national importance in terms of Section 6 of the Act if stormwater is not appropriately managed; (c) Potential to adversely affect people's health and safety; (d) Adversely affect those with particular interests including Maori; (e) There may be significant costs to the community if stormwater is not appropriate managed.

5 EVALUATION OF PROPOSED POLICIES, RULES AND METHODS

Section 32 (1)(b) requires an evaluation of whether the provisions are the most appropriate way to achieve the objectives by identifying other reasonably practicable options, assessing the efficiency and effectiveness of the provisions in achieving the objectives, and summarising the reasons for deciding on the provisions. The assessment must identify and assess the benefits and costs of environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions, including opportunities for economic growth and employment. The assessment must if practicable quantify the benefits and costs and assess the risk of acting or not acting if there is uncertain or insufficient information available about the subject matter.

5.1 Identification of Reasonably Practicable Options – for Achieving Objective(s)

The following assessment consists of an examination of all reasonably practicable options for achieving the Objective regarding three waters. This high-level screening process considers the effectiveness of each option. Only those options considered to be reasonably practicable will be evaluated in this section.

Table 6 Reasonably Practicable Options for Achieving the Objective

Objective(s)	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 1: Do nothing (remove all policies and associated methods)	This option would mean that the PDP remained silent on the issue and would not recognise that development, operation and maintenance of the three waters network is required.	Highly ineffective.	While this is within Council's powers, this is not an effective way to give effect to RPS Policy 6.6. The three waters network is included in the definition of "regionally significant infrastructure" and the development, operation and maintenance of it must be enabled for the infrastructure to continue serving the community.	This approach would be unacceptable to the community as they have expectations of a certain level of service. The three waters networks ensure the health and safety of the community.	**Discard.** This approach would not enable routine maintenance activities to be carried, nor the existing infrastructure to be upgraded to retain levels of service.

Objective(s)	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 2: Retain existing approach of the Operative District Plan	Both of the Franklin and Waikato Sections of the Operative District Plan allows the operation and maintenance of network utilities as a permitted activity subject to compliance with standards. The Franklin Section has standards specific for network utilities whereas the Waikato section uses the standards applicable for each zone.	This is an effective approach to enabling the operation and maintenance of essential three waters infrastructure.	This is within Council's power and would give effect to the RPS objectives and policies recognising the benefits of regionally significant infrastructure.	This approach would be acceptable to the community, The community has certain expectations for a level of service and this approach would enable Council to maintain, operate and upgrade existing infrastructure without regulatory delay.	**Retain.** Recommend explicitly include development and upgrade of the existing network to avoid ambiguity as to whether the network can be upgraded.

Objective(s)	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 3 – Require consent for development, operation and maintenance activities	This option would require a resource consent for Council to undertake maintenance and upgrade existing infrastructure. The existing structures themselves would be afforded existing use rights under Section 10 of the RMA. Council would realistically have to obtain a global consent as it is not feasible or realistic to obtain a consent works for each portion of the	Highly ineffective.	While this is within Council's powers, this is not an effective way to give effect to RPS Policy 6.6. The three waters network is included in the definition of "regionally significant infrastructure" and the development, operation and maintenance of it must be enabled for the infrastructure to continue serving the community.	This approach would be unacceptable to the community as they have expectations of a certain level of service. The three waters networks ensure the health and safety of the community. This would be a highly ineffective and inefficient approach. The resource consent would achieve nothing more in terms of managing effects that could not be achieved through a permitted	**Discard.**

Objective(s)	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	network.			activity status with standards.	

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 1: Do nothing (remove all policies and associated methods)	This option would involve the district plan not addressing the matter of integration of land use and three waters infrastructure at all.	This approach would be highly ineffective in achieving the objective.	The Council have a requirement under Section 31(1)(a) of the Act to achieve integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the District. This approach would not fulfil this requirement. This approach would not achieve Council's responsibilities under Section	This approach could result in development being approved without the necessary servicing being available or in place. There could be serious health and safety consequences of this approach.	**Discard.** This option would not encourage the integration of land use and three waters infrastructure as required by the RPS and the NPS-UDC.

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
			75(3)(a) and (c) which require district plans to give effect to national policy statements and regional policy statements. This approach would not give effect to the NPS-UDC or the RPS which requires the integration of land use and three waters infrastructure.		
Option 2: Retain existing approach Operative District Plan	The policy framework for infrastructure in the Waikato Section of the Operative District Plan is	Partially effective. This approach is not explicit in its expectation of integrating land use	This approach partially meets Council's requirements under Section 31(1)(a) of the Act to achieve	This approach seems to be working well enough, but it would be more helpful to the processing of consents to be	**Discard.**

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	contained in three separate sections - the built environment (Chapter 6), energy (Chapter 7) and the land transport network (Chapter 8). The key themes of the objectives and policies are: • Development that is connected or grouped around infrastructure •Growth occurs in towns and villages •Adverse effects of use and development	with infrastructure.	integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the District. This approach would only partially achieve Council's responsibilities under Section 75(3)(a) and (c) which require district plans to give effect to national policy statements and regional policy statements. This	explicit about the need for integration of land use and infrastructure.	

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	are avoided by provision of wastewater and stormwater disposal, supply of water, energy and telecommunications. The rules relating to infrastructure are contained within Appendix B – Engineering Standards The Franklin Section does not explicitly recognise the need for integration of land uses and infrastructure and instead it is a matter		approach would only partially give effect to the NPS-UDC or the RPS which requires the integration of land use and three waters infrastructure.		

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	of control or discretion of subdivision. The Plan does recognise the importance to the economic and social well-being of the district and the essential nature of infrastructure as an objective.				
Option 3 – Develop policies and rules that ensure that development is appropriately serviced with three waters infrastructure.	This option would involve establishing an explicit policy and rule framework to ensure that development was not approved unless there was sufficient appropriate servicing available for three	Very effective.	This approach is within Council's powers and would be an efficient and clear way to give effect to the RPS and NPS-UDC on this matter.	This approach would be acceptable to the community. There would be certainty when purchasing a property arising out of a subdivision that there is appropriate three waters infrastructure	**Retain.** This approach is the best way to give effect to the RPS and NPS-UDC.

Objective(s)	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision use and development.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	waters. Also, areas would not be rezoned for growth unless there was funding for three waters infrastructure (by Council or the developer).			available.	

Objective(s)	6.1.8 Objective – Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 1: Do nothing (remove all policies and associated methods)	This option would not address the issue. It would set no policy direction or activity status to either encourage or discourage new infrastructure associated with the three waters.	This would be highly ineffective. This approach would not achieve the objectives at all.	This approach would not achieve Council's responsibilities under Section 75(3)(a) and (c) which require district plans to give effect to national policy statements and regional policy statements.	This approach would create a lot of uncertainty for both landowners and Council.	**Discard.** This option would be contrary to the RPS.
Option 2: Status quo retain existing approach of the Operative District Plan	Both of the Franklin and Waikato Sections of the Operative District Plan allows network utilities as a permitted activity subject to	This is a partially effective approach. The Waikato approach does assume that the standards for each Zone are appropriate for	This is within Council's power and would give effect to the RPS objectives and policies recognising the benefits of regionally significant	This approach would be acceptable to the community. It has the advantage of establishing an envelope of expected bulk and location standards within	**Discard.** The zone bulk and location standards are not going to be appropriate for large scale above-ground structures. It

Objective(s)	6.1.8 Objective – Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	compliance with standards. The Franklin Section has standards specific for network utilities whereas the Waikato section uses the standards applicable for each zone.	structures such as reservoirs.	infrastructure.	which structure could expected to be constructed.	is more appropriate that the approach be tailored to the infrastructure rather than the zone standards be adopted.
Option 3 – Enable three waters infrastructure throughout the District as permitted activities	This option would enable new pipes and infrastructure as a permitted activity throughout the District, irrespective of size and location.	This approach would be ineffective at achieving the Objective. New lines and structure could be constructed without any consent process, but may have significant effects on the	While this is technically within Council's powers it arguably does not achieved the purpose of the RMA in Section 5(2)(c) which is "avoiding, remedying, or mitigating any adverse effects of	This approach would not be acceptable to the community. There would be no certainty as to where structures may be located and the adverse effects from this approach are significant in terms of environmental,	**Discard.** This option would assist in giving effect to the RPS which recognises the benefits of regionally significant infrastructure, however it would not give effect to

Objective(s)	6.1.8 Objective – Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
		features, character and amenity of the surrounding environment.	activities on the environment." There are likely to be significant adverse effects from this approach. There could be potentially significant effect on Section 6 matters.	cultural, social and economic.	other parts of the RPS which protect Section 6 matters.
Option 4 – Enable underground infrastructure as a permitted activity but require consents for larger activities and structures	This option would enable new water pipes as a permitted activity, but require above ground structures to be consented.	This approach would be highly effective at achieving the Objective. Above ground structures have greater visual effects than underground and this approach would	This approach would assist in achieving the purpose of the RMA in Section 5(2)(c) which is "avoiding, remedying, or mitigating any adverse effects of activities on the	This approach would be acceptable to the community. The environmental, cultural, social and economic effects of above ground structures could be assessed.	**Retain.**

Objective(s)	6.1.8 Objective – Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
		allow the effects to be considered.	environment." This approach strikes a balance between enabling underground infrastructure which has very little effect and instead focusing on the larger and more obvious above-ground structures.		
Option 5 – Require consents for all new three waters infrastructure irrespective of size and location	This option would require all new three waters pipes and structures to be assessed by way of a resource consent, with a blanket activity status	This approach would be effective in achieving the Objective. It would ensure that the effects of the new infrastructure were assessed, but is a	This approach is within Council's powers and responsibilities.	This approach would allow the adverse effects of the proposal to be assessed, and conditions could be placed to ensure that adverse effects are avoided, remedied or	**Discard.** This approach is blunt and does not set any particular direction for how new structures should be located or

Objective(s)	6.1.8 Objective – Infrastructure in the Community and Identified Areas Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	irrespective of whether the structures are above or underground, or their location / zone.	rather blunt approach.		mitigated in accordance with Section 5 of the Act.	designed.
Option 6 – Discourage new infrastructure in specific locations	This approach is a tiered approach with different activity statuses for: • Above ground versus below ground • Within identified sensitive areas versus outside	This approach would be effective in achieving the Objective. It would ensure that the effects of the new infrastructure were assessed, and sets a more restrictive approach for above-ground structures within specified identified areas.	This approach would achieve Council's responsibilities under Section 75(3)(a) and (c) which require district plans to give effect to regional policy statements.	This approach would allow the adverse effects of the proposal to be assessed, and conditions could be placed to ensure that adverse effects are avoided, remedied or mitigated in accordance with Section 5 of the Act.	**Retain** This approach efficiently gives effect to the RPS. It is considered to be the most appropriate way to achieve the objective.

Objective(s)	6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
Option 1: Do nothing (remove all policies and associated methods)	This option would involve not addressing this matter at all through policies or rules	Not effective at all.	This approach would not meet Council's requirements under Section 31(1)(a) of the Act to achieve integrated management of the effects of the use, development or protection of land and associated natural and physical resources of the District. This approach would only partially achieve Council's responsibilities under Section 75(3)(a) and (c)	This approach could have significant effects beyond the boundary of the site being developed. It could lead to flood damage to structures, property and ultimately risk people's safety. It will also lead to decreased water quality in streams, rivers, lakes and the coastal marine area.	**Discard.**

Objective(s)	6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
			which require district plans to give effect to regional policy statements. This approach would not achieve Method 8.3.10(d), (f) and (g) and 14.4.3(p).The RPS encourages use of low impact stormwater design.		
Option 2: Retain existing approach of the Waikato Section and apply this across the District	Appendix B5 in the Waikato Section set out standards for the management of stormwater but there was no certainty as the standards were drafted as	Partially effective as the provisions were not explicit in the outcome they were seeking.	This approach is within Council's powers and responsibilities	There was no certainty because of the lack of measurable standards. It did allow a range of solutions to be proposed however	**Discard.** This approach does not reflect the directive in the RPS to encourage low-impact designs for stormwater management.

Objective(s)	6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
	assessment criteria.				
Option 3: Retain existing approach of the Franklin Section and apply this across the District	Servicing requirements for stormwater are a matter of discretion for subdivision. There is no guiding objectives and policies to establish a strategic direction for the management of stormwater.	Partially effective as the provisions were not explicit in the outcome they were seeking.	This approach would only partially achieve Council's responsibilities under Section 75(3)(a) and (c) which require district plans to give effect to regional policy statements. This approach would not achieve Method 8.3.10(d), (f) and (g) and 14.4.3(p).The RPS encourages use of low impact stormwater design.	This approach does not provide any strategic direction or support. While it does enable a wide variety of design responses, there is no supporting policy framework.	**Discard.**
Option 4 – actively	This approach	Highly effective	This is within	This approach will	**Retain.**

Objective(s)	6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.				
Options Approach to achieve objective(s)	**Description (brief)** Describe the option and acknowledge the source of this option (if there is one e.g. feedback from consultation, suggestions from workshops with elected members etc).	**Relevance** How effective provisions are in achieving the objective(s).	**Feasibility** Within council's powers, responsibilities and resources, degree of risk and uncertainty of achieving objectives, ability to implement, monitor and enforce.	**Acceptability** Level of equity and fair distribution of impacts, level of community acceptance. Where possible identify at a broad level social, economic, environmental, cultural effects.	**Recommendation** Discard or evaluate further (with brief explanation).
manage the stormwater generation and management of new development	involves a comprehensive set of policies which outline how the objective is to be achieved. This is supported with rules which establish standards for managing stormwater.		Council's powers and responsibilities and efficiently gives effect to the RPS objectives and policies regarding the management of stormwater.	more effectively protect the health and safety of people and property. It may cause additional costs for developers but this will provide more effective management of stormwater.	

5.2 Evaluation of Selected Options

This section contains an evaluation of those options identified above for further evaluation. The short list of options has been developed further to include (where relevant) polices, rules and methods. In some instances, provisions have been bundled where they are expected to work together to achieve the objective(s). For efficiency, this second tier evaluation focuses on the approach and the policies and rules which implement that approach as a package, rather than a detailed analysis of every policy and every rule. The following table provides a summary of the evaluation results.

5.3 Objective: Development, Operation and Maintenance of Infrastructure

The following suite of provisions address existing three waters infrastructure and achieve Objective 6.1.1:
6.1.2 Policy - Development, Operation and Maintenance
6.1.3 Policy - Technological Advances
6.1.4 Policy – Infrastructure Benefits
6.1.9 Policy – Environmental Effects, Community Health, Safety and Amenity
6.5.6 Policy – Network Utility Location
Rule 14.3.1 The operation, maintenance, repair and removal of existing infrastructure (P1)
Rule 14.3.1 Minor upgrading of existing infrastructure (P2)
Rule 14.3.1 Earthworks activities associated with infrastructure (P4)
Rule 14.3.3 Minor upgrading of existing infrastructure that does not comply with one or more of the conditions of Rule 14.3.1.1 which are relevant to the activity proposed (RD1)
Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)

The following suite of provisions address new three waters infrastructure (which forms part of "development" of the network):
6.1.2 Policy - Development, Operation and Maintenance
6.1.4 Policy – Infrastructure Benefits
6.5.6 Policy – Network Utility Location
6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity
6.1.5 Policy –Natural Hazards and Climate Change
6.1.10 Policy – Infrastructure in Identified Areas
6.1.11 Policy – Undergrounding New Infrastructure
6.1.12 Co-location of Compatible Facilities
6.4.7 Policies – Stormwater
Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4)
Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5)
Rule 14.11.1 Pump stations for the conveyance of water, wastewater and stormwater (P6)

Rule 14.11.1 Stormwater treatment, detention and retention facilities or devices (P7)
Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within:

- Business Zone
- Business Town Centre Zone
- Tamahere Business Zone
- Te Kowhai Airpark Zone
- Industrial Zone
- Heavy Industrial Zone
- Motor Sport and Recreation Zone
- Rural Zone
- Reserve Zone (P8)

Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9)
Rule 14.11.1 Below ground reservoirs (P10)
Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3)
Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4)
Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5)
Rule 14.11.2 Stormwater ponds or wetlands, that serve more than one site, located within:

- Residential Zone
- Rangitahi Peninsula Zone
- Village Zone
- Country Living Zone
- Road and unformed road
- Identified Area (RD6)

Rule 14.11.2 Outfall structures located within an Identified Area (RD7)
Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8)
Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9)
Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1)
Rule 11.4.3 Wastewater treatment plants located within the following:

- Industrial Zone
- Heavy Industrial Zone
- Motor Sport and Recreation Zone
- Rural Zone
- Country Living Zone
- Reserve Zone (D2)

Rule 14.11.3 Above ground reservoirs not located within an Identified Area (D3)
Rule 14.11.4 Water treatment plants located within the following:

- Road and unformed road
- Identified Area (NC1)

Rule 14.11.4 Wastewater treatment plants located within the following:

- Residential Zone
- Rangitahi Peninsula Zone
- Village Zone
- Business Zone
- Business Town Centre Zone

- Tamahere Business Zone
- Te Kowhai Airpark Zone
- Road and unformed road
- Identified Area (NC2)

Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3)
Rule 14.3.1 Earthworks activities associated with infrastructure (P4)
Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)
Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6)
Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas:

- That do not comply with one or more of the conditions of Rule 14.3.1.5; or
- Are located within identified areas (RD4)

5.3.1 Identification of Options

In considering options for managing the three waters a number of factors were taken into account including:

- The RPS
- The NZCPS
- The NPS-UDC
- Section 6 matters in the RMA
- Feedback from the Council's engineers
- Managing adverse effects

Options considered for the management of three waters infrastructure are outlined in Section 5.1 of this report, and included:

- Do nothing – (remove all policies and associated methods)
- Status quo – retain existing approach of the Waikato Section
- Status quo – retain existing approach of the Franklin Section
- Require consent for development, operation and maintenance activities

5.3.2 Policy, Rule and Method Evaluation

This section assists to identify the provisions (i.e. policies, rules and methods) that are the most appropriate to achieve the objective.

Table 7 Evaluation of provisions

Provisions most appropriate for achieving Objective 6.1.1	Effectiveness and Efficiency	
	Benefits	Costs
The following suite of provisions address existing three waters infrastructure: 6.1.2 Policy - Development, Operation and Maintenance 6.1.3 Policy - Technological Advances 6.4.1 Policy – Infrastructure Benefits 6.1.9 Policy – Environmental Effects, Community Health, Safety and Amenity 6.5.6 Policy – Network Utility Location Rule 14.3.1 The operation, maintenance, repair and removal of existing infrastructure (P1) Rule 14.3.1 Minor upgrading of existing infrastructure (P2) Rule 14.3.1 Earthworks activities associated with infrastructure (P4) Rule 14.3.3 Minor upgrading of existing infrastructure that does not comply with one or more of the conditions of Rule 14.3.1.1 which are relevant to the activity proposed (RD1)	Environmental: Limits the effects on the environment by a tiered activity status. A more stringent activity status allows environmental effects to be assessed for the larger above-ground structures. Enables upgrades and maintenance which reduces the environmental effects. Some pipes are very old and will be allowing infiltration of the wastewater network as well as leakage from it. Enables development of the network and there are considerable lesser environmental effects from a reticulated network Recognises areas of high amenity or high natural character as being especially sensitive to adverse effects of infrastructure	Environmental: There will still be environmental effects associated with the operation and development of the three waters network Recognises the potential for adverse effects to arise from the establishment, operation, maintenance and upgrading of infrastructure Avoiding one particular area for the location of infrastructure may increase the environmental effects of another location May result in routes or locations with significant environmental effects (e.g. substantially increased earthworks, amenity values or visual effects)

Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2) The following suite of provisions address new three waters infrastructure (which forms part of "development" of the network): 6.1.2 Policy - Development, Operation and Maintenance 6.1.4 Policy – Infrastructure Benefits 6.5.6 Policy – Network Utility Location 6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity 6.1.5 Policy –Natural Hazards and Climate Change 6.1.10 Policy – Infrastructure in Identified Areas 6.1.11 Policy – Undergrounding New Infrastructure	Protects the values and characteristics of: • Urban Expansion Area • Significant Natural Area • Outstanding Natural Feature • Outstanding Natural Landscape • Significant Amenity Landscape • Outstanding Natural Character • High Natural Character • Heritage Precinct • Heritage Items • Maaori Sites of Significance • Maaori Areas of Significance • Notable Trees Enables the effects of infrastructure in these areas to be assessed in terms of the effects on the feature Encouraging undergrounding of infrastructure with a more enabling activity status	
6.1.12 Co-location of Compatible Facilities 6.4.7 Policies – Stormwater Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4) Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5) Rule 14.11.1 Pump stations for the conveyance of water, wastewater and	Economic: Recognises the critical importance of infrastructure to the functioning of the district.. Development of the three waters network is essential for economic development. Reduces the costs of undertaking maintenance by reducing consenting costs	Economic: May place limitations on the infrastructure in terms of location and increase cost. May result in alternative routes or alignments with greater cost . Increased cost of maintenance with undergrounding. More difficult to undertake maintenance.

stormwater (P6) Rule 14.11.1 Stormwater treatment, detention and retention facilities or devices (P7) Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within: • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Reserve Zone (P8) Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9) Rule 14.11.1 Below ground reservoirs (P10) Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3) Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4) Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5) Rule 14.11.2 Stormwater ponds or wetlands,	Developing the network can be more responsive to the demand.	
	Social: Enables quick maintenance to be undertaken without delay for a consent. Protects sensitive areas.	Social:
	Cultural: Protects culturally significant areas.	Cultural:

that serve more than one site, located within: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Country Living Zone • Road and unformed road • Identified Area (RD6) Rule 14.11.2 Outfall structures located within an Identified Area (RD7) Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8) Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9) Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1) Rule 11.4.3 Wastewater treatment plants located within the following: • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Country Living Zone • Reserve Zone (D2) Rule 14.11.3 Above ground reservoirs not located within an Identified Area (D3) Rule 14.11.4 Water treatment plants located within the following: • Road and unformed road		

• Identified Area (NC1) Rule 14.11.4 Wastewater treatment plants located within the following: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Road and unformed road • Identified Area (NC2) Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3) Rule 14.3.1 Earthworks activities associated with infrastructure (P4) Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2) Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6) Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas: • That do not comply with one or more of the conditions of Rule 14.3.1.5; or • Are located within identified areas (RD4)		

Opportunities for economic growth and employment
These provisions are not likely to result in any economic growth, but a fully functioning and efficient three waters network is required to support economic activity and growth. Development of the network will be required to enable growth.
Options less or not as appropriate to achieve the objective
• Do nothing – (remove all policies and associated methods) • Status quo – retain existing approach of the Waikato Section • Status quo – retain existing approach of the Franklin Section • Require consent for development, operation and maintenance activities Appropriateness These were all discarded as they did not give protect Section 6 matters, or would not have achieved the objective.
Risk of acting or not acting
Uncertainty or insufficiency of information: The only uncertainty is what will be the realistic growth demand, the timing of growth and how the three waters network will need to be developed to accommodate it. Risk of acting or not acting: Even though there is some uncertainty as to the timing, location and scale of growth, the risk of not acting is that the three water network is delayed through consenting requirements.
Efficiency and effectiveness
How will the suite of provisions be efficient at achieving the objective? The approach achieves an appropriate balance between enabling maintenance and operation of the network as a permitted activity, and establishing a framework for development of the network. RPS Objective 3.12(e) requires that the value and long term benefits of regionally significant infrastructure is recognised and protected. This approach will efficiently achieve this objective by enabling the operation, maintenance and development of the three waters network. How will the suite of provisions be effective at achieving the objective? The approach enables maintenance activities to be carried out without further regulation through consents. The standards set acceptable parameters within which the activities must be carried out. A policy and rule framework guides the development of the three waters networks and is an effective way of only requiring structures with unknown effects or those with a higher probability of effects to obtain resource consent.

5.4 Objective: Infrastructure in the Community and Identified Areas

The following provisions assist in achieving Objective 6.1.8:
6.1.1 Objective – Development, Operation and Maintenance of Infrastructure
6.4.6 Objective – Stormwater and Drainage
6.1.4 Policy – Infrastructure Benefits
6.1.5 Policy –Natural Hazards and Climate Change
6.5.6 Policy – Network Utility Location
6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity
6.1.10 Policy – Infrastructure in Identified Areas
6.1.11 Policy – Undergrounding New Infrastructure
6.1.12 Policy - Co-location of Compatible Facilities
6.1.13 Policy –Future Growth Areas
6.1.14 Policy – Electromagnetic and Radio Frequency Fields
6.1.16 Policy – Water Conservation
6.4.7 Policies – Stormwater
Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4)
Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5)
Rule 14.11.1 Pump stations for the conveyance of water, wastewater and stormwater (P6)
Rule 14.11.1 Stormwater treatment, detention and retention facilities or devices (P7)
Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within:

- Business Zone
- Business Town Centre Zone
- Tamahere Business Zone
- Te Kowhai Airpark Zone
- Industrial Zone
- Heavy Industrial Zone
- Motor Sport and Recreation Zone
- Rural Zone
- Reserve Zone (P8)

Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9)
Rule 14.11.1 Below ground reservoirs (P10)
Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3)
Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4)
Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5)
Rule 14.11.2 Stormwater ponds or wetlands, that serve more than one site, located within:

- Residential Zone
- Rangitahi Peninsula Zone
- Village Zone

- Country Living Zone
- Road and unformed road
- Identified Area (RD6)

Rule 14.11.2 Outfall structures located within an Identified Area (RD7)
Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8)
Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9)
Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1)
Rule 11.4.3 Wastewater treatment plants located within the following:

- Industrial Zone
- Heavy Industrial Zone
- Motor Sport and Recreation Zone
- Rural Zone
- Country Living Zone
- Reserve Zone (D2)

Rule 14.11.3 Above ground reservoirs not located within an Identified Area (D3)
Rule 14.11.4 Water treatment plants located within the following:

- Road and unformed road
- Identified Area (NC1)

Rule 14.11.4 Wastewater treatment plants located within the following:

- Residential Zone
- Rangitahi Peninsula Zone
- Village Zone
- Business Zone
- Business Town Centre Zone
- Tamahere Business Zone
- Te Kowhai Airpark Zone
- Road and unformed road
- Identified Area (NC2)

Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3)
Rule 14.3.1 Earthworks activities associated with infrastructure (P4)
Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)
Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6)
Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas:

- That do not comply with one or more of the conditions of Rule 14.3.1.5; or
- Are located within identified areas (RD4)

5.4.1 Identification of Options

In considering options for managing the three waters a number of factors were taken into account including:

- The RPS
- The NZCPS
- The NPS-UDC

- Section 6 matters in the RMA
- Feedback from the Council's engineers
- Managing adverse effects

Options considered for the management of three waters infrastructure are outlined in Section 5.1 of this report, and included:

- Do nothing – (remove all policies and associated methods)
- Status quo – retain existing approach of the Operative District Plan
- Option 1 – Enable three waters infrastructure throughout the District as permitted activities
- Option 2 – Enable underground infrastructure as a permitted activity but require consents for larger activities and structures
- Option 3 – Require consents for all new three waters infrastructure irrespective of size and location
- Option 4 – discourage new infrastructure in specific locations

5.4.2 Policy, Rule and Method Evaluation

This section assists to identify the provisions (i.e. policies, rules and methods) that are the most appropriate to achieve the objective.

Table 8 Evaluation of provisions

Provisions most appropriate for achieving Objective 6.1.8	Effectiveness and Efficiency	
	Benefits	Costs
6.1.4 Policy – Infrastructure Benefits 6.1.5 Policy –Natural Hazards and Climate Change 6.5.6 Policy – Network Utility Location 6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity 6.1.10 Policy – Infrastructure in Identified Areas 6.1.11 Policy – Undergrounding New Infrastructure 6.1.12 Policy - Co-location of Compatible Facilities 6.1.13 Policy –Future Growth Areas 6.1.14 Policy – Electromagnetic and Radio Frequency Fields 6.1.16 Policy – Water Conservation 6.4.7 Policies – Stormwater Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4) Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5) Rule 14.11.1 Pump stations for the conveyance of water, wastewater and stormwater (P6) Rule 14.11.1 Stormwater treatment,	Environmental: Protects the values and characteristics of: • Urban Expansion Area • Significant Natural Area • Outstanding Natural Feature • Outstanding Natural Landscape • Significant Amenity Landscape • Outstanding Natural Character • High Natural Character • Heritage Precinct • Heritage Items • Maaori Sites of Significance • Maaori Areas of Significance • Notable Trees Enable the effects of infrastructure in these areas to be assessed in terms of the effects on the feature Encouraging undergrounding of infrastructure with a more enabling activity status	Environmental: May result in routes or locations with significant environmental effects (e.g. substantially increased earthworks)
	Economic:	Economic: May increase the cost of infrastructure in these areas May result in alternative routes or alignments with greater cost Increased cost of maintenance with undergrounding

detention and retention facilities or devices (P7) Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within: • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Reserve Zone (P8) Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9) Rule 14.11.1 Below ground reservoirs (P10) Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3) Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4) Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5) Rule 14.11.2 Stormwater ponds or wetlands, that serve more than one site, located		More difficult to undertake maintenance
	Social: Protects sensitive areas Specific rules for area with a special character.	Social:
	Cultural: Protects culturally significant areas	Cultural:

within: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Country Living Zone • Road and unformed road • Identified Area (RD6) Rule 14.11.2 Outfall structures located within an Identified Area (RD7) Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8) Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9) Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1) Rule 11.4.3 Wastewater treatment plants located within the following: • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Country Living Zone • Reserve Zone (D2) Rule 14.11.3 Above ground reservoirs not located within an Identified Area (D3) Rule 14.11.4 Water treatment plants located within the following: • Road and unformed road		

• Identified Area (NC1) Rule 14.11.4 Wastewater treatment plants located within the following: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Road and unformed road • Identified Area (NC2) Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3) Rule 14.3.1 Earthworks activities associated with infrastructure (P4) Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2) Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6) Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas: • That do not comply with one or more of the conditions of Rule 14.3.1.5; or • Are located within identified areas		

(RD4)		

Opportunities for economic growth and employment

These policies and rules are unlikely to encourage economic growth and employment but three waters networks are required to support any growth.

Options less or not as appropriate to achieve the objective

Do nothing – (remove all policies and associated methods)
Status quo – retain existing approach of the Operative District Plan
Option 1 – Enable three waters infrastructure throughout the District as permitted activities
Option 2 – Enable underground infrastructure as a permitted activity but require consents for larger activities and structures
Option 3 – Require consents for all new three waters infrastructure irrespective of size and location
Option 4 – discourage new infrastructure in specific locations

Appropriateness:
The first option was disregarded due to the Section 6 matters and the RPS. Requiring all infrastructure to be consented is not an efficient process. It adds substantial time and cost. The preferred option is a mix of Options 2 and 4.

Risk of acting or not acting

Uncertainty or insufficiency of information:
There is no uncertainty.

Risk of acting or not acting:
The risk of not acting is that the value and characteristics of the identified areas are eroded or destroyed by insensitive location of three waters infrastructure.

Efficiency and effectiveness

How will the suite of provisions be efficient at achieving the objective?
The policies generally provide an efficient way to achieve the Objective, as the benefits of providing for the efficient development of three waters networks outweighs the costs. The primary benefits from the policies and rules is that new infrastructure is guided away from the most sensitive parts of the District, and a more lenient and enabling rule framework for more appropriate locations.

The rules crate a hierarchy of activity status. Underground infrastructure is a permitted activity while above-ground infrastructure are restricted discretionary activities, and those in identified areas have a more restrictive activity status of discretionary.

How will the suite of provisions be effective at achieving the objective?
The approach of the provisions is that a more lenient activity status apply to new infrastructure not located within Identified Areas and a discretionary activity status within Identified Areas. This more stringent activity status indicates that these are not places where new three waters infrastructure is appropriate. Identified areas include those more sensitive environments that are sensitive to change and have certain values that need to be protected. They include:

- Urban Expansion Area
- Significant Natural Area
- Outstanding Natural Feature
- Outstanding Natural Landscape
- Significant Amenity Landscape
- Outstanding Natural Character
- High Natural Character
- Heritage Precinct
- Heritage Items
- Maaori Sites of Significance
- Maaori Areas of Significance
- Notable Trees

In conclusion, the recommended approach constitutes an effective way to give effect to the RPS and is in accordance with Section 6 of the Act, by creating a policy and rule framework to guide the development of three waters infrastructure into appropriate locations.

5.5 Objective: Integration of Infrastructure with Subdivision, Land Use and Development

The following provisions assist for achieving Objective 6.4.1:
6.4.2 Policy – Provide Adequate Infrastructure
6.4.3 Policy – Infrastructure Location and Services
6.1.13 Policy –Future Growth Areas
6.1.16 Policy – Water Conservation
4.1.4 Policy – Staging of development
4.7.5 Policy – Servicing requirements
4.7.6 Policy – Co-ordination between servicing and development and subdivision
Rule 14.11.1 Stormwater systems for new development or subdivision (P1)
Rule 14.11.1 Wastewater servicing for new development or subdivision (P3)
Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1)
Consents and assessment criteria for subdivision and multi-unit developments in the urban zones.
The extent and location of zoned new development areas / growth

5.5.1 Identification of Options

In considering options for managing the three waters a number of factors were taken into account including:

- The RPS
- The NPS-UDC
- Feedback from the Council's engineers
- Managing adverse effects
- Case studies from Tamahere
- Concerns raised by Councillors

Options considered for the integration of three waters infrastructure with land use are outlined in Section 5.1 of this report, and included:

- Do nothing – (remove all policies and associated methods)
- Status quo – retain existing approach Operative District Plan
- Option 1 – Develop policies and rules that ensure that development is appropriately service for the three waters.

5.5.2 Policy, Rule and Method Evaluation

This section assists to identify the provisions (i.e. policies, rules and methods) that are the most appropriate to achieve the objective.

Table 9 Evaluation of provisions

Provisions most appropriate for achieving Objective 6.4.1	Effectiveness and Efficiency	
	Benefits	Costs
6.4.2 Policy – Provide Adequate Infrastructure 6.4.3 Policy – Infrastructure Location and Services 6.1.13 Policy –Future Growth Areas 6.1.16 Policy – Water Conservation 4.1.4 Policy – Staging of development 4.7.5 Policy – Servicing requirements 4.7.6 Policy – Co-ordination between servicing and development and subdivision Rule 14.11.1 Stormwater systems for new development or subdivision (P1) Rule 14.11.1 Wastewater servicing for new development or subdivision (P3) Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1) Consents and assessment criteria for subdivision and multi-unit developments in the urban zones. The extent and location of zoned new development areas / growth	Environmental: Ensures the health of people. Ensures the health of the ecosystems by reticulating wastewater and treating to a higher level than would be achieved with each site The comprehensive management of stormwater reduces the frequency, duration and scale of flooding	Environmental: The management and disposal of stormwater and water supply will still have adverse environmental effects
	Economic: The comprehensive management of stormwater reduces potential damage to property	Economic: Providing infrastructure will add cost to Council or the developer, which will ultimately be passed onto the end purchaser The cost of the infrastructure will be recouped through rates or a purchase price
	Social: Ensures that sites can be built on Health effects of providing clean water, and transporting wastewater and stormwater away	Social:
	Cultural: Will assist in preserving the mauri of water	Cultural:
Opportunities for economic growth and employment		
These policies and rules are unlikely to encourage economic growth and employment but three waters networks are required to support any growth.		
Options less or not as appropriate to achieve the objective		

• Do nothing – (remove all policies and associated methods) • Status quo – retain existing approach Operative District Plan Appropriateness: The first option was disregarded due to the directives in the RPS and NPS-UDC to integrate land use with infrastructure. The second option did not effectively ensure that development was coordinated with infrastructure.
Risk of acting or not acting
Uncertainty or insufficiency of information: There is uncertainty whether the growth projections will be realised. Many assumptions underpin the figures such as assuming that growth will continue at its present rate. There is a risk that Council will fund and plan infrastructure which will never be used. Risk of acting or not acting: Even though there is some uncertainty as to the accuracy of the growth projections, the three waters infrastructure must be available to service growth, if and when there is growth.
Efficiency and effectiveness
How will the suite of provisions be efficient at achieving the objective? The provisions will be efficient as they clearly set standards for a permitted activity. The policies recognise the need for integration of and use and three waters and the rules deliver this. How will the suite of provisions be effective at achieving the objective? The standards are clear with no ambiguity. The proposed policies are clear and directive and will be effective tools in directing how the objectives will be achieved with regard to three waters and development. They will be effective in ensuring that every newly created site has appropriate level of servicing for three waters.

5.6 Objective: Stormwater and Drainage

The following policies and rules for achieving Objective 6.4.6:
6.1.16 Policy – Water Conservation
6.4.7 Policy – Stormwater
Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision (P2)
Rule 14.11.1 Stormwater systems for new development or subdivision (P1)
Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1)
Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.2 (RD2)

5.6.1 Identification of Options

In considering options for managing the three waters a number of factors were taken into account including:

- The RPS
- The NZCPS
- The NPS-UDC
- Feedback from the Council's engineers
- Managing adverse effects
- Case studies from Tamahere
- Concerns raised by Councillors

Options considered for the management of three waters infrastructure are outlined in Section 5.1 of this report, and included:

- Status quo – retain existing approach of the Waikato Section
- Status quo – retain existing approach of the Franklin Section
- Option 1 – actively manage the stormwater generation and management of new development
- Relying on the Regional Infrastructure Technical Specifications instead of managing this matter through the district plan provisions

5.6.2 Policy, Rule and Method Evaluation

This section assists to identify the provisions (i.e. policies, rules and methods) that are the most appropriate to achieve the objective.

Table 10 Evaluation of provisions

Provisions most appropriate for achieving Objective 6.4.6	Effectiveness and Efficiency	
	Benefits	Costs
6.1.16 Policy – Water Conservation 6.4.7 Policy – Stormwater Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision (P2) Rule 14.11.1 Stormwater systems for new development or subdivision (P1) Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1) Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.2 (RD2)	Environmental: Ensures that development does not exacerbate overland flow Ensures that development does not cause flooding with a substantial reduction in permeability Retains water quality of runoff which maintains quality of water bodies Enables catchments to be managed holistically and comprehensively	Environmental: Any development is likely to increase the level of impermeability and runoff There will be considerable runoff from sealed roads
	Economic: Reduces the cost of damage through flooding	Economic: Increased cost to the developer Sites may need to be bigger to accommodate development while achieving the permeability standard Increased cost with the need for permeable pavers and similar alternative building and landscape materials
	Social: Requires stormwater to be managed within each site, reducing adverse effects on neighbouring sites	Social: May constrain the desired development on a site Concrete may need to be replaced with a form of permeable pavers changing the character of a home
	Cultural: Maintains the mauri of water bodies	Cultural:
Opportunities for economic growth and employment		

These provisions are unlikely to result in growth and employment, although there could be increased demand for permeable building ad landscaping materials.
Options less or not as appropriate to achieve the objective
• Status quo – retain existing approach of the Waikato Section • Status quo – retain existing approach of the Franklin Section • Relying on the Regional Infrastructure Technical Specifications instead of managing this matter through the district plan provisions Appropriateness The Operative District Plan does not actively encourage low impact stormwater design and thus does not give effect to the RPS. Reliance on the Regional Infrastructure Technical Specifications was discarded because the specifications are not necessarily appropriate for every development in every area. In addition, the technical specifications are being reviewed and this approach would require incorporating the specifications by reference in the PDP. A plan change would be required to update the references.
Risk of acting or not acting
Uncertainty or insufficiency of information: Each catchment has different characteristics and there is the potential for the impermeability standards to be too large resulting in the objective not being achieved. The effects of climate change are not known but it is likely that rainfall events will be more extreme and more frequent. Risk of acting or not acting: The risk of not acting is that development exacerbates flooding by removing too much potential for infiltration of stormwater. The consequences of this is increased flooding in terms of frequency, scale and duration. This poses a serious risk to human health and safety, as well as increases the potential for damage to properties and buildings.
Efficiency and effectiveness
How will the suite of provisions be efficient at achieving the objective? The policy efficiently sets out how the hydrological characteristics of the drainage processes can be retained. This is then achieved by the rules. Alternative designs for managing stormwater can be proposed outside the permitted standards, and this will be a restricted discretionary activity. This is an efficient approach by only requiring consent when an alternative approach to managing stormwater is proposed. How will the suite of provisions be effective at achieving the objective? The policies and rules will be effective in achieving the policy as they set out clear expectation for the management of stormwater.

6 CONCLUSION

After undertaking an evaluation as required by Section 32 of the RMA, The Objective is considered the most appropriate way to achieve the Purpose of the RMA (Section 5) for addressing water supply, stormwater and wastewater.

It is considered that the recommended policies and methods outlined above are the most appropriate way for achieving the objective, having considered:
(i) other reasonably practicable options for achieving the objective; and
(ii) assessing the efficiency and effectiveness of the provisions in achieving the objective.

APPENDIX 1 PROVISION CASCADE

Issue to be addressed	Objective	Policies	Rules	Standards / Assessment Criteria
Integration of three waters infrastructure with land uses	6.4.1 Objective – Integration of Infrastructure with Subdivision, Land Use and Development Infrastructure is provided for, and integrated with, subdivision, use and development.	6.4.2 Policy – Provide Adequate Infrastructure 6.4.3 Policy – Infrastructure Location and Services 6.1.13 Policy –Future Growth Areas 6.1.16 Policy – Water Conservation 4.1.4 Policy – Staging of development 4.7.5 Policy – Servicing requirements 4.7.6 Policy – Co-ordination between servicing and development and subdivision	Rule 14.11.1 Stormwater systems for new development or subdivision (P1)	14.11.1.1 Standards
			Rule 14.11.1 Wastewater servicing for new development or subdivision (P3)	14.11.1.3 Standards
			Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1)	Discretion is restricted to: (a) The likely effectiveness of the system to avoid flooding, nuisance or damage to other buildings and sites; (b) The capacity of the system and suitability to manage stormwater.
			Consents and assessment criteria for subdivision and multi-unit developments in the urban zones.	
			The extent and location of zoned new development areas / growth	
Enabling maintenance and upgrades	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and	6.1.2 Policy - Development, Operation and Maintenance 6.1.3 Policy - Technological Advances 6.1.4 Policy – Infrastructure	Rule 14.3.1 The operation, maintenance, repair and removal of existing infrastructure (P1)	
			Rule 14.3.1 Minor upgrading of existing infrastructure (P2)	14.3.1.1 Standards

	maintained to benefit the social, economic, cultural and environmental well-being of the district.	Benefits 6.1.9 Policy – Environmental Effects, Community Health, Safety and Amenity 6.5.6 Policy – Network Utility Location	Rule 14.3.1 Earthworks activities associated with infrastructure (P4)	14.3.1.3 Standards
			Rule 14.3.3 Minor upgrading of existing infrastructure that does not comply with one or more of the conditions of Rule 14.3.1.1 which are relevant to the activity proposed (RD1)	Discretion is restricted to: (a) The likely effectiveness of the system to avoid flooding, nuisance or damage to other buildings and sites; (b) The capacity of the system and suitability to manage stormwater.
			Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)	Discretion is restricted to: (a) Site design and layout; (b) The risk of flooding, nuisance or damage to the site or other buildings and sites.
Providing for new infrastructure and managing the effects	6.1.1 Objective – Development, Operation and Maintenance of Infrastructure Infrastructure is developed, operated and maintained to benefit the social, economic, cultural and environmental well-being of the district. 6.1.8 Objective – Infrastructure in the Community and Identified Areas	6.1.2 Policy - Development, Operation and Maintenance 6.1.4 Policy – Infrastructure Benefits 6.5.6 Policy – Network Utility Location 6.1.9 Policy - Environmental Effects, Community Health, Safety and Amenity 6.1.5 Policy –Natural Hazards and Climate Change 6.1.10 Policy – Infrastructure in	Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater (P4)	14.11.1.4 Standards
			Rule 14.11.1 Below ground pipelines for the conveyance of water, wastewater and stormwater located within an Identified Area (P5)	14.11.1.5 Standards
			Rule 14.11.1 Pump stations for the conveyance of water, wastewater and stormwater (P6)	14.11.1.6 Standards
			Rule 14.11.1 Stormwater treatment, detention and retention facilities or devices (P7)	14.11.1.7 Standards

	Infrastructure takes into account the qualities and characteristics of surrounding environments and community well-being. 6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.	Identified Areas 6.1.11 Policy – Undergrounding New Infrastructure 6.1.12 Co-location of Compatible Facilities 6.4.7 Policies – Stormwater 6.1.13 Policy –Future Growth Areas 6.1.16 Policy – Water Conservation 6.4.7 Policies – Stormwater	Rule 14.11.1 Stormwater ponds or wetlands, that serve more than one site, located within: • Business Zone • Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Reserve Zone (P8)	
			Rule 14.11.1 Ventilation facilities, drop shafts and manholes (P9)	14.11.1.8 Standards
			Rule 14.11.1 Below ground reservoirs (P10)	14.11.1.9 Standards
			Rule 14.11.2 Wastewater servicing for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.3 (RD3)	Discretion is restricted to: (a) Health and safety of the occupants; (b) Capacity of the system; (c) Infiltration capacity of the soil; (d) Location, including proximity to waterways and effects on habitats; (e) Contamination of downstream properties by wastewater.

			Rule 14.11.2 Below ground pipelines that do not comply with one or more of the conditions of Rules 14.11.1.4 and 14.11.1.5 (RD4)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage; and (e) Effects on the specific values, qualities and characteristics of any Identified Area.
			Rule 14.11.2 Pump stations for the conveyance of water, wastewater and stormwater located within an Identified Area (RD5)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage; and (e) Effects on the specific values, qualities and characteristics of any Identified Area.
			Rule 14.11.2 Stormwater ponds or wetlands, that serve more than one site, located within: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Country Living Zone • Road and unformed road • Identified Area (RD6)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage; and (e) Effects on the specific values, qualities

				and characteristics of any Identified Area.
			Rule 14.11.2 Outfall structures located within an Identified Area (RD7)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage; and (e) Effects on the specific values, qualities and characteristics of any Identified Area.
			Rule 14.11.2 Ventilation facilities, drop shafts and manholes that do not comply with one or more of the conditions of Rule 14.11.1.8 (RD8)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage; and (e) Effects on the specific values, qualities and characteristics of any Identified Area.
			Rule 14.11.2 Below ground reservoirs located within an Identified Area (RD9)	Discretion is restricted to: (a) The functional need and operational need of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects; (c) Road network safety and efficiency; (d) The risk of hazards to public or individual safety, and risk of property damage;

				and (e) Effects on the specific values, qualities and characteristics of any Identified Area.
			Rule 11.4.3 Water treatment plants not located within road and unformed road or an Identified Area (D1)	
			Rule 11.4.3 Wastewater treatment plants located within the following: • Industrial Zone • Heavy Industrial Zone • Motor Sport and Recreation Zone • Rural Zone • Country Living Zone • Reserve Zone (D2)	
			Rule 14.11.3 Above ground reservoirs not located within an Identified Area (D3)	
			Rule 14.11.4 Water treatment plants located within the following: • Road and unformed road • Identified Area (NC1)	
			Rule 14.11.4 Wastewater treatment plants located within the following: • Residential Zone • Rangitahi Peninsula Zone • Village Zone • Business Zone	

			• Business Town Centre Zone • Tamahere Business Zone • Te Kowhai Airpark Zone • Road and unformed road • Identified Area (NC2)	
			Rule 14.11.4 Above ground reservoirs located within an Identified Area (NC3)	
			Rule 14.3.1 Earthworks activities associated with infrastructure (P4)	14.11.1.3 Standards
			Rule 14.3.3 Earthworks associated with infrastructure that do not comply with one or more of the conditions of Rule 14.3.1.3 (RD2)	Discretion is restricted to: (a) Management of sediment and dust, including the staging of works; (b) The volume, extent and depth of the earthworks activities; (c) The location of the earthworks activities, taking into account any effects on the values, qualities and characteristics of the site; (d) Any flood or land stability risks; (e) Visual, landscape and amenity effects; (f) The location of the earthworks in relation to ecosystems and habitats.
			Rule 14.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas (P6)	14.3.1.5 Standards

			Rule 11.3.1 Pipe and cable bridge structures for the conveyance of electricity, telecommunications, water, wastewater, stormwater and gas: • That do not comply with one or more of the conditions of Rule 14.3.1.5; or • Are located within identified areas (RD4)	Discretion is restricted to: (a) The functional and operational needs of, and benefits derived from, the infrastructure; (b) Visual, streetscape and amenity effects, (c) Public safety; (d) Effects on the values, qualities and characteristics of any Identified Area.
Development increases impermeability and can create significant increases in stormwater	6.4.6 Objective – Stormwater and Drainage The hydrological characteristics of the natural drainage processes are retained.	6.1.16 Policy – Water Conservation 6.4.7 Policies – Stormwater	Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision (P2)	14.11.1.2 Standards
			Rule 14.11.1 Stormwater systems for new development or subdivision (P1)	14.11.1.1 Standards
			Rule 14.11.2 Stormwater systems for new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.1 (RD1)	Discretion is restricted to: (a) The likely effectiveness of the system to avoid flooding, nuisance or damage to other buildings and sites; (b) The capacity of the system and suitability to manage stormwater.
			Rule 14.11.1 The establishment of impervious surfaces associated with new development or subdivision that do not comply with one or more of the conditions of Rule 14.11.1.2 (RD2)	Discretion is restricted to: (a) Site design and layout; (b) The risk of flooding, nuisance or damage to the site or other buildings and sites.

APPENDIX 2 ISSUES AND OPTIONS REPORT

APPENDIX 3 FEEDBACK FROM WORKSHOPS