



**MARLBOROUGH SOUNDS
RESOURCE MANAGEMENT PLAN**

**Plan Change No. 7: On-site Discharges of Domestic
Wastewater**

(Plan Change and section 32 analysis included)

**REPORT PREPARED TO FULFIL THE REQUIREMENTS OF
SECTION 32 OF THE
RESOURCE MANAGEMENT ACT 1991**

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Introduction

This report sets out an evaluation behind the Marlborough District Council's decision to change the Marlborough Sounds Resource Management Plan ("the Plan") in an effort to improve the performance of on-site wastewater management systems ("on-site systems) in the Marlborough Sounds.

There are approximately 4500 dwellings in the area covered by the Plan that are serviced by on-site systems. These systems have a history of variable performance due to a range of factors, including small allotment size, inappropriate design or installation, and inadequate operation and maintenance.

If the domestic wastewater is not effectively treated and contained on-site, contaminants present in the wastewater will runoff or infiltrate into the surrounding environment. Many on-site systems are located in close proximity to water or other residential properties. Poor performance of on-site systems therefore creates the potential to contaminate coastal water, cause illness and affect the amenity values of nearby residential properties.

At the same time, there is continuing demand for further residential properties and visitor accommodation that might also be serviced by on-site systems.

As outlined in Part B of this report, the Plan already contains provisions for managing domestic wastewater discharges to land. However, the results of coastal water quality and shellfish monitoring, a record of complaints of poor performance and the rate of system upgrade/replacement suggest that these provisions need to be strengthened. A range of additional objectives and policies, and several changes to the rules, are proposed in order to protect the Marlborough Sounds environment.

In notifying any change to the Plan, councils have a duty under Section 32 of the Resource Management Act to evaluate a number of matters. In preparing plans and changes to them, councils are required to consider the alternative ways to achieve the environmental outcomes being sought and have to consider a broad range of policies, objectives and methods. An analysis of the benefits and costs in deciding which provisions are the most efficient has to be carried out.

The specific elements of Section 32 that are covered in this report are as follows:

- (3) *An evaluation must examine—*
 - (a) *the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
 - (b) *whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*
- (4) *For the purposes of this examination, an evaluation must take into account—*
 - (a) *the benefits and costs of policies, rules, or other methods; and*

- (b) *the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

Councils are required then to:

- Determine the environmental issue.
- Evaluate the extent to which any new objective is the most appropriate way to achieve the purpose of the RMA.
- Evaluate whether the policies, rules, or other methods are the most appropriate for achieving the objective.
- Explore different methods/ways of dealing with the issue.
- Evaluate the benefits and costs of the proposed policies, rules, or other methods.
- Examine the risk of acting or not acting if there is uncertain or insufficient information on the policies, rules, or other methods.
- Decide which method or methods is the most appropriate to achieve the purpose of the RMA.

The RMA also requires that a report be prepared that summarises the evaluation and gives reasons for that evaluation. This report fulfils that requirement (Section 32(5)).

Structure of the Section 32 Report

Part A: In carrying out the Section 32 analysis the Council has identified that there is a resource management issue that needs to be addressed. Validation of the issue has been determined through a number of actions and initiatives undertaken by the Council or its predecessors. These actions and initiatives are described in Part A of this report.

Part B: The legislative framework and the policies and rules that currently apply to domestic wastewater discharges are described in Part B.

Part C: The various options the Council has considered in deciding how to address the issue are outlined in this Part of the report. A preferred option is presented, representing a mix of the options available.

Part D: Public comment was sought on the preferred options outlined in Part C through a public discussion document released in July 2004. The discussion document also included a draft plan change for comment. The community's response to this management framework and the draft plan change are described in Part D of this report.

Part E: An analysis of the provision to be included within the Plan in terms of the requirements of Section 32 of the RMA is provided in Part E.

Part A: Resource Management Issue

Background

Almost all houses, holiday homes and buildings used for visitor accommodation in the Marlborough Sounds, outside of Picton, Waikawa and Havelock, rely on on-site systems to manage domestic wastewater. This means that wastewater generated in the building(s) receives initial treatment in some form of treatment unit, such as a septic tank, and is then discharged into or onto a land application area on the property. Contaminants present in the wastewater, such as bacteria and nutrients, are then further treated or absorbed as the wastewater passes through the soil.

In the Marlborough Sounds, domestic wastewater is discharged into soils of low permeability, which are difficult to penetrate, into thin soils with limited ability to treat contaminants, or free draining alluvial soils. In all cases, there is the potential for contaminants to travel beyond the land application area, and into the surrounding environment, through runoff or infiltration.

Most buildings used for residential or accommodation purposes in the Marlborough Sounds are located in close proximity to streams, creeks, underlying groundwater or coastal water. This means that, if the on-site system servicing the building performs poorly, there is a risk that the subsequent discharge will contaminate water. The Council's monitoring has already established that there are elevated levels of bacteria in some coastal waters over the summer months (see "Results of Monitoring" below).

Any degradation of coastal water quality threatens the community's ability to continue to use the coastal environment of the Marlborough Sounds for recreational (e.g., boating, swimming, shellfish gathering) and commercial (e.g., marine farming) purposes.

There is also a risk to public health when contaminants within domestic wastewater are not effectively treated and contained on-site, especially where there is the potential for direct contact with the wastewater. This is because the wastewater contains harmful bacteria and viruses.

A number of factors contribute to poor performance of on-site systems in the Marlborough Sounds, including:

- The on-site systems are not necessarily compatible with the site conditions or current occupancy of the building, and were often based on dated standards. For example, many septic tanks in the Marlborough Sounds discharge wastewater into soak pits or short trenches, which have a tendency to eventually fail when installed in clay soils. The older the on-site system, the greater the potential for failure;
- The age of the on-site system can mean that the various components are no longer watertight and therefore it may leak;

- Not all on-site systems are maintained in an efficient operating condition. A lack of maintenance can contribute to the potential for failure. This situation is made worse because many on-site systems are inaccessible for servicing;
- Stormwater is entering the treatment unit or land application area, increasing the loading on the site soils;
- Given the age of some on-site systems, and the rate of property ownership change in the Marlborough Sounds, present owners may know little about the on-site system on their property;

Objectives contained in the Regional Policy Statement and in Volume One of the Plan create a community expectation that water quality and public health standards are to be maintained or improved (see Part B for further details). It is therefore clear that the risk of contamination needs to be carefully managed.

Validation of the issue

Concerns regarding the effect of on-site domestic wastewater discharges on the Marlborough Sounds environment are not a recent occurrence. A variety of reports have identified the potential for conventional on-site systems¹ to contaminate coastal water, beginning with an inter-governmental study carried out in 1976.² That study, undertaken in response to pressures for development in the Marlborough Sounds, resulted in a strategy to assist the Marlborough County Council manage future development. The impact of residential development in particular was highlighted:

“...the Sounds is only able to accommodate a certain level of bach development without conflict with other values (water and soil, natural and cultural, landscape), and uses (pastoral and marine farming, commercial forestry and fishing, public recreation) and that accordingly bach development should not be permitted to continue indefinitely.”

The report specifically highlighted the impact of domestic wastewater discharges from the conventional on-site systems that typically service baches. In order to protect water quality, the strategy consequently recommended that other methods of “sewage disposal” be investigated and permitted if proven and environmentally accepted.

12 years later, building upon the earlier work described above, the Town and Country Directorate of the Ministry of Works and Development published a discussion document to assist the Marlborough County

¹ Conventional on-site systems consist of a septic tank and some form of soakage field. The soakage field could be either a soak pit or a system of trenches.

² Ministry of Agriculture and Fisheries, New Zealand Forest Service, Department of Lands and Survey, Ministry of Works and Development. 1976. **A Strategy for the Conservation and Development of the Marlborough Sounds.**

Council review the Marlborough Sounds section of the district scheme.³ This work built upon the earlier inter-governmental strategy. The discussion document again emphasised that the interrelationships between land and water cannot be separated. It stated that:

“This relationship must be addressed and techniques developed to alleviate any existing or potential conflicts which arise as a result of this inter-relationship...It would be inappropriate to consider any of the issues relating to land uses without simultaneously considering the indirect effects such a use may have on water quality and water based uses.”

The discussion document highlighted the implications of any water quality reductions on marine farming and recreational activities in the Marlborough Sounds. It established that there was already a history of poor performance with on-site systems caused primarily by the significant seasonal loading that systems receive over holiday periods⁴ and the impermeable nature of the soils that exist in many parts of the Sounds. It was concluded that:

“Septic tanks as a system of waste disposal are not considered suitable for dense residential subdivisions due to the proven high failure rate of these tanks.”

More stringent controls on residential subdivision and development were recommended for inclusion within the district scheme. Three recommendations put forward in this regard were:

- Undertaking further work to determine optimal treatment techniques for sewerage disposal for future residential developments;
- Where intensive residential development is proposed, requiring that it be serviced by a community package treatment system designed to ensure maximum treatment;⁵
- Requiring a buffer strip between any type of development and the foreshore reserve of 100 to 200 metres to provide protection in the event of on-site system overflow or failure.

Whereas the Marlborough County Council was responsible for controlling land use, the Marlborough Sounds Maritime Planning Authority controlled the use of the maritime environment. In the same year as the Ministry of Works and Development released its discussion document, the Authority released its

³ Town and Country Planning Directorate, Ministry of Works and Development. March 1988. **Marlborough Sounds Section Marlborough County District Scheme Review – Discussion Document.**

⁴ The 1976 inter-governmental study found that 70 percent of the 1641 dwellings that existed in the Marlborough Sounds at that time were holiday homes.

⁵ The report recommended that any such system should be installed prior to the sale of the new lots or the issue of a building permit to build upon the new lots.

Proposed Marlborough Sounds Maritime Planning Scheme.⁶ Like the discussion document, it too recognised the importance of the interrelationships between land use and water quality, including the potential for on-site discharges of domestic wastewater associated with residential activity to adversely affect water quality:

“Scattered residences in isolated areas of the Sounds are usually served by septic tanks which normally do not pose water quality problems unless misused or overloaded. However, each septic tank needs adequate soakage and maintenance, and intensification of residential development in the Sounds may eventually require alternative forms of sewerage disposal.”

The Proposed Scheme went on to highlight the important role homeowners play in maintaining water quality through the maintenance of septic tanks and noted the difficulties of ensuring such maintenance actually occurs.

Although the water quality issues associated with on-site management of domestic wastewater were acknowledged in the above publications, and a climate for change therefore existed, this opportunity was not realised due to the local government re-organisation that occurred in 1989. That year the Nelson-Marlborough Regional Council assumed the functions of both the Marlborough County Council and the Marlborough Sounds Maritime Planning Authority.

Following the subsequent abolishment of the Nelson Marlborough Regional Council in 1992, the Marlborough District Council became responsible for the integrated management of the natural and physical resources of the Marlborough Sounds. Soon after the abolishment, the Council began the process of preparing a combined regional (including coastal) and district plan. The Council commissioned 12 discussion documents to assist in the preparation of its resource management plan for the Marlborough Sounds, including one on residential activity.⁷ That document, “Issues and Options for Residential Activities in Marlborough Sounds”, identified that there were 3900 residential dwellings in unreticulated areas in the Sounds.

The document again highlighted the importance of good water quality for marine farming. However, the following point was also made:

“It is not enough to require high water quality standards only in marine farming areas for reason only of fear of damage to that industry; if at the same time water quality standards elsewhere are neglected because they might not affect human activity. The neglected water quality may still detrimentally affect marine life.”

⁶ Marlborough Sounds Maritime Planning Authority. July 1988. **Proposed Marlborough Sounds Maritime Planning Scheme.**

The discussion document reiterated the findings of earlier studies in terms of the actual or potential threat to water quality posed by on-site discharges of domestic wastewater:

“The soil conditions throughout the Sounds can make it difficult to satisfactorily provide adequate septic tank soakage for individual houses and particularly for numbers of houses in close proximity. The ability to provide, on-site, for sewage disposal is potentially a major constraint on the density of residential settlement within parts of the Sounds.”

The document went on to reiterate the recommendations of earlier studies, in terms of investigating alternative methods to conventional septic tanks and soakage fields and community schemes where housing development is dense. The authors also identified concerns regarding the increase in wastewater volumes now produced through the use of modern day appliances (e.g., automatic washing machines and dishwashers).

The poor performance of on-site systems has historically been a significant issue in managing the natural and physical resource of the Marlborough Sounds. Current monitoring information confirms that this issue still exists, as set out below.

Results of Monitoring

The Plan sets, as an objective, attaining a “SG standard” of coastal water quality or, in other words, water quality that is suitable for the gathering or cultivation of shellfish for human consumption. One of the threats to achieving this objective is bacterial contamination of coastal waters, which can be measured by taking and analysing water and shellfish flesh samples. The results can then be compared against numerical standards set in the Plan (see Appendix H of Volume Two) and in Ministry of Health documents.⁸

In 1999, a comprehensive survey was undertaken to measure compliance with the SG classification for marine waters in the Marlborough Sounds and in response to concerns raised by local residents.⁹ Water and shellfish samples were taken at 30 sites throughout Queen Charlotte Sound. Half of the sites breached the recreational shellfish gathering bacteriological guidelines for microbiological contamination on at least one occasion (a total of 9 samples were taken at each site over December and January), with the highest level of non-compliance recorded on the 3 January 2000. The author stated that although the source of contamination was not clear, the likely sources were on-site discharges of domestic

⁷ Works Consultancy Services Ltd. November 1992. **Issues and Options for Residential Activities in the Marlborough Sounds.**

⁸ Food Administration Section, Ministry of Health. October 1995. **Microbiological Reference Criteria for Food.**

⁹ Marlborough District Council. March 2000. **1999/2000 Queen Charlotte Sound Marine Water Quality and Shellfish Survey.**

wastewater, discharges from moored boats and runoff. The author then recommended an intensive study in one bay to try and isolate the source.

For a period of two years, the Council undertook intensive monitoring in Double Cove, Queen Charlotte Sound, over the summer months (2000-2001¹⁰ and 2001-2002¹¹). In the first year, water and shellfish samples were taken at 7 sites with water being sampled on 10 occasions and shellfish on two occasions. The results showed a dramatic increase in bacteria levels in shellfish at all sites over the holiday period and non-compliance with the Ministry of Health Microbiological Reference Criteria for food. Two of these sites also had decreases in water quality to the extent that bacteria levels exceed Ministry for the Environment and Ministry of Health water quality guidelines.

The study was repeated the following summer. The results showed consistent non-compliance with the Ministry of Health Microbiological Reference Criteria for food.

The Council also undertakes annual monitoring of water quality at bathing beaches as part of a national programme. This involves sampling water quality close to the shore and testing the water for the bacteria Enterococci. The results have consistently shown instances of non-compliance with the Marine Bathing Guidelines.¹²

It should be noted that the sampling has not always occurred in areas where there is a dense concentration of residential dwellings for the reason that no bathing beach exists. In fact, sites have tended to concentrate on bathing beaches in close proximity to direct discharges into coastal water. However, for those areas sampled that do not have direct discharges, the following locations have had at least one instance of non-compliance:

- Okiwi Bay
- Ngakuta Bay
- Anakiwa
- Moenui

¹⁰ Marlborough District Council. April 2001. **Double Cove 2000-2001 Marine Water Quality and Shellfish Survey.**

¹¹ Marlborough District Council. December 2002. **Double Cove 2001-2002 Marine Water Quality and Shellfish Survey.**

¹² The results of the Recreational Waters Survey are published annually. The full list of the reports is identified in Appendix 1.

This information should be considered in light of the Double Cove exercise, which concluded that water quality monitoring is not necessarily a good indicator of contamination. In other words, the contamination may actually be worse than that indicated by the water quality results.

For this reason, the Council commenced monitoring shellfish in the above areas over the summer of 2003/2004. Unfortunately, too few shellfish were located in Okiwi Bay and the monitoring ceased at this location. However, the unpublished results of monitoring showed excessive bacteria levels in shellfish at Anakiwa and Ngakuta, as well as Tirimoana. This monitoring is ongoing.

In summary, there is bacterial contamination of coastal water evident at several locations in the Marlborough Sounds. It is difficult to conclusively link these instances of contamination specifically to on-site discharges of domestic wastewater due to the intermittent nature of the discharges, dilution due to tidal influences and the limitations of sampling techniques.¹³ At the same time, there is an obvious risk, particularly given the documented history of poor performance identified in previous studies.

Complaints

The Council receives, and responds to, complaints about failing on-site systems where wastewater is ponding on the property, is running off the property, is creating offensive and objectionable smell or is being piped directly to the sea or a nearby creek. A total of 56 complaints have been received since 1999. However, anecdotal evidence suggests that the actual rate of failure is higher

Upgraded or replacement on-site systems

As has been highlighted above, many conventional on-site systems perform poorly due to the combination of a lack of maintenance, the low permeability of the soil and the intermittent nature of the discharges. Failure of the on-site system occurs when the land application area becomes clogged. Building consent applications and, in the event of non-compliance with permitted activity rules, discharge permit applications are processed to authorise the upgrading or replacement existing on-site systems. Although no record has been kept of the number of building consents and resource consents issued in these circumstances, the advice from those processing the applications suggests that they make up a significant proportion of all consents for on-site systems. They also identify that modifications are probably made to treatment units and land application areas to deal with failure without the necessary approvals.

¹³ Gunn, I. May 2003. **Personal Communication**

Staff workshops

During 2003, a series of eight staff workshops was held over a five month period to identify and confirm any issues created by on-site discharges of domestic wastewater. As set out in Part B of this report, the Council processes building consent and discharge permit applications to authorise on-site systems and the discharges from them. The Council monitors compliance with the subsequent building consents and resource consents, as well as conditions of permitted activity rules. Staff are therefore responsible for resolving instances of poorly performing on-site systems. The Council also monitors the state of the environment including coastal water quality in the Marlborough Sounds.

The staff present at the workshops represented all of these Council functions. In several cases, the staff present were also involved in the management of on-site systems in previous local government organisations, such as the Marlborough County Council and Marlborough Sounds Maritime Planning Authority. Staff were encouraged to share their experiences with on-site management of domestic wastewater in the Marlborough Sounds, which were subsequently recorded. The issues identified in the plan change reflect this corporate experience.

The workshops were also used to identify and develop options for dealing with the issues.

In summary, the Marlborough Sounds support significant marine farming and tourism industries that rely upon a high standard of water quality. The coastal waters are also an important recreational resource and have spiritual and cultural significance to local iwi. For these reasons, objectives contained in the Plan already create the expectation that water quality is to be maintained or enhanced. It is therefore clear that the risk of contamination outlined above needs to be managed.

Part B: Current Legislative Framework

Resource Management Act 1991

Purpose

The purpose of the Resource Management Act 1991 (RMA) is to promote the sustainable management of natural and physical resources. Sustainable management means:

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

- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

(c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*"

In achieving the purpose of sustainable management, the Council must have regard to a number of principles set out in the RMA. These include recognition and provision for a number of "matters of national importance" described in Section 6 of the RMA. The Council must also have particular regard to matters such as "amenity", "kaitiakitanga", "quality of the environment", and "ecosystem values" (Section 7).

The RMA enables the use and development of resources as long as such use does not adversely affect the environment in a way that impacts on the foreseeable needs of future generations, the life supporting capacity of ecosystems, other users or the environment. This is the concept of "sustainability" which the RMA promotes as its overriding purpose.

The use and development of the land resources of the Marlborough Sounds for residential activity and visitor accommodation (outside the serviced areas of Picton, Waikawa and Havelock) rely upon on-site systems to appropriately manage any domestic wastewater generated. If the on-site systems perform poorly, then this land use may impact on other residential activity or visitor accommodation, or may adversely affect the surrounding water resources and the community's ability to utilise those resources. In other words, residential or visitor accommodation land uses in unserviced areas of the Marlborough Sounds are only sustainable if domestic wastewater is treated and contained on-site.

Marlborough District Council Responsibilities

The Council is a unitary authority, that is, it has the functions, powers and duties under the RMA of both a regional council and a district council. Its functions are set out in Sections 30 and 31 of the RMA. The Council has a direct responsibility for controlling the discharge of contaminants, such as domestic wastewater, into or onto land under Section 30(1)(f). That control is currently exercised through rules included within the Plan and through the resource consent process.

As domestic wastewater is a consequence of the residential use and development of the Marlborough Sounds land resource, Sections 30(1)(a) and 31(a) are also relevant. These sections identify that the integrated management of natural and physical resources, and the use of those resources, is a Council function.

Part III of the RMA sets out "Duties and Restrictions Under this Act", all of which apply to the Council in its resource management role as a unitary authority. Explicit direction on how restriction and the lack of restriction are to be applied to managing natural and physical resources is applied through Sections 9 to 15 in particular. Of relevance to the Plan Change are the restrictions described in Section 15 "discharge of contaminants into environment".

Under Section 15(2) of the RMA no person may discharge any contaminant into or onto land in a manner that contravenes a rule in a regional plan or proposed regional plan, unless expressly allowed by a

resource consent or regulations or allowed by Section 20A of the RMA. This is an enabling and permissive stance. It anticipates that discharges of contaminants into or onto land may occur “as of right”, unless there is a rule in a plan that requires otherwise. In other words, where the effects of the discharge might need specific consideration to see whether or not the activity is in line with the RMA’s sustainable management principles, the Council may find it necessary to take disabling stance by imposing a rule.

For example, permitted activity rules have been included for the discharge of domestic wastewater into or onto land in seven of the Plan’s zones. The rules introduce environmental standards that the discharge must meet in order to be undertaken as a permitted activity. Non-compliance with these standards results in the discharge becoming a discretionary activity and a resource consent (called a discharge permit) is required to undertake the discharge.

Section 20A is also relevant to this Plan Change. Section 20A allows activities that did not formerly require a resource consent but which do as a result of a rule in a plan being either notified or becoming operative, to continue. However, there are limits as to how long the activity can continue: once the rule becomes operative, the person undertaking the discharge must apply for a resource consent within 6 months.

New Zealand Coastal Policy Statement

The Council’s responsibilities for managing the coastal environment are shared with the Minister of Conservation. The Minister is responsible for the preparation of a New Zealand Coastal Policy Statement (NZCPS) which sets out a national framework for promoting sustainable management of the natural and physical resources in the coastal environment. A regional coastal plan prepared by the Council must not be inconsistent with the NZCPS (Section 67(2)(c)).

Most buildings used for residential or accommodation purposes in the Marlborough Sounds are located in close proximity to the coast. This means that domestic wastewater from these buildings can be discharged to land within the coastal environment.

The current NZCPS was gazetted in 1994, and establishes that it is a national priority to:

- *Preserve the natural character of the coastal environment;*
- *Protect the essential or important elements of the natural character of the coastal environment;*
- *Protect the integrity, functioning and resilience of the coastal environment; and*
- *Restore and rehabilitate the natural character of the coastal environment where appropriate.*

Policy 3.3.1 embraces the adoption of a precautionary approach to activities where the effects are as yet unknown or little understood. Classifying activities into a permitted, controlled, discretionary, non-complying or prohibited status allows for that approach.

A number of policies covering inappropriate use and development of the coastal environment and the protection of coastal water quality are particularly relevant to this Plan Change. These include:

Policy 3.2.4:

Provision should be made to ensure that the cumulative effects of activities, collectively, in the coastal environment are not adverse to a significant degree.

Policy 3.2.5:

Subdivision, use and development in the coastal environment should be conditional on the provision of adequate services (particularly the disposal of wastes), and the adverse effects of providing those services should be taken into account when preparing policy statements and plans and when considering applications for resource consents.

Policy 5.1.1:

Rules should be made as soon as possible with the object of enhancing water quality in the coastal environment (including aquifers) where that is desirable to assist in achieving the purpose of the Act, and in particular where:

- (a) there is a high public interest in, or use of the water;*
- (b) there is a particular tangata whenua interest in the water;*
- (c) there is a particular value to be maintained or enhanced; or*
- (d) there is a direct discharge containing human sewage.*

The overall thrust of these policies is that adequate provision must be made for managing domestic wastewater from any residential development and that any subsequent discharge of domestic wastewater should not adversely affect coastal water quality, either by itself or in combination with other such discharges.

Marlborough Regional Policy Statement

The Marlborough Regional Policy Statement (RPS) was made operative on 28 August 1995. It provides a community based vision and direction for the management of the natural and physical resources of Marlborough. The RPS identifies five regionally significant issues for Marlborough including sustaining the life supporting capacity of Marlborough's water ecosystems and enabling community wellbeing.

A number of the subsequent objectives, policies and methods developed to deal with these issues are relevant to the Council's management of on-site domestic wastewater discharges.

Objective 5.3.2:

That water quality in the coastal marine area be maintained at a level which provides for the sustainable management of the marine ecosystem.

The accompanying text highlights the potential for runoff to be contaminated by poorly performing septic tanks.

Subsequent methods highlight that Council will investigate the operation of septic tanks on land adjacent to contaminated coastal water and require remedial works to be carried out where problems are apparent. It also identifies that Council will undertake a targeted education programmes in an attempt to improve the use and maintenance of septic tanks.

As poorly performing on-site systems can result in the runoff of domestic wastewater onto neighbouring properties, Objective 7.1.2 is also relevant:

To maintain and enhance the quality of life of the people of Marlborough while ensuring that activities do not adversely affect the environment.

The subsequent policies highlight the importance of maintaining or enhancing community health and amenity values.

Marlborough Sounds Resource Management Plan

In addition to preparing a regional policy statement, the Council's unitary authority status imposes an obligation to prepare a coastal plan, a district plan and such other regional plans as are necessary to promote the sustainable management of natural and physical resources. Because of its unitary authority status the Council has taken the opportunity to integrate the management of the resources of the Marlborough Sounds by preparing a combined regional, district and coastal plan, known as the Marlborough Sounds Resource Management Plan ("the Plan").

Except for those parts of the Plan that constituted a Regional Coastal Plan and various other specific matters, the Plan became operative on 28 February 2003 with the Minister of Conservation making the Regional Coastal Plan component operative a month later on 28 March 2003.

The Plan is comprised of three volumes:

Volume One Contains the introduction to the Plan, which incorporates information requirements for resource, consent applications, cross boundary matters and monitoring. Volume One contains the issues to be addressed by the Plan as a whole, the objectives, policies and methods to be used in promoting sustainable management of the natural and

physical resources of the Marlborough Sounds and the environmental results anticipated from their implementation.

Volume Two Sets out the rules to achieve the objectives, policies and methods including the assessment criteria for those activities subjected to resource consents. Volume Two also contains the interpretation section, which defines the words, terms and phrases used in the Plan.

Volume Three Contains the planning maps for the Plan.

This Plan Change affects provisions in Volume One and Two of the Plan.

How Does the Plan Currently Manage Domestic Wastewater Discharges?

Chapter 14 of Volume One contains provisions managing the discharge of solid and liquid waste to land, including domestic wastewater. Liquid wastes are dealt with under Objective 14.2.3.1 which seeks to achieve:

The treatment and disposal of human, rural and industrial liquid waste, including sewage sludge, in such a way that water and soil quality, land and water ecosystems and amenity values are not adversely affected.

This objective is supported by Policy 14.2.3.1.1:

Ensure that the receiving environment is not adversely affected by the treatment or disposal of human, rural and industrial liquid waste.

Zoning is used in the Plan as a method of applying an appropriate regulatory framework to activities, given the predominant use of the land resource. A permitted activity rule applies to on-site domestic wastewater discharges in seven of the Plan's zones.¹⁴ However, the rules introduce environmental standards that the discharge must meet in order to be undertaken as a permitted activity. These relate to buffer distances from water bodies, bores and other on-site systems, hazard zones, odour, discharge quality and quantity, soil conditions, treatment unit capacity etc. Non-compliance with any one of these standards results in the discharge becoming a discretionary activity and a resource consent (called a discharge permit) is required to undertake the discharge.

¹⁴ Rural Zone, Sounds Residential Zone, Urban Residential Zone, Rural Township Zone, Conservation Zone, District Recreation Zone and Local Recreation Zone.

Although assessment criteria are included within the Plan to guide the processing of resource consent applications, there are no specific assessment criteria for on-site discharges of domestic wastewater.

Other relevant legislation and information

Building Act 2004

There is a strong relationship between the RMA and the Building Act 2004 with respect to on-site systems. The treatment of the domestic wastewater prior to it being discharged, including the physical structure in which the treatment takes place, is building work and is subject to the Building Act's controls. The RMA, on the other hand, deals with the adverse effects of the discharge so any controls imposed under the RMA apply at the point at which the treated wastewater meets the soil.

A building consent is therefore required to authorise the construction/installation of an on-site system. All building work must comply with the Building Code. Sanitary plumbing and drainage work must comply with Clause G13 "Foul Water". G13.3.4 refers to on-site systems:

Where no sewer is available, an adequate on-site disposal system shall be provided for foul water...

Health Act 1956

Section 39 of the Health Act requires provision be made for the disposal of domestic wastewater in a sanitary manner for all dwellings. The Medical Officer of Health may require sanitary works to be undertaken to ensure that this is the case.

Local Government Act 2002

The Local Government Act requires the Council to undertake an assessment of water supply and wastewater services. The information required in any such assessment includes an assessment of any risks to the community relating to the absence in any area of either a water supply and/or reticulated wastewater service. The assessment must be included within Council's Long Term Community Plan or must be adopted through the Act's special consultative procedure.

National Standards

Four national standards, produced jointly by Standards New Zealand and Standards Australia, currently apply to the on-site discharge of domestic wastewater. AS/NZS 1546.1:1998, AS/NZS 1546.2:2001 and AS/NZS 1546.3:2001, apply to various treatment units (septic tanks, composting toilets and aerated wastewater treatment systems respectively). AS/NZS 1547:2000 applies to the on-site domestic wastewater management and identifies a range of performance objectives relating to public health, environmental quality and community amenity values. This standard also identifies the processes needed

to achieve these objectives, which focus on methods of site and soil evaluation and on-site system selection.

Part C: Options considered for dealing with the issue

Having determined that there is an issue with the poor performance of on-site systems in the Marlborough Sounds, and that this creates the potential for degradation of the surrounding environment, the Council set about identifying options for reducing the impact of on-site discharges.

As described in Part A of this report, a series of staff workshops was used to supplement the information already contained in a variety of planning and monitoring reports. As well as identifying issues created by a reliance on on-site servicing, the workshops provided the opportunity to identify and work through options for resolving the issues.¹⁵

The Council also engaged the services of a professional wastewater consultant with significant experience with on-site systems to technically review all options put forward and to identify additional options.¹⁶

The various options are identified and evaluated below.

As at 1993, there were an estimated 3900 dwellings in unreticulated areas in the Marlborough Sounds. A further 566 building consents have been granted for new dwellings in the same areas up until June of 2004. There is still undeveloped land zoned for residential purposes by the Plan, and many of these sites are more difficult to develop and service than those already built upon.

The options identified therefore fell in into two broad categories:

- Improving the performance of existing on-site systems over time; and
- Ensuring that the risk of adverse effects on the environment is not increased as a result of future residential development and subdivision.

¹⁵ A record of all staff workshops is kept on Council file M135-15-07.

¹⁶ All draft plan change provisions were technically reviewed by Ian Gunn of Auckland UniServices. A record of all feedback is kept on Council file M135-15-07.

Options for improving the performance of existing on-site systems

Management Option	Does the option improve system performance and reduce the potential for adverse effects on the surrounding environment?	Are the costs minimised? ¹⁷	Are there any risks of unexpected events?
<p>Option 1: Maintain existing management framework. The current management approach involves investigating complaints of poorly performing on-site systems.</p>	<p>No. This method has been relied upon for some time and yet there is still an issue with poor performance.</p> <p>Relying upon complaints does not ensure that Council is made aware of problem on-site systems due to the isolation of some properties and community reluctance to complain to Council. Discharges may therefore be adversely affecting the surrounding environment despite the fact that Council is prepared to respond to complaints.</p>	<p>Costs depend on the number and nature of complaints.</p>	<p>There can be a lack of obvious signs of poor performance, particularly when the wastewater is discharged into fractured schist. Discharges may therefore be adversely affecting the surrounding environment despite the fact that Council is prepared to respond to complaints.</p>
<p>Option 2: More stringent rules. A discharge permit could be required to continue discharging domestic wastewater to land.</p>	<p>A requirement for a discharge permit could provide the opportunity to assess the adequacy of the existing on-site system and address any issues found. This could result in considerable environmental benefit.</p> <p>However, the information held on existing on-site systems is extremely variable and landowners may even be unaware of the nature or location of the on-site system, let alone performance.</p>	<p>There would be costs involved with preparing an application for discharge permit and the processing the consent application.</p> <p>The Council may refuse the consent application if the existing on-site system is not acceptable, in which case the owner would have to upgrade or replace the on-site system. This could be at a significant cost to the owner.</p>	<p>Unless there is a direct discharge to water or runoff onto an adjoining property, it can be difficult to link effects on the surrounding environment to a particular on-site system. There is therefore a risk that a discharge permit would be granted without addressing the issues with individual on-site systems.</p>
<p>Option 3: Undertake investigations. Focus on determining the factors that influence the performance of existing on-site systems.</p>	<p>Research into the factors that affect system performance is ongoing. Council could collate this information, but must also pass this on to landowners to create any positive</p>	<p>Costs would depend on the nature of the investigations. Any primary research would involve a significant cost.</p>	<p>Relying upon existing information, which is not specific to the Marlborough Sounds, creates a risk that the information may not be relevant.</p>

¹⁷ The comments provided on costs are based on economic outcomes. Costs/benefits involving environmental, cultural, and social aspects are taken into account in the assessment of whether each option improves the performance of on-site wastewater management systems.

Management Option	Does the option improve system performance and reduce the potential for adverse effects on the surrounding environment?	Are the costs minimised? ¹⁷	Are there any risks of unexpected events?
	change (see Option 4).		
<p>Option 4: Share Information. The Council could provide property owners with details on the factors that affect the performance of on-site systems and outline appropriate operation and maintenance procedures.</p>	<p>Providing information to landowners might create an awareness of the issues and encourage them to change their practices (in terms of operation and maintenance). This could have positive effects on the performance of on-site systems.</p>	<p>Moderate cost associated with the production, publishing and dissemination of information.</p>	<p>Relying upon voluntary action does not necessarily result in all landowners changing their practices.</p> <p>In some cases (e.g., where the on-site systems are not appropriate to the site conditions or where the land application area has failed) changes in the way in which on-site systems are operated and maintained will have little affect on improving performance.</p>
<p>Option 5: Establish the performance of existing on-site systems. This would require inspections. In the event that the on-site system is found to be poorly performing, the Council could require that the system to be upgraded or replaced.</p>	<p>A system of on-site inspections could be implemented to check the performance of on-site systems. If the system is poorly performing, then the Council could use its powers under the Building Act 2004 and/or Resource Management Act 1991 to require instances of poor performance to be rectified.</p>	<p>The share scale of the Marlborough Sounds, and the number of existing on-site systems, would mean that implementing this system would be an expensive option.</p> <p>A requirement to upgrade or replace the on-site system could be at a significant cost to the owner.</p>	<p>Unless there is a direct discharge to water or runoff onto an adjoining property, it can be difficult to link effects on the surrounding environment to a particular on-site system. There is therefore a risk that inadequate on-site systems could be passed as satisfactory when in fact they are performing poorly and adversely affecting the surrounding environment.</p>
<p>Option 6: Require maintenance. Instead of encouraging property owners to maintain their on-site systems, the Council could require that the maintenance occur through bylaws.</p>	<p>One of the most significant causes of poor performance is a lack of maintenance, such as removing solids from the treatment unit. The Council could make it a requirement to remove the solids as a pre-requisite to legally continue discharging. Certification could be provided to authenticate that the maintenance has actually occurred.</p> <p>However, there are properties that are inaccessible for servicing in this manner.</p>	<p>Maintenance should be occurring as a matter of best practice regardless of any Council requirement. In other words the cost borne by the landowner is a cost that should be being met regardless of maintenance certification.</p> <p>There is a risk that the maintenance is required at more frequent intervals than is necessary given the intermittent occupancy of the dwelling.</p>	<p>Requiring the pump out of septic tanks and other treatment units, without providing a method of managing septic sludge disposal at the same time creates a risk of sludge disposal in an environmentally damaging manner.</p>

<p>Option 7: Reticulation. The Council or the community could provide reticulated sewerage systems instead of on-site options.</p>	<p>In those communities where on-site discharges are adversely affecting the surrounding environment, the dwellings could be reticulated. This not only removes the effect of on-site discharges but a centralised system is easier to manage.</p> <p>This might be a viable option where there is dense residential development, but would be difficult to implement where residential development is sporadic.</p>	<p>The costs of a reticulated sewerage scheme are considerable when compared to the ongoing use of on-site systems, particularly if those systems are performing adequately. However, the cost to the landowner may be comparable if the existing on-site system must be upgraded or replaced under some of the options highlighted above.</p>	<p>The sewage from the reticulated network must still be discharged into a receiving environment. There is therefore a risk that a combined discharge might also result in significant adverse effects on the surrounding environment.</p>
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Preferred Option(s)

It is not considered that more stringent rules will facilitate an improvement in the performance of existing on-site systems, particularly as so little is known about the majority of these systems. There could be up to 4500 on-site systems already being used in the Marlborough Sounds. Instead, it is more appropriate to commence collecting information on the nature and location of these systems, to undertake further monitoring to establish what effect on-site discharges are having, to undertake sanitary surveys where monitoring establishes issues and in the meantime encourage landowners to adopt more appropriate actions in terms of operation and maintenance by providing relevant information.

All of the above options can be implemented without the need for rules in the Plan (i.e., outside the RMA’s regulatory framework). However, there is an issue with the legal status of existing on-site discharges that should be dealt with when pursuing this preferred option. The current permitted activity rules contain conditions requiring the discharge to occur at least 30 metres from any surface water body or coastal water. As there are no existing use rights for discharges under the RMA (see Part B of this report for commentary on Section 20A of the RMA), this permitted activity condition also applies to existing on-site discharges. It is estimated that there are in excess of 1000 existing on-site systems located in close proximity to water in the Marlborough Sounds. Most of these would not comply with this set back distance and therefore require resource consent.

The difficulties with administering such a requirement given the lack of knowledge of existing on-site systems has already been highlighted above. Alternatively, a permitted activity rule could be retained for existing on-site systems, but in a manner that ensures that the discharge is still subject to a requirement to mitigate the adverse effects of the discharge on the surrounding environment. This would enable the use of enforcement (i.e., Option 1 or 5), while also providing the opportunity to apply educational methods (i.e., Options 3 or 4).

A number of the comments received during the consultation exercise highlighted the numerous practical difficulties that would be faced if implementing the system of maintenance certification outlined in Option 6. This is discussed in greater detail in Part D of this report.

The cost of reticulation will be prohibitive to implement Option 7 in all but the most densely populated areas. However, there may be locations where this is a realistic option of avoiding the adverse effects created by on-site discharges. It is probably best to consider such options under the Local Government Act 2002. This legislation requires an assessment of the risks to the community due to the absence of wastewater services.

Recommended Options: Options 3, 4 and 5 and investigate option 6 further.

Options for ensuring the existing situation is made no worse through future residential subdivision and development

Management Option	Does the option improve system performance and reduce the potential for adverse effects on the surrounding environment?	Are the costs minimised? ¹⁸	Are there any risks of unexpected events?
Option 1: Maintain existing approach. The Council processes approximately 40 discharge permits a year for new on-site systems.	No. Discharges that comply with the permitted activity standards at the time of installation may then perform poorly, due to inappropriate design, inadequate operation and maintenance.	Yes	This is unlikely given that the Council has been administering the Plan rules for 8 years. However, it is possible that non-compliance with the conditions of permitted activity rules or resource consents is not being picked up.
Option 2: Rely on the provisions of the Building Act 2004	No. The ability to consider the adverse effects of the discharge from the proposed on-site system is limited under the Building Act. This could result in the instalment of an on-site system that satisfied the requirements of the Building Code, but which does treat and contain domestic wastewater on-site.	Yes. The applicant would only have to go through one consenting process to authorise the instalment of an on-site system.	No.

¹⁸ The comments provided on costs are based on economic outcomes. Costs/benefits involving environmental, cultural, and social aspects are taken into account in the assessment of whether each option improves the performance of on-site wastewater management systems.

<p>Option 3: More stringent rules. The Council could require a discharge permit for any new on-site system.</p>	<p>Yes. The requirement for a discharge permit would allow an assessment of the appropriateness of any proposed on-site system, given the nature of the discharge and the site conditions/constraints. Such an assessment would reduce the potential of any new discharge adversely affecting the surrounding environment.</p>	<p>The applicant will have to pay for the costs of processing the discharge permit application. These average between \$600 and \$1000. However, this will only be an additional cost, when compared to the existing management framework, where the on-site system would have complied with the current permitted activity standards.</p> <p>Costs may be able to be minimised by removing the requirement for notification of the application or serving notice on affected parties.</p>	<p>The designer may not have undertaken a proper site and soil assessment on which any subsequent assessment of the on-site system relies. This creates a risk that an inappropriate on-site system will still be installed.</p>
<p>Option 4: Further policies. In combination with either Option 1 or Option 2, more detailed policies could be included in the Plan to guide the determination of discharge permit applications.</p>	<p>The Plan currently does not provide "criteria" for approving discharge permit applications. Providing such criteria would assist the consent authority to determine whether a discharge permit should be granted or not.</p>	<p>The policies would not create additional costs over and above the existing or potential costs associated with discharge permit applications and may actually reduce the costs by providing certainty in terms of the circumstances under which discharge permits will be granted (i.e., it will make the information requirements clear).</p>	<p>Unlikely, the policy would provide greater certainty for both the Applicant and the Council.</p>
<p>Option 5: Investigate alternative technologies</p>	<p>Potentially. Alternative technologies may address issues common with on-site servicing in the Marlborough Sounds. If such technologies were to be adopted, the impact of on-site discharges on the surrounding environment might therefore be reduced.</p>	<p>There will be a cost to the Council involved with undertaking the investigation. Costs would depend on the nature of the investigations. Any primary research would involve a significant cost.</p>	<p>Alternative technologies tend to be innovations and therefore may not have been used in conditions to those experienced in the Marlborough Sounds. However, any potential problems with applying the technology should be detected quickly if properly monitored.</p>
<p>Option 6: Use/adopt national standards</p>	<p>AS/NZS 1547:2000 is currently used to assist the processing of discharge permit applications. If Council formerly adopted the standard then it would clearly set a benchmark in terms of site investigation and system design.</p>	<p>No. As a national standard, designers should be already using AS/NZS 1547:2000 as a basis of undertaking site investigations and subsequently designing an appropriate on-site system.</p>	<p>Innovative design might assist to address some of the issues created by on-site servicing in the Marlborough Sounds. AS/NZS 1547:2000 identifies that alternative on-site systems (i.e., systems not described in the standard) can be used if thoroughly investigated and able to be justified. If the national standard, and</p>

			the design procedures it contains, was formerly adopted, it might remove flexibility and the opportunity to think outside the square.
<p>Option 7: Prepare designer guidelines. Guidelines could be prepared to assist designers on the methods they should be using to investigate sites and design on-site systems</p>	<p>Potentially. The Marlborough Sounds presents unique constraints to effective on-site servicing and it would be useful to interpret the national standards in the context of local conditions.</p>	<p>There would be a cost to Council to prepare the guidelines.</p> <p>The nature of any cost imposed on the designer, and therefore the landowner, would depend on the nature of the guidelines and how they would be used.</p>	<p>There is a risk that the guidelines specify inappropriate methods. However, involving industry practitioners in the development of the guidelines can minimise this risk.</p>
<p>Option 8: Review subdivision standards. Many existing issues are caused due to allotment size created through historic subdivisions. The subdivision provisions of the Plan could be reviewed to ensure that the current provisions relating to subdivisions ensure sufficient land is set aside to allow for effective on-site systems to be installed.</p>	<p>Any improvements would depend upon the findings of the review.</p>	<p>No.</p>	<p>Unlikely, any changes would build on experience with administering the current plan provisions.</p>
<p>Option 9: Discourage certain systems. On-site systems that have a documented record of failure could be discouraged through the use of plan rules.</p>	<p>Yes.</p>	<p>Potentially. By discouraging the use of systems that have not worked in Marlborough Sounds conditions, landowners are less likely to invest in systems that are not sustainable, saving them costs in the long term. However, this may necessitate an investment in more expensive on-site systems.</p>	<p>No.</p>

Preferred Option(s)

The Council is concerned that the permitted activity rules are not working effectively to avoid, remedy or mitigate the adverse effects of new on-site discharges on the Marlborough Sounds environment. This is based on experience with administering the Plan rules over the past 8 years and experience with the performance of particular on-site systems over those years.

The common denominators appear to be a variable standard of site investigation, system design and system installation. Due to these factors the discharged wastewater may not be treated or contained on the site, despite the fact the on-site system complies with the permitted activity standards at the time of installation.

In order to maintain or improve coastal water quality, public health standards and community amenity values, the Council believes that it is appropriate to exercise discretion over whether any new discharge of domestic wastewater commences. The Council has the ability to do so given its functions under Section 30 of the RMA. This will enable an assessment of the suitability of the proposed on-site system, given the nature of the discharge and the site conditions, to occur. Rules would have to be imposed to require discharge permits given the enabling stance of Section 15(2) of the RMA.

Additional policies that identify criteria for determining discharge permit applications would provide greater certainty to the applicant and the community alike. National standards and local design guidelines could also be used to assist this assessment. At the same time it is appropriate to investigate alternative technologies as these may overcome some of the issues faced with on-site servicing in the Marlborough Sounds.

As is set out in Part A of the report, conventional on-site systems have consistently been found to fail in Marlborough Sounds conditions. This is particularly the case in heavy clay soils. Discouraging the use of conventional on-site systems in such soil conditions is likely to result in investment in alternative on-site management options and would implement direction provided by earlier studies.¹⁹

The subdivision of land is a critical step in determining the ability to service subsequent dwellings on each allotment as the subdivision consent process determines allotment size, dimensions and layout. It is critical that each allotment contains sufficient land, of an appropriate nature, to act as an effective land application area. It is therefore appropriate to review the subdivision provisions of the Plan to ensure that they are consistent with the objectives of Plan provisions focussing directly on on-site discharges.

Recommended Options: Options 3 to 9.

¹⁹ See the 1976 inter-governmental study, the 1988 Ministry of Works and Development discussion document, the 1988 Marlborough Sounds Maritime Planning Authority scheme and the 1992 Works Consultancy Services Ltd discussion document.

Part D: The Draft Plan Change

The above assessment of options identifies that no one option will, by itself, be successful in improving the performance of on-site systems and reduce the potential for adverse effects of on-site discharges on the surrounding environment. Instead, the Council is proposing to utilise a suite of options to develop a framework for promoting sustainable on-site domestic wastewater management in the long term. In order to implement this framework, the Council prepared a draft Plan Change. A summary of the draft Plan Change is described below.

It is important to note that this draft Plan Change was released for public comment. As a result of this consultation and further consideration by the Council, some aspects of the draft were modified and the plan change that was eventually adopted by the Council is different in some aspects to what is described here.

Chapter 14 - Discharges of Waste to Land

Three new issues were identified for inclusion in Chapter 14 of Volume One of the Plan, as follows:

The use of inappropriate on-site wastewater management systems to service buildings producing domestic wastewater, and/or the poor management and maintenance of on-site wastewater management systems, can result in adverse effects on the surrounding environment.

Several communities in the Marlborough Sounds suffer from a degraded environment and a potential risk to public health due to their reliance on the on-site management of domestic wastewater.

The subdivision of unsewered land for residential use can create a development density that exceeds the capacity of individual allotments to assimilate domestic wastewater in a manner that protects the surrounding environment.

These issues all reflect the resource management issue identified in Part A of the report.

New on-site wastewater management systems

It was proposed to include a new objective in Chapter 14 of Volume One seeking to ensure that new on-site systems treat and contain all domestic wastewater on-site.

All new domestic wastewater discharges and discharges previously authorised by way of a discharge permit would require a discharge permit to commence/continue under the draft plan change. The existing permitted activity rules in 7 of the Plan's zones were to be deleted and replaced with a new restricted discretionary activity rule. This would allow the design of any proposed on-site system to be assessed by the Council to ensure that it suits the site, given the site conditions and limitations. In other words, the

potential for the discharge to adversely affect the surrounding environment could be evaluated and the application determined accordingly.

It was proposed to add a number of policies to Chapter 14 to assist with the preparation, assessment and determination of subsequent resource consent applications. This included the use of national standards, such as AS/NZS 1547:2000.

As the assessment process would be a technical assessment, to determine whether there would be adverse effects beyond the property boundary, it was considered that there was no need for neighbouring property owners to be involved in the process. Applications for subsequent discharge permits would therefore be processed on a non-notified basis.

In addition to this regulatory method, the draft plan change also identified a range of non-regulatory methods aimed at improving the standard of design including the preparation of design guidelines, the provision of training for industry practitioners and liaison with the practitioners through the establishment of a working group.

A new prohibited activity rule was included for the discharge of domestic wastewater through any new soak pit. This approach was based on the fact that the use of soak pits results in a discrete discharge into the environment, as opposed to distributing the wastewater over a large area, and therefore creates the potential for significant adverse effects. This is because the wastewater receives little treatment as it passes through the soak pit.

Existing on-site wastewater management systems

Property owners are responsible for operating and maintaining their own on-site systems. As both operation and maintenance influence the performance of on-site systems, the draft plan change recognised the important role property owners play in avoiding adverse effects of on-site discharges on the Marlborough Sounds environment. It was proposed to include a new objective in Chapter 14 of Volume One seeking to ensure all on-site systems perform in an efficient operating condition on an ongoing basis.

A range of policies were included to support this new objective, the majority of which provided a framework for the use of non-regulatory methods aimed at improving the operation and maintenance of on-site systems. These methods focussed on collecting information on the how the performance of on-site systems can be improved and sharing this information with the community to change and improve on current practices.

A method of certifying maintenance was also proposed in recognition of the fact that education will not necessarily result in appropriate changes in operation and maintenance required. The certification would be required in order to legally continue discharging domestic wastewater into or onto land.

In addition to the non-regulatory methods, compliance with the conditions of resource consents and permitted activity rules was to be monitored and enforcement action taken where necessary.

In order to enable the above methods to be applied, and to resolve the legal issue with existing discharges highlighted in Part C of this report, discharges from existing on-site systems could continue without a discharge permit under the draft plan change. A new permitted activity rule was to be included in 7 of the Plan's zones that previously had permitted activity rules for the discharge of domestic wastewater to land from existing on-site systems. However, conditions of the permitted activity rule require that the on-site system be maintained in an efficient operating condition and that the discharge from it must not adversely affect neighbouring properties or water quality in nearby water bodies.

Subdivision of land

Following a review of the subdivision provisions of the Plan, it was determined that the current rules already encourage the use of lots sizes that, in almost all cases, would allow for the development of effective land application areas.²⁰ However, the rules do enable any person to apply for a non-complying activity to reduce lot size below the standards specified in the Plan.

The draft plan change directed that any person proposing to subdivide land for residential purposes should assess all alternatives for servicing the lots and then make an assessment of the best practicable option. If this option happens to be an on-site option, then the draft plan change policies directed the size and shape of any of the proposed lots allows for effective land treatment areas to be developed.

The plan change also identified that several communities in the Marlborough Sounds potentially suffer from a degraded environment and a risk to public health due to their reliance on-site management of domestic wastewater. This is because the density of development exceeds the ability of the surrounding environment to assimilate contaminants. The draft plan change identified the areas, Okiwi Bay, Ngakuta Bay, Double Cove, Anakiwa/Tirimoana and Moenui, where it is considered that such cumulative effects are being created and provided direction about those areas.

Okiwi Bay and Ngakuta Bay have land zoned by the Plan as being suitable for residential development, but which have yet to be subdivided for that purpose. The draft plan change identified that it is inappropriate to allow for further residential development, when the existing level of development in these areas is already adversely affecting the surrounding environment.

²⁰ Land zoned Sounds Residential can be subdivided into 4000 square metre lots as a controlled activity and into 3000 square metre lots as a discretionary activity.

Definitions

Due to a range of new terms being included in the draft plan change, a range of new definitions were included to provide certainty as to how the plan provisions should be applied.

Public Response to the Draft Plan Change

The Council sought feedback on the draft plan change from the community, iwi, wastewater industry practitioners and other groups such as residents associations, marine farmers, health authorities, government departments and others that use the waters of the Marlborough Sounds for recreational purposes. A discussion document was prepared which summarised the issues and the draft plan change. The Council released this document on 19 July 2004 and received comments through to 20 August 2004. Meetings were also held with those individuals and groups that requested them. A record of these meetings is contained in Appendix 2.

A flyer summarising the discussion document was also prepared and sent to all 3700 rural ratepayers in the Marlborough Sounds to further encourage feedback.

Comments were received from 34 individuals or groups. Most of these recognised the importance of protecting the Marlborough Sounds environment and therefore supported the concept of improving the performance of on-site systems. Marine farmers also highlighted the potential impact of bacterial contamination to marine farming and wild shellfish gathering.

There was general support for requiring discharge permits for new on-site systems and for providing further guidance to the processing of both discharge permit applications and subdivision consent applications. A small number of comments highlighted perceived deficiencies with the resource consent process outlined in the draft plan change or the policies that guide it. These deficiencies included:

- Uncertainty regarding the effect of the permitted activity rule on existing discharges authorised by way of discharge permits;
- Disagreement with the proposed 15 year term of discharge permits granted. A longer term was sought instead;
- The need for buffer distances between the proposed discharge and surface water bodies or Sounds Foreshore Reserve;
- Disagreement with the proposed non-notified status of any discharge permit application;
- Encouraging the use of advanced on-site systems in clay soils might preclude other appropriate on-site systems such as LPED systems; and

Most of the comments received related to improving the performance of existing on-site systems, particularly the methods of pursuing this objective outlined in the draft plan change. The majority of these emphasised that education is a more appropriate tool than what they perceived to be regulation through the system of maintenance certification. The difficulties with implementing a system of maintenance certification were highlighted including the practical difficulties created by isolation, inaccessibility of septic tanks for “sucker trucks”, issues of funding, the disposal of septic tank sludge, the intermittent use of dwellings and, finally, the lack of detail regarding the implementation of this method. It was felt that no system of maintenance certification should be developed and implemented until these issues had been worked through with the community. All stressed that it was essential to co-operate with the affected communities and a requirement for maintenance certification would be counter productive in this regard.

The other substantive issue raised regarded the policy on avoiding further subdivision in Ngakuta Bay and Okiwi Bay. Three landowners were affected by the policy more than any others, as they owned substantial areas of land zoned Sounds Residential that had yet to be subdivided into residential properties. Two of these landowners expressed concern that they were being penalised for poor performance of existing on-site systems in those areas, over which they had no control, and that the Council might be acting without detailed information about the impact of on-site discharges on coastal water quality.

In both cases, those making the comments suggested that, although they recognised the need to protect the Marlborough Sounds environment, the nature of the problem should first be confirmed and then remedial action taken, where necessary and appropriate.

A number of practical suggestions were made in terms of improving the performance of existing on-site systems as well. Although outside the scope of the draft plan change, these suggestions have been noted for further action.

Finally, a number of comments were concerned that there are other sources of contamination, particularly discharges from vessels, which also need to be controlled in some way.

Follow-up to specific issued raised

A number of specific issues requiring further comment have arisen out of the feedback received on the discussion document. Those of particular note are listed below.

Maintenance Certification

The practical issues surrounding maintenance certification were given careful consideration. It is acknowledged that these issues create a significant barrier to the successful development and implementation of any scheme of programmed maintenance. It would therefore be difficult to justify the inclusion of any such method within the plan change. The Council still considers that maintenance, including septic tank pump out and correct maintenance of proprietary treatment units, is critical to the

ongoing performance of on-site systems. This has been confirmed in expert advice received from a Council consultant.²¹

Given the potential for contamination created by a lack of maintenance, it is considered that Council must still act to improve the current level of maintenance in some way. The focus, in the short term, will therefore be on the sharing of appropriate information between the Council and the Marlborough Sounds community. However, the risks involved in this approach, when compared to a system of programmed maintenance, are probably greater due to the reliance on voluntary action. For this reason, the Council will also commence investigating the practical issues identified in the comments, in consultation with the community. These new initiatives are reflected in the methods of the plan change.

It is possible to take further action in terms of proprietary wastewater treatment systems. This is because programmed maintenance is already required as a condition of contract between the homeowner and system provider. The plan change methods support this approach.

The subdivision of land in Okiwi Bay and Ngakuta Bay

There has been considerable dialogue with landowners who own large areas of land in Okiwi Bay and Ngakuta Bay zoned Sounds Residential. In all cases, the land has yet to be subdivided into residential allotments, which means that these landowners would probably have been most affected by the draft policy of avoiding further subdivision in these areas without reticulated sewerage.

Following further analysis, it is considered that the existing Plan zoning and provisions signal that the land in question is suitable for residential subdivision and development. The Plan rules also imply that allotments in excess of 4000 square metres provide sufficient land area for wastewater servicing on-site.

The policy was included in the draft plan change to deal with existing servicing problems in Okiwi Bay and Ngakuta Bay. Strategic direction for the future of the two communities is still considered necessary in order to maintain or enhance community health standards and coastal water quality. However, the policy would have penalised landowners who intended creating large lots, in compliance with the Plan's standards, without dealing with the problems that the density of past development has already created.

For this reason, the policy has been amended to incorporate the 4000 square metre threshold. The policy therefore still applies to any subdivision of land that would exacerbate the existing density of residential development.

Buffer distances

²¹ Gunn, I. September 2003. **Personal Communication**

Several comments highlighted concerns regarding the removal of the permitted activity rules on the basis that it also removed a *de facto* buffer set out in the permitted activity standards. The conditions of the current permitted activity rules require a distance of at least 30 metres between the discharge and any surface waterbody or coastal water. There was an incentive to comply with this buffer in order to avoid the need to obtain a discharge permit.

The advantages of requiring a discharge permit for any new domestic wastewater discharge, as described elsewhere in this report, outweigh the desirability of retaining the permitted activity and the buffers they encourage. However, it is obviously appropriate to minimise the potential for contamination by retaining the greatest possible distance between the discharge and any water. To achieve this, an addition has been made to one of the plan change policies to express a community preference for selecting land application areas furthest from water resources. In other words, if there are two or more suitable sites for land application areas, then the site the furthest from any water resource should be selected.

Non-notification and the effect of the permitted activity rule

Several groups were concerned at the non-notification of individual discharge permit applications. Several options were explored to alleviate such concerns, including a commitment to consult particular groups on discharge permit applications.

On reflection, it is now considered that the absolute requirement not to notify discharge permit applications was too rigid. There may be circumstances in which other parties should be provided the opportunity to be involved in the resource consent process. A good example is where the discharge is into or onto potentially unstable land where downslope neighbours may be potentially affected. As such, this requirement not to notify applications has been removed from the plan change. Instead, Council staff, acting under delegation, will exercise judgement as to whether or not to notify any application. The policies being added to Chapter 14 of Volume One will assist the officer to make this determination.

Status of existing discharges authorised by resource consent

The proposed permitted activity rule included within the discussion document for existing discharges applied to lawfully established systems. It was pointed out through the consultation process that the permitted activity rule would therefore apply to discharges previously authorised by discharge permit. Given that the discharge permit was required due to the potential for the discharge to adversely affect the surrounding environment, it is considered appropriate to continue the consent requirement for such discharges. The permitted activity rule has been amended to exclude on-site discharges authorised by discharge permits. Such discharges will continue to be considered as discretionary activities when the current discharge permit expires.

Part E: Evaluation under Section 32

The Quality Planning website, which promotes best practice by sharing knowledge about policy and plan development under the RMA, states that the Section 32 process must be transparent and well documented, with all assumptions and decisions justified. This helps to ensure that:

- Good environmental outcomes are achieved, at the lowest practicable cost to individuals and the community.
- Plan provisions are targeted at achieving the purpose of the RMA by the most appropriate methods.
- Councillors (as decision makers) have sound policy analysis on which to base their decisions about resource management issues.
- A sound basis is provided for re-assessing whether the chosen provisions are necessary and appropriate once they are in use and the environmental outcomes become apparent.

The Council considers that the process it has gone through in identifying the resource management issue and the various steps it has taken in considering how to deal with that issue, have assisted in reaching a more robust decision that will ultimately achieve better environmental outcomes for the community. This section of the report then, draws together the various steps in the process, against the technical background of the requirements of Section 32 of the RMA.

As has been highlighted in Part D above, a number of changes to the draft Plan Change have been made. The plan change, as amended, is attached as Appendix 3.

Appropriateness of objectives

The land, aquatic and coastal resources of the Marlborough Sounds combine to form a unique environment, an environment in which it is clearly desirable to live, holiday and recreate in. The opportunity to do so contributes to the social and cultural wellbeing of not just the Marlborough community, but also the holidaymakers and tourists that visit the area.

The residential and tourism use (through the provision of visitor accommodation) of the environment inevitably generates domestic wastewater. The wastewater contains a variety of contaminants, including bacteria and nutrients, which have the potential to harm the environment into which they are discharged. As has been described throughout this document, the usual manner of managing domestic wastewater generated in residential dwellings, baches and visitor accommodation is to utilise some form of on-site system to treat and contain the contaminants within the property.

Poor performance of on-site systems has created a potential for significant adverse effects on the Marlborough Sounds environment, as has been described in Part A. Poor performance can result in the

runoff or infiltration of domestic wastewater from the land application area so that contaminants leave the property and enter the surrounding environment. There they can degrade water and shellfish quality, adversely affect the amenity values enjoyed on adjoining properties, and create a risk to public health. In other words, the residential use of the natural and physical resources of the Marlborough Sounds threatens some of the very qualities that attract people and marine farming industry to the area in the first place.

There are very clear community expectations of maintaining or enhancing the Marlborough Sounds environment, as reflected in the objectives of the Regional Policy Statement and the Plan. These include maintaining or enhancing freshwater and coastal water quality, residential amenity values and public health standards (see Part B for further details).

It is important to recognise that there is considerable demand for further residential properties in the Marlborough Sounds, as reflected in the number of building permits issued for new dwellings in the last 10 years (a total of 566). The Plan specifically provides for this demand by zoning land as Sounds Residential, which allows one residential unit per allotment as a permitted activity. A significant proportion of such properties are yet to be developed for residential purposes. This probably means that on-site systems will continue to be relied upon to service future residential development.

It is proposed to add three objectives that are collectively aimed at improving the performance of on-site systems in order to avoid, remedy or mitigate the potential for residential and tourism development to adversely affect the Marlborough Sounds environment.

Each of the objectives targets a discrete part of the process of using on-site systems to manage domestic wastewater: the creation of the initial residential allotment, the design of on-site systems installed to service dwellings on individual allotments, and the ongoing operation and maintenance of such systems. All of these factors contribute in a unique way to affect the performance of on-site systems.

Objective 14.4.1: To ensure that new on-site wastewater management systems are designed, located and installed to effectively treat and contain all domestic wastewater on-site.

One of the reasons for poor performance of existing on-site systems is that they do not reflect the conditions that exist on the site. As has been highlighted elsewhere in this report, the Marlborough Sounds presents unique constraints to effective on-site management of domestic wastewater including soils of low permeability, thin soils, steep slopes, and potentially high rainfall. The above objective recognises that new on-site discharges are a necessary part of providing for the residential and tourism use of the Marlborough Sounds environment, but also seeks to ensure that the potential for poor performance is minimised through appropriate design and installation. In other words, if the on-site system is appropriate to the site conditions, the potential for adverse effects to be created offsite is

reduced. Of course, the potential for adverse effects also relies upon appropriate operation and maintenance, which Objective 14.4.2 seeks to address (see below).

Objective 14.4.1 will have marginal effect at the date of notifying this plan change, but as further properties are developed (or redeveloped) for residential purposes, as seems inevitable given the sustained demand for such properties, the objective will seek to ensure that the existing situation described in Part A of this report is made no worse, while providing for this demand in a manner that is consistent with the current Plan zonings.

Avoiding any further on-site discharges is the only alternative objective, but this could effectively act as a prohibition on any further residential development. This would unfairly adversely affect existing landowners, who have an expectation from existing Plan provisions that they can develop their properties for residential purposes.

For this reason, the Council does not believe that there are any alternative objectives with respect to new on-site systems. As has been stated, it is inevitable that residential activity and visitor accommodation will continue to rely upon on-site servicing, and on-site servicing is preferable to direct discharges of domestic wastewater to water. It is then important that the domestic wastewater is treated and contained on-site to prevent any adverse effects on the surrounding environment.

Objective 14.4.2 To ensure that all on-site wastewater management systems perform in an efficient operating condition on an ongoing basis, while avoiding adverse effects on the surrounding environment.

Once on-site systems are installed, it is important that they are appropriately operated and adequately maintained in order to ensure that they continue to treat and contain domestic wastewater on-site over time.²² In other words, Objective 14.4.2 seeks to ensure that the on-site system is sustainable. As operation and maintenance is so critical to the performance of any on-site system, it is considered that there are no alternative objectives.

Objective 14.5.1 To ensure that the management of domestic wastewater, associated with residential subdivision and development, does not adversely affect the surrounding environment.

Future demand for residential activity in the Marlborough Sounds might be satisfied through the subdivision of land currently used for rural purposes. Any proposal to subdivide land requires a resource consent under the current rules of the Plan. This objective seeks to ensure that due consideration is given, through this consent process, to the options available for servicing subdivisions so that the subsequent allotments are able to be serviced in a sustainable manner.

In the past, land has been subdivided without due consideration of domestic wastewater management. This has resulted in allotments that are too small to treat and contain wastewater on-site. In such situations, remedial action is clearly required.

Objective 14.5.1 recognises the role subdivision design and layout can play in avoiding offsite adverse effects of domestic wastewater discharges in the future. At the same time, it provides direction for dealing with the adverse effects of past subdivisions.

In summary, it is considered that the three objectives will work together, each focussing on a different aspect of on-site servicing, to enable the community to continue to utilise the Marlborough Sounds but in a manner that ensures that the consequences of this use, in terms of generating domestic wastewater, do not adversely affect the very same environment. Given that the Plan currently deems residential use as an appropriate use of the Sounds, it is considered that the objectives are the only way in which the consequences of the use are taken into account and appropriately managed.

Efficiency and effectiveness of the policies, rules, or other methods

There are a range of policies aimed at achieving each of the objectives, and subsequent methods (including rules) for implementing the policies. These reflect the preferred options discussed in Part C of this report.

Policies and methods under Objective 14.4.1

The first objective seeks to treat and contain domestic wastewater within property boundaries. Past experience with administering the permitted activity rules of the Plan, and the General Authorisations of the Marlborough Catchment Board prior to that, has demonstrated that setting performance standards does not ensure that appropriate on-site systems are installed. Clearly, it is necessary to be able to independently assess the proposed design and exercise some form of discretion as to whether it is appropriate, given the nature of the discharge and the site conditions.

This is essentially the approach embodied in the policies and methods of the plan change. Through the requirement for a discharge permit, the Council has the ability to consider the nature of the discharge, the site conditions and the proposed design and can then determine, using the policies, national standards and design guidelines, the appropriateness of the proposed on-site system. If the proposed design is considered to be appropriate then a discharge permit will be granted, authorising the commencement of the wastewater discharge.

²² Gunn, I. September 2003. **Personal Communication**

The Council has taken a strict stance on the use of particular on-site systems, including the use of conventional on-site systems in clay soils²³ and the use of soak pits. The status of discharges from conventional on-site systems in clay soils is non-complying, as opposed to discretionary for other on-site discharges, while the use of soak pits is prohibited. This stance reflects the accumulated experience with the poor performance of such systems in Marlborough Sounds conditions.

To support this approach, the plan change also includes methods to improve the standard of design, such as the development of design guidelines and the provision of training.

There are two principal alternative methods of assessing the appropriateness of the proposed on-site system: Utilising the provisions of the Building Act 2004 and continuing to rely on the existing permitted activity rules (i.e., the do nothing option).

As described in Part C, the consideration of on-site systems under the Building Act is limited to those matters specified in the Building Code. This means that Council's consideration would stop at the point of discharge into or onto the soil. As the soil is a fundamental part of the on-site system and effectively functions to treat and absorb the wastewater, the Council is not able to consider the ability of the receiving environment to assimilate the proposed hydraulic and contaminant loading. So, although the Council would be able to judge whether the on-site system effectively services the dwelling (i.e., whether the building is sanitary or not), it would be limited in its ability to determine whether contaminants present in the subsequent discharge are treated or contained on-site.

The continued use of the permitted activity rules does not provide Council the discretion to determine the appropriateness of the on-site system. Essentially, by setting the parameters under which a discharge can occur without a discharge permit, Council is identifying that the on-site system is sustainable. The fact that this is not necessarily the case has already been discussed elsewhere in this report.

The other issue with continuing to utilise the permitted activity standards is the difficulties in establishing non-compliance with the standards. Non-compliance with the permitted activity rules is often picked up through Project Information Memorandum (PIM) process. In many instances, the information accompanying the PIM application does not identify matters such as the proximity of the discharge to water bodies or neighbouring fields. This means that there is the risk that on-site systems are being installed without the necessary authorisation under the RMA. The universal requirement for a discharge permit will eliminate this possibility.

Considering the issues with the two alternatives, the framework included in the plan change is the most effective way of achieving the objective because it allows for the direct consideration of the adverse

²³ These soils are described as Category 1, 4, 5 and 6 soils in the relevant rule. These categories relate to specific soil types described in AS/NZS 1547:2000 and are adopted in the Council's own guidelines.

effects of the discharge on the surrounding environment. It also discourages the use of on-site systems that have historically been found to perform poorly in the Marlborough Sounds.

Utilising the resource consent process is potentially the most efficient method of achieving the objective. Given the history of poor performance resulting from the use of inappropriate on-site systems, it is considered that there is considerable environment benefit created by implementing the policies and methods with little, if any, associated environmental cost.

There is, however, an economic cost involved with using this framework as those wanting to install a new on-site system will have to spend additional money to prepare an application for discharge permit and pay the associated costs of processing the application. It is important to note that this cost will only apply to those persons who intend to install a new on-site system and the subsequent discharge would have complied with the permitted activity rules of the current Plan. All others intending to install a new on-site system already have the cost of securing a discharge permit.

A typical discharge permit authorising a discharge of domestic wastewater to land currently costs between \$600 and \$1000 to process. This cost makes up a small proportion of the total cost of servicing the dwelling. Costs of on-site systems vary significantly depending on the type of on-site system and range from \$5000 to \$15,000.²⁴ The costs could be greater when installing on-site systems in the Marlborough Sounds due to transportation costs. There will also be the cost of site and soil evaluation and system design on top of the cost of the system itself. Most new on-site systems are installed to service new residential development, so the costs of wastewater servicing described above are (as a total) only a proportion of the overall cost of the development.

In summary, the proposed framework under Objective 14.4.1 imposes only marginal additional costs. Some of the methods, such as the use of national standards and guidelines, may actually assist to reduce the cost of preparing a discharge permit application by providing greater certainty as to the information requirements.

Ensuring that the proposed on-site system is appropriate for the site may also save costs in the long term by ensuring that the on-site system does not have to be replaced following failure at a later date. This potential saving certainly applies to the policy of discouraging conventional on-site systems in soils of low permeability. Although there is an additional cost in investing in alternative systems (i.e., they are more expensive to install than conventional systems), property owners will not have to pay replace the system in the not to distant future.

²⁴ On-site NewZ. 2004. On-site wastewater systems – Selecting a system for your property.

The prohibition of soak pits will not impose any additional cost as this method of disposing (as opposed to treating) domestic wastewater has not been an acceptable method for quite some time. The prohibition on soak pits included in the rules merely ratifies this position.

The cost of implementing this framework to the Council is recovered through fees charged to process the resource consent application.

If Council were to rely on the Building Act 2004 or the current permitted activity rules, then there is a risk that on-site systems will be installed that are inappropriate given the nature of the discharge and site conditions. This is likely to result in poor performance and the potential for runoff or infiltration of contaminants into the surrounding environment. Methods have been included to monitor the operational performance of on-site systems and this might pick up non-compliance with the permitted activity rules, but it is inherently difficult to link adverse effects on the environment to specific discharges.²⁵ This risk is minimised by assessing all new on-site systems prior to installation in the manner described above.

In summary, the policies and methods under Objective 14.4.1 impose marginal economic cost for potentially significant environmental benefit, particularly in the context of the alternatives. That benefit will expand over time, as further residential and visitor accommodation developments that rely on on-site servicing are proposed. For these reasons, it is considered that the proposed framework is the most efficient means of achieving the objective.

Policies and methods under Objective 14.4.2

Objective 14.4.2 seeks to ensure that all on-site systems, both those installed prior to the notification of this plan change and those installed in the future, are sustainable in that they continue to treat and contain the wastewater on-site on an ongoing basis.

The operation and maintenance of on-site systems is critical to the ongoing performance of on-site systems.²⁶ Circumstantial evidence indicates that on-site systems are being used in an inappropriate manner and/or without adequate maintenance. Examples include overloading septic tanks, using chemicals harmful to the healthy functioning of septic tanks, and not removing the sludge and scum that has built up within the septic tanks. These factors all affect the performance of on-site systems.

The plan change provisions under Objective 14.4.2, focus on the important role landowners play in achieving sustainable on-site systems. Landowner ignorance is possibly the greatest barrier to proper use and maintenance, so the provisions include a range of non-regulatory methods aimed at informing landowners and encouraging appropriate behaviour. These methods include the collection and sharing of information on factors that affect the performance of on-site systems. With the requirement for a

²⁵ Gunn, I. May 2003. **Personal Communication**

²⁶ Gunn, I. September 2003. **Personal Communication**

discharge permit described under 14.4.1 above, operation and maintenance guidelines can be required as a condition of consent for any new on-site system to ensure that the landowner is aware of how to properly use and operate their own on-site system. The effectiveness of the policies and methods will depend on how willing people are to alter their behaviour in response to information and education.

An alternative to this approach is to require maintenance to occur. This was promoted in the draft plan change through a method of “maintenance certification”. Systems of maintenance certification have been successful in other parts of the country where it is known that on-site discharges are adversely affecting the surrounding environment, most notably in the Bay of Plenty.²⁷

Comments received during the consultation exercise highlighted a range of practical difficulties in applying such a system in the Marlborough Sounds, including a lack of information about the nature and location of on-site systems, let alone how they should be maintained, uncertainty regarding the means of funding such a system, issues created by the intermittent use of on-site systems, problems with the accessibility of sites for servicing, the fact that septic sludge is only accepted at the Blenheim Wastewater Treatment Plant and the problems created by the share scale of the Marlborough Sounds.

These practical difficulties mean that a system of maintenance certification is going to be extremely difficult to develop and implement in the short term. Due to the lack of certainty regarding the effectiveness of the plan changes policies and methods under Objective 14.4.2, the Council believes that it is still appropriate to investigate the concept of maintenance certification further, in consultation with the community. In this manner, if the voluntary methods are found to be ineffective then a potential alternative might be available.

The Council will also continue to react to complaints regarding poor performance of on-site systems and, where necessary, will require the landowner to upgrade or replace their on-site system. This is not a particularly effective method of ensuring that existing on-site systems are not adversely affecting the surrounding environment, particularly given the isolation of some properties and the reluctance of residents to report neighbours. However, the only other option to achieve the objective is to commence inspecting all on-site systems. The issues raised with respect to “maintenance certification” also apply to any formal inspection process. There are also difficulties demonstrating poor performance with individual on-site systems where there is no obvious failure.²⁸

However, until information is collected on the nature, location and performance of existing on-site systems (one of the methods included in the plan change identifies that Council will commence collecting this information and storing it on a database), a voluntary regime is considered to be the most effective

²⁷ Bay of Plenty Regional Council. December 1996. **On-site Effluent Treatment Regional Plan.**

²⁸ Gunn, I. May 2003. **Personal Communication**

means of achieving the objective. Any change in behaviour created will contribute to incremental improvements in the performance of existing on-site systems.

As no controls are to be imposed upon landowners over and above the permitted activity rule, there is no significant cost to be imposed upon them unless their on-site system is found, through the complaints process or through state of the environment monitoring, to be adversely affecting the environment and remedial action is required. This method is already set out in the Regional Policy Statement. Yet, the framework to be used is not particularly efficient in that there is no guarantee of resolving the issue with existing on-site systems (i.e., there could be a significant ongoing environmental cost) and there is likely to be costs to the Council in providing information to the community and monitoring the state of the environment to determine whether the voluntary methods have been successful.

When compared to alternative options such as requiring maintenance and inspecting all on-site systems, which would involve considerable costs to the community, and would be difficult to implement regardless, then it is considered that the policies and methods selected are the most effective and efficient in the interim. This situation may well change as more information is collected and this issue can be revisited as a result of Council's responsibilities under Section 35 of the RMA.²⁹

Policies and methods under Objective 14.5.1

A review of the subdivision standards concluded that the existing rules were adequate to achieve the objective as they encouraged allotments of sufficient size to allow for effective on-site systems to be installed on the property.³⁰ However, two additional policies have been included to ensure that the best practicable option for servicing proposed lots is adopted in any subdivision proposal and, where that option is an on-site option, that due consideration is given to the requirements of the land application area when designing the subdivision layout. In this manner, it is hoped to minimise the potential for future on-site discharges to adversely affect the surrounding environment.

It is considered that these policies support and strengthen the existing provisions of the Plan relating to the subdivision of land and are therefore likely to contribute to reducing the risk of adverse effects on the environment created by residential subdivision and development.

The assessments required might create greater costs upon the developer, especially if more expensive systems of servicing are required or fewer allotments are able to be created in order to provide for adequate land application areas. Ultimately, the developer can recover these costs through subsequent sale of the created allotments. As the policies will apply to subdivision of all land zoned Rural or Sounds

²⁹ Section 35 of the RMA requires the Council to monitor the effectiveness and efficiency of the Plan.

³⁰ A method has been included in the plan change to provide a clearer link between the need to provide sufficient land as a land application area and the minimum lot sizes specified in the subdivision rules.

Residential, there will also be a level playing field so that one developer is not penalised to the advantage of another.

The do nothing option (i.e., not to include the policies) will mean that on-site options will continue to be relied upon, even when there are other options that involve less risk to the environment, and subdivisions will continue to be laid out without due consideration given to the requirements of land application areas.

Another option is to require all future subdivision to be reticulated which will involve considerable costs to the developer. However, it will still be necessary to discharge the collected wastewater into the environment, so there is still the risk of environmental degradation. It is therefore considered that developers should have the flexibility to investigate all possible servicing options and select the best practicable option. Guidance is given within the plan change on how to assess the best practicable option.

Policy 14.5.1.3 identifies five areas in the Marlborough Sounds where historic subdivision practices have created situations where the reliance on on-site discharges is likely to be adversely affecting the surrounding environment. However, more information is required before a programme for rectifying this situation can be developed. Taking this into account, the policy and subsequent method probably represent the only option for beginning to work toward the objective in the interim.

However, the policy and method is at considerable cost to the environment through possible adverse effects on residential amenity values, degraded water quality and the risks to public health. There will also be a significant cost to the Council to undertake the investigations. The risks of not acting will diminish as the results of investigations begin to allow appropriate programmes to be implemented to remedy or mitigate any adverse effects.

Appendix 1

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Appendix 2

Record of the Development Process

Stakeholder Meetings

Date	Group	Place
1/9/03	Department of Conservation	Department of Conservation, Picton
8/8/03	Sounds Advisory Group	Marlborough District Council
3/9/03	Connell Wagner; Abacus Design; Hadley Consultants; Cameron Gibson and Wells; Lets Go! Enterprises; Davidson Partners; Kerrigan Engineers; Smart Associates; Collins Septic Tank Services	Marlborough District Council
10/9/03	Public Health Service	Marlborough District Council
17/10/03	Sounds Advisory Group	Marlborough District Council
25/11/03	Connell Wagner; Abacus Design; Hadley Consultants; Cameron Gibson and Wells; Lets Go! Enterprises; Davidson Partners; Kerrigan Engineers; Smart Associates; Collins Septic Tank Services; Simcox Construction Ltd	Marlborough District Council
3/8/04	Ayson & Partners Ltd; Gilbert, Haymes & Associates, Connell Wagner, Survey Solutions Ltd	Marlborough District Council
9/8/04	Mr and Mrs Colvey	Marlborough District Council
13/8/04	Davidson Partners Ltd	Davidson Partners Ltd
16/8/04	Hadley Consultants	Marlborough District Council
30/8/04	Department of Conservation	Department of Conservation, Picton
3/9/04	Okiwi Bay Ltd	Marlborough District Council
20/9/04	Mr and Mrs Colvey	Colvey property, Ngakuta Bay
2/10/04	Kenepuru and Central Sounds Residents Association	Waitaria Bay Hall
6/11/04	Tirimoana 2000	Tirimoana

Appendix 3

Proposed Plan Change

SCHEDULE OF CHANGES

The Marlborough Sounds Resource Management Plan is hereby amended in accordance with the following schedule:

Volume One – Objectives, Policies and Methods

14.0 Discharges of Waste to Land

1. Delete the following text from the explanation to 14.2.3 (Objectives and Policies):

~~The majority of houses in the Marlborough Sounds area are connected to a reticulated sewerage system. However, many rely on septic tanks or other on-site systems to treat and dispose of domestic sewage. This disposal is a source of contamination adversely affecting water quality in some areas. The extent of this contamination is not known. In the Marlborough Sounds area soils and site characteristics make the use of simplified trench or soak disposal systems in septic tanks unsustainable.~~

~~Sustainable long term use of on-site systems is only achievable if successful evaluation, design and installation practices are followed by regular operation and maintenance. Septic tank management can have the following problems which make their use an unsustainable means of sewage treatment and disposal:~~

- ~~• Infrequent cleaning;~~
- ~~• High loading into the system;~~
- ~~• Wasteful use of water leading to high volumes entering the system;~~
- ~~• Use of powerful bleaches, detergents and other chemicals; and~~
- ~~• Poor maintenance of disposal fields.~~

2. Delete the second sentence of the following text from 14.2.4 (Methods of Implementation), as follows:

Education/ Guidelines	Promote strategies for minimising adverse effects associated with the treatment and disposal of liquid waste. These will include maintenance of existing on-site treatment systems (including septic tanks), installation and use of alternative treatment systems, and criteria for appropriate siting of on-site treatment and disposal systems.
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3. Renumber 14.3 (Methods of Implementation) as 14.2.8.
4. Insert the following new section after the renumbered 14.2.8:

14.3 On-site management of domestic wastewater in the Marlborough Sounds

Almost all houses, holiday homes and buildings used for visitor accommodation, outside of Picton, Waikawa and Havelock, rely on on-site systems to manage domestic wastewater. This means that domestic wastewater generated in the building(s)

receives initial treatment in some form of treatment unit, such as a septic tank, and is then discharged into or onto a land application area on the property. Contaminants present in the wastewater, such as bacteria and nutrients, are then further treated or absorbed as the wastewater passes through the soil.

In the Marlborough Sounds, domestic wastewater is discharged into soils of low permeability, into thin soils with limited ability to treat contaminants, or into extremely permeable alluvial soils. In all cases, there is the potential for contaminants to travel beyond the land application area, and into the surrounding environment, through runoff or infiltration.

Most buildings used for residential or accommodation purposes in the Sounds are located in close proximity to streams, creeks, underlying groundwater or coastal water. This means that, if the on-site wastewater management system servicing the building performs poorly, there is a risk that the subsequent discharge will contaminate water. The Council's monitoring has already established that there are elevated levels of bacteria in some coastal waters over the summer months.

The Marlborough Sounds support significant marine farming and tourism industries that rely upon a high standard of water quality. The coastal waters are also an important recreational resource and have spiritual and cultural significance to local iwi. For these reasons, objectives contained elsewhere in this Plan create an expectation that water quality is to be maintained or enhanced. It is therefore clear that the risk of contamination needs to be managed. This involves two key steps.

Firstly, it is important to improve the performance of existing on-site systems over time. It is estimated that there are in excess of 3000 existing systems in the Marlborough Sounds, the performance of which is extremely variable. This is because:

- (a) The systems are not necessarily compatible with the site conditions or current occupancy of the building, and were often based on dated standards. For example, many septic tanks in the Sounds discharge wastewater into soak pits or short trenches, which have a tendency to eventually fail when installed in soils of low permeability. The older the system, the greater the potential for failure;
- (b) The age of the on-site system can mean that the various components are no longer watertight and may therefore leak;
- (c) Not all systems are maintained in an efficient operating condition. A lack of maintenance can contribute to the potential for failure identified in (a). This situation is made worse by the fact that many on-site systems are inaccessible for servicing;
- (d) Stormwater is entering the treatment unit or land application area, increasing the hydraulic loading on the site soils; and
- (e) Given the age of some systems, and the rate of property ownership change in the Sounds, present owners may know little about the on-site wastewater management system on their property.

The Council's ability to respond to poorly performing or failing systems under the Resource Management Act is limited to instances of non-compliance with permitted activity rules and resource consents. It is considered that a more proactive and integrated programme is required to resolve the issues.

Secondly, it is important that the existing situation is not made worse by future residential subdivision and development. There is still undeveloped land zoned for residential purposes by this Plan, and many of the sites are more difficult to develop and service than those already built upon. It is important that any on-site wastewater management system installed to service a residential building is appropriate to the site, given the nature of the discharge and the site conditions.

A demand for further residential properties throughout the Sounds is reflected in resource consent applications to subdivide land. It is important that the density of future properties does not exceed the ability of the surrounding environment to assimilate domestic wastewater. This may mean that existing and future subdivisions are better serviced by off-site systems.

It will be important to continue monitoring the performance of on-site systems, and their potential effects on the surrounding environment, to determine whether the various initiatives identified in this Plan are effective.

14.4 Issue

The use of inappropriate on-site wastewater management systems to service buildings producing domestic wastewater, and/or the poor management and maintenance of on-site wastewater management systems, can result in adverse effects on the surrounding environment.

If the discharge of domestic wastewater to land exceeds the capacity of the soil to assimilate it, then the wastewater will not be contained within the land application area (commonly referred to as “failure”) and will adversely affect the surrounding environment. Such effects may include the contamination of water, particularly given the proximity of many on-site systems to streams, to coastal water or, in some cases, to underlying aquifers. Amenity values enjoyed on neighbouring properties can also be adversely affected by the runoff of mismanaged domestic wastewater or from odour associated with the operation of the on-site system. By increasing the hydraulic load on the site soils, the discharge of domestic wastewater may result in the degradation of the soils, or may initiate instability or make existing instability worse.

The Marlborough Sounds present unique constraints for the successful on-site management of domestic wastewater, including poorly drained soils, thin soils, steep slopes, unstable geology, periods of heavy rainfall and the potential for low evapotranspiration. If the method of treating the wastewater and/or the nature of the land application area does not take into account and reflect the site conditions, system failure, and adverse effects on the surrounding environment, are more likely.

A high proportion of existing residential buildings are serviced by conventional on-site systems, comprising a septic tank and some form of a land application area (usually a soak pit or trenches). However, advanced on-site systems are increasingly being used to treat the wastewater to a secondary standard before it is discharged into or onto land within the land application area. The operational and maintenance requirements of each system vary, from the pumping out of septic tanks at approximately five year intervals, through to the regular inspections (undertaken by trained technicians) required for some advanced on-site systems. Whichever system is used, it will not perform in an efficient operating condition unless appropriate maintenance is undertaken regularly. A lack of maintenance increases the risk of system failure and creates the potential for adverse effects on the surrounding environment.

The extent to which existing discharges of domestic wastewater from on-site systems are adversely affecting the Marlborough Sounds environment is not certain. It is difficult to monitor such effects, due to a lack of knowledge about existing on-site systems, the intermittent nature of occupancy, the isolated nature of much of the Marlborough Sounds, variable weather and tides, “natural” sources of contaminants and the extent of coastal waters.

14.4.1

Objective and Policies

Objective 1	To ensure that new on-site wastewater management systems are designed, located and installed to effectively treat and contain all domestic wastewater on-site.
Policy 1.1	To require discharge permits for all new on-site domestic wastewater discharges.
Policy 1.2	<p>To approve discharge permit applications for new on-site domestic wastewater discharges where:</p> <ul style="list-style-type: none"> (a) There is no public sewer located within 30 metres of the lot boundary or within 60 metres of the closest building on the lot; (b) The on-site wastewater management system will effectively service the building(s) to which it is connected; (c) The land application area is located as far as practical from any surface waterbody or coastal water; (d) The discharge will not contaminate surface water, coastal water or groundwater; (e) The discharge will not initiate instability, or make existing instability worse; (f) The discharge will not create offensive or objectionable odour or adversely affect the amenity values enjoyed on adjoining properties.
Policy 1.3	All design flows (the volume of domestic wastewater to be discharged into or onto land) shall reflect the potential occupancy of the building(s) that the on-site wastewater management system serves.
Policy 1.4	Land application areas shall be sized to accommodate the volume of domestic wastewater to be discharged, taking into account the characteristics of the site.
Policy 1.5	All domestic wastewater shall be discharged evenly over the land application area at a rate that does not exceed the ability of the land to assimilate the wastewater.
Policy 1.6	All treatment units shall be located so as to be accessible for maintenance purposes.
Policy 1.7	To avoid the use of conventional on-site wastewater management systems where it is proposed to discharge domestic wastewater into or onto poorly draining soils (such as clays) or porous soils (such as gravel, coarse sand or fractured rock).
Policy 1.8	To avoid the use of soak pits.
Policy 1.9	When considering discharge permit applications to discharge domestic wastewater into or onto land, to have

	regard to:
	(a) The soil characteristics of the site and surrounding area, including hydraulic capacity and ability to treat contaminants present within the domestic wastewater;
	(b) Site constraints including geology, topography, slope, lot size and shape, climate, and existing structures;
	(c) Alternative options for managing the domestic wastewater, including discharge to an alternative location on the same site;
	(d) The need for a reserve field;
	(e) The way in which stormwater is managed on the site and the potential for stormwater to impair the performance of the on-site wastewater management system; and
	(f) Relevant guidelines and standards.

Policy 1.10	To provide guidance on appropriate procedures for the investigation and evaluation of a site for the on-site management of domestic wastewater.
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Policy 1.11	To require the designers of new on-site wastewater management systems to certify the installation of the system.
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Policy 1.12	To enable the use of alternative technologies for managing domestic wastewater.
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An implication of living, holidaying or providing visitor accommodation in the Marlborough Sounds is the need to appropriately manage the domestic wastewater generated as a result of these activities. In areas not serviced by a reticulated sewerage system, this is achieved by installing and operating an on-site wastewater management system.

It is important that the design, location and installation of the on-site system take into account and reflect the site characteristics, as this will ultimately determine whether the domestic wastewater can be treated and contained on-site. To ensure that this is the case, the Council must be able to consider all proposed on-site systems and retain discretion over whether the discharge from the system can commence. As identified in Policy 14.4.1.1.1, a discharge permit is required to authorise the discharge of contaminants from all new on-site systems. A new on-site system includes extensions to, or replacements of, existing land application areas.

Any applicant for a discharge permit will need to demonstrate that the design of the proposed on-site system satisfies all of the requirements of Policy 14.4.1.1.2. Policies 14.4.1.1.3 to 14.4.1.1.9 establish principles or identify matters that are relevant to, and will assist, this assessment process. Designers and Council staff alike can therefore use these policies to ensure that proposed on-site systems are appropriate, given the nature of the discharge and the site conditions.

A variety of standards exist for the on-site management of domestic wastewater,

including AS/NZS 1546.1:1998, AS/NZS 1546.2:2001, AS/NZS 1546.3:2001, AS/NZS 1547:2000. These standards can also be used to assist the assessment of new on-site systems. However, as the Marlborough Sounds presents unique constraints to on-site servicing, there is also the need to interpret these standards in the context of local conditions. The policies therefore also signal the need to provide greater guidance to designers given these unique constraints. This guidance will reflect the Council's experience with different types of on-site systems in the Marlborough Sounds.

The Council is already aware that conventional on-site systems do not perform in certain soil types in the Marlborough Sounds or where soak pits are used. It would therefore be inappropriate to continue to allow such on-site systems to be installed.

Historically, conventional on-site systems were the only option for managing domestic wastewater, but many alternative technologies are now available. The appropriateness of alternative on-site systems to the types of environment that exist in the Marlborough Sounds will be investigated by the Council on an ongoing basis.

To ensure that the on-site system is installed according to design, the designer will be required to certify the installation of the system and provide that certification to the Council.

By ensuring that the design, location and installation of the on-site system takes into account and reflects the site characteristics, adverse effects on water quality, soil quality and stability, and amenity values can be avoided. The use of these policies will therefore assist in maintaining the very qualities that attract people to live and holiday in the Marlborough Sounds.

14.4.2 Methods of Implementation

Rules	Rules identify circumstances in which resource consents will be required to commence or continue discharging domestic wastewater to land. All new on-site domestic wastewater discharges will require discharge permits. Policies 14.4.1.1.2 to 14.4.1.1.9 will assist the Council to determine the significance of the effects that the discharge could potentially create and therefore whether the discharge permit should be granted.
Monitoring/ Enforcement	Compliance with the conditions of resource consents will be monitored and enforcement action taken where necessary.
Guidelines	The Council has prepared guidelines to assist industry practitioners to assess the characteristics and constraints of any particular site relevant to the on-site management of domestic wastewater.
Training	The Council will establish an accreditation system for the design of on-site wastewater management systems, and practitioners will be required to hold such accreditation to submit on-site system designs to the Council. A pre-cursor to accreditation will be the completion of appropriate training courses in site and soil evaluation.
Liaison	The Council will establish a working group of industry practitioners in order to provide a forum to discuss issues associated with site investigation, and the design

	and installation of on-site wastewater management systems. This working group can consider particular issues and provide advice on ways in which current management can be improved.
Investigations	The Council will investigate the availability and practicality of alternative technologies for the management of on-site wastewater management systems and the potential to use these technologies in the Marlborough Sounds.
Standards	The Council will use current standards to help assess the appropriateness of new on-site wastewater management systems through the resource consent process.

Plan rules allow the appropriateness of any new on-site wastewater management system to be assessed. This assessment is necessary to ensure that the domestic wastewater can be effectively contained and treated on-site, and adverse effects on the surrounding environment thereby avoided. Standards, such as AS/NZS 1546.1:1998, AS/NZS 1546.2:2001, AS/NZS 1546.3:2001 and AS/NZS 1547:2000, will assist this assessment process.

The methods also seek to improve the standard of design through the use of local guidelines. These guidelines will provide practitioners with greater certainty in terms of the procedures to be followed for site investigation and assessment. This, in turn, will assist to ensure that the subsequent design of any on-site system reflects the site characteristics prior to applying for a discharge permit. The use and continual improvement of the guidelines will be facilitated through liaison with practitioners and the provision of appropriate training.

The installation and commissioning of on-site systems is to be monitored to ensure that each system is constructed according to the approved design. Enforcement action may be necessary to remedy any instances of non-compliance.

The process of continuous improvement will also require the investigation of alternative technologies, as such technologies may allow for improved on-site management of domestic wastewater in the Marlborough Sounds.

14.4.3 Objective and Policies

Objective 1	To ensure that all on-site wastewater management systems perform in an efficient operating condition on an ongoing basis, while avoiding adverse effects on the surrounding environment.
Policy 1.1	Existing on-site domestic wastewater discharges, which were lawfully established without resource consent prior to 21 April 2005, will continue to be permitted activities providing: <ul style="list-style-type: none"> (a) The on-site wastewater management system is maintained in an efficient operating condition at all times; and (b) The discharge is contained on-site and is not adversely affecting surface water, coastal water or groundwater quality.

Policy 1.2	To monitor the operational performance of all on-site wastewater management systems and to require poorly performing systems to be upgraded to, or be replaced with, systems that effectively treat and contain all domestic wastewater on-site.
Policy 1.3	To require all on-site wastewater management systems to be maintained in an efficient operating condition at all times.
Policy 1.4	To identify and define the impact of factors that influence the performance of on-site wastewater management systems.
Policy 1.5	To promote good practice in the use of on-site wastewater management systems.
Policy 1.6	To improve the community's understanding of the impact of on-site discharges on the surrounding environment.
Policy 1.7	To establish a register to record the details of all on-site wastewater management systems.
Policy 1.8	When considering building consent applications to extend or alter residential or commercial buildings serviced by on-site wastewater management systems, an assessment will be made of the wastewater loading that would result from changes in the occupancy of the building. If there is to be an increase in the loading, then a discharge permit will be required to continue discharging domestic wastewater to land.

The day-to-day management and ongoing maintenance of on-site wastewater management systems play vital roles in ensuring that domestic wastewater is appropriately treated and contained on-site in the long term. This is because inappropriate use and/or a lack of maintenance can affect the performance of the on-site system. The responsibility for management and maintenance of on-site systems is that of the property owner. The above policies therefore target the important role that property owners play in avoiding the adverse effects of domestic wastewater discharges on the surrounding environment.

Given the large number of holiday homes and properties providing visitor accommodation in the Marlborough Sounds, property owners and visitors alike may not be aware of the appropriate methods of using and managing on-site systems. The Council will therefore inform property owners of practical measures they can take to improve the performance of their on-site systems. A good example is the installation of effluent filters into existing conventional on-site systems. These measures may be identified as a result of investigations undertaken by the Council, other councils, the wastewater industry or independent researchers.

To reduce the potential for this same situation occurring with any future on-site system, the designer will be required to prepare and submit operation and maintenance guidelines when applying for a discharge permit. Property owners installing proprietary advanced on-site systems are usually required to enter into a maintenance contract by the supplier or installer. The Council will make this a requirement for all such on-site systems through the resource consent process.

A lack of maintenance increases the risk of system failure and creates the potential for adverse effects on the surrounding environment. However, property owners may not be aware of the need to desludge septic tanks, others may forget or, given the isolated nature of many parts of the Marlborough Sounds, desludging may be problematic.

Even where the on-site system is properly used and well maintained, it could still be performing in an inappropriate manner. This could be as a result of a lack of maintenance by previous owners, an increase in domestic wastewater loadings, or may reflect that the original on-site system was inappropriate given the site characteristics. Examples of poor performance include the land treatment area failing, resulting in the ponding and/or runoff of domestic wastewater, owners modifying the on-site system to discharge directly to a waterbody, offensive or objectionable odour and the leakage of domestic wastewater from the septic tank. It is therefore necessary to monitor the operational performance of all on-site systems in the Marlborough Sounds and require remedial action where the systems are poorly performing.

Many buildings in the Marlborough Sounds started as simple baches serviced by conventional on-site systems that reflected the scale and occupancy of the building. There is an increasing tendency to modernise and/or extend these structures. If more people can be accommodated in the buildings(s) following these changes, even if only for a short period, then the wastewater loading and rate of discharge will also increase. A discharge permit will be required to continue discharging domestic wastewater to land in such circumstances. This will allow the Council to determine whether the existing on-site system is capable of managing the increased loading and, if it is not, will ensure that the system is either upgraded or replaced with an appropriate system. Policies 14.4.1.1.2 to 14.4.1.1.9 can be used to assist this determination.

14.4.4 Methods of Implementation

Rules	Rules identify circumstances in which resource consents will be required to commence or continue discharging domestic wastewater to land. Conditions of permitted activity rules (for existing discharges) and resource consents will require all on-site wastewater management systems to be maintained in an efficient operating condition.
Operation and Maintenance Guidelines	The Council will require (through the resource consent process) designers to prepare operation and maintenance guidelines for all new on-site wastewater management systems. These guidelines should then be submitted to the Council and, more importantly, to property owners.
Service Contracts	The Council will require (through the resource consent process) property owners installing proprietary advanced on-site wastewater management systems to enter into service contracts with the manufacturer.
Monitoring	The performance of on-site wastewater management systems will be monitored to ensure compliance with the minimum standards established by the Plan and/or resource consents. When determining whether an existing on-site wastewater management system is poorly performing, regard will be had to:

	<ul style="list-style-type: none"> (a) The age and type of system; (b) The structural integrity of the treatment unit and the water-tightness of all components of the system; (c) Whether domestic wastewater is saturating soil or ponding within, or in the vicinity of, the land application area; (d) The proximity of the land application area to any waterbody; (e) Whether the discharge from the system is initiating instability or making existing instability worse; (f) Any offensive or objectionable odour; (g) The past maintenance of the system; and (h) The conditions of any relevant permitted activity or resource consent.
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Enforcement	Where an on-site wastewater management system is failing to treat and/or contain domestic wastewater on the subject property, action can be taken under the Building Act 2004 and/or the Resource Management Act 1991. The action will require the discharge to cease or remedial measures to be taken to rectify the problem.
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Septic Tank Pump-out	The Council will investigate options for co-ordinating the pump-out of septic tanks throughout the Marlborough Sounds, including the appropriate disposal of septic tank sludge.
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Investigations	The Council will review existing technical information and undertake research, where necessary, to determine the factors that influence the performance of on-site wastewater management systems.
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Information Collection	The Council will collect information on existing on-site wastewater management systems in the Marlborough Sounds. This information will be stored on a database, which can then be used as the basis of implementing a number of the other methods identified in this chapter. The database will also store information on new on-site systems authorised through resource consent processes.
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Information sharing	Education is a vital tool in improving the performance of existing on-site wastewater management systems and ensuring new on-site wastewater management systems are managed effectively. The Council will provide property owners and servicing agents with details on the factors that affect the performance of on-site systems and outline appropriate operation, maintenance and monitoring procedures for all on-site systems.
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Liaison	The Council will establish a working group of industry practitioners and other relevant parties in order to provide a forum to discuss issues associated with the ongoing performance of on-site wastewater
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management systems. This working group can consider particular issues and provide advice on ways in which performance can be improved.

The methods focus on means of improving the performance of existing on-site wastewater management systems and ensuring that future on-site systems perform according to design.

The Plan recognises that the day-to-day use and ongoing maintenance influence the performance of on-site systems in the long term. From this perspective, the Council will require the designers of new on-site systems to specify, and provide to the property owner, the appropriate procedures for operating the system. The Council will also provide relevant information to property owners, so that they can act to appropriately manage and maintain their on-site systems where no such procedures exist. This information will be provided to the community on an ongoing basis, to ensure that it reflects the current knowledge of factors that influence the effectiveness of on-site systems.

However, it is also recognised that the provision of information and voluntary actions alone will not ensure that property owners appropriately manage and maintain their on-site systems. For example, there is a low rate of septic tank pump-out in the Marlborough Sounds despite the fact that the performance of the septic tank relies upon the periodic removal of the accumulated solids. The isolation of some properties, the inability of contractors to access the septic tank by road or barge, the variable rates of accumulation caused by intermittent use of dwelling and the cost all act to inhibit appropriate septic tank maintenance. For this reason, the Council will investigate options for co-ordinating the pump-out of septic tanks throughout the Marlborough Sounds, in consultation with the community. Monitoring results may identify priority areas for the implementation of any such programme.

If a programme of co-ordinated septic tank pump-out is implemented it must also address the subsequent disposal of the sludge that is removed. Given the isolation of many properties in the Marlborough Sounds and the fact that the Council does not accept septic tank sludge at the Picton Sewage Treatment Plant, a strategy needs to be developed to address this issue. The successful implementation of this regime will also require the details of all on-site systems to be recorded.

There will also be situations where the existing on-site system is not performing at optimal levels despite appropriate use and recent maintenance. Such a situation may result in adverse effects on the surrounding environment and remedial action will be required if this is the case.

14.5(a) Issue

Several communities in the Marlborough Sounds suffer from a degraded environment and a potential risk to public health due to their reliance on the on-site management of domestic wastewater.

Residential activity in the Marlborough Sounds, outside of urban areas, is usually concentrated along the coastal fringe. The resultant density of development is lower than that which exists in urban environments. However, there are areas in the Marlborough Sounds where this is not the case, and communities have developed that are almost urban in character. These communities include, but are not limited to:

- Okiwi Bay

- Ngakuta Bay
- Double Cove
- Anakiwa/Tirimoana
- Moenui

The residential properties in these areas are the result of historic subdivision practices. These communities are not serviced by reticulated sewerage systems and the process used to approve the subdivision of land often did not take into account the land area required for the effective on-site management of domestic wastewater. As a result, many of the on-site wastewater management systems installed to service residential buildings were inappropriate given the site conditions. For example, soak pits were commonly installed (in soils of low permeability) to service older residential developments.

Many of the on-site systems initially installed in these communities have either subsequently failed, and have had to be upgraded or replaced, or continue to perform in a less than satisfactory manner. This is reflected in the results of water quality and shellfish monitoring, which show contamination of coastal waters. Additionally, complaints have been made about offensive and objectionable odour and the runoff of domestic wastewater onto neighbouring properties. Given the residential character of these communities, there may also be an increased risk of people coming into contact with untreated or partially treated sewage.

The nature and extent of the effects on the surrounding environment and on public health need to be accurately assessed. It may be established that these communities are unsustainable in the absence of a community sewerage system.

14.5(b) Issue

The subdivision of unsewered land for residential use can create a development density that exceeds the capacity of individual allotments to assimilate domestic wastewater in a manner that protects the surrounding environment.

There is a demand for further residential properties in the Marlborough Sounds, and the Council continually receives applications for resource consent to subdivide land, currently zoned either Sounds Residential or Rural One, for residential purposes. In the absence of reticulated sewerage, all of the newly created allotments are serviced by on-site wastewater management systems.

However, on-site systems may not necessarily be the most appropriate means of servicing the subdivision due to the site conditions, and even where they are, if the development does not take into account the land area required for the effective on-site management of domestic wastewater, the resultant properties could be too small for this purpose. Where the density of development is such that multiple residential buildings are unable to treat and contain the domestic wastewater on-site, the adverse effects identified in Issue 14.5(a) can result. In this manner, additional subdivision and development can exacerbate existing problems or can create further communities that are unsustainable in terms of on-site management of domestic wastewater.

14.5.1 Objective and Policies

Objective 1	To ensure that the management of domestic wastewater, associated with residential subdivision and development, does not adversely affect the surrounding environment.
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Policy 1.1	For the subdivision of land zoned Rural One or Sounds Residential, where the allotments to be created are to be used for residential purposes, the option of on-site domestic wastewater management shall be evaluated against off-site alternatives and the best practicable option shall be adopted.
Policy 1.2	To ensure that, where on-site management of domestic wastewater is proposed, subdivision layout, allotment size and dimensions make adequate provision for land treatment areas and reserve areas.
Policy 1.3	To provide guidance on appropriate procedures for the investigation and evaluation of land for the on-site management of domestic wastewater.
Policy 1.4	To avoid any further residential subdivision that would create allotments of less than 4000 square metres in those areas of Okiwi Bay and Ngakuta Bay zoned Sounds Residential, until a community sewerage scheme is established.
Policy 1.5	To establish the performance of on-site wastewater management systems on individual allotments, and to assess the environmental effects of the on-site management of domestic wastewater at key localities, including: <ul style="list-style-type: none"> (a) Okiwi Bay (b) Ngakuta Bay (c) Double Cove (d) Anakiwa/Tirimoana (e) Moenui

The subdivision of land is a process of identifying and setting aside, legally and physically, parcels of land for specific development, including residential development. It is important that all proposed residential allotments can be serviced in a sustainable manner, including the management of domestic wastewater. If this is not achieved, the community expectations reflected in objectives elsewhere in this Plan, in terms of water and soil quality, natural hazards and residential amenity values, will not be achieved.

It is therefore important that the best method for avoiding or mitigating the adverse effects of domestic wastewater discharges is selected. Developers need to consider and assess all available alternatives for managing domestic wastewater. On-site management is the obvious option where there is no sewerage system available, but shared or offsite options may also exist and should be evaluated. These include:

- *On-site cluster systems (applying on-site technology to service two or more dwellings);*
- *Cluster systems (also serving two or more dwellings, but where the subsequent discharge is to an off-site environment); and*

- Full community sewerage schemes.

The best practicable option can then be determined having regard to:

- The sensitivity of the receiving environment;
- The financial implications, and the effects on the environment, of each option when compared with the other options; and
- The current state of technical knowledge and the likelihood that each option can be successfully applied.

(Policies 14.4.1.1.3 to 14.4.1.1.9 are also all relevant to such an assessment.)

If the best practicable option is an on-site option, it is still important that the actual size and configuration of the allotments allows for effective land treatment areas to be developed. This must include reserve areas to safeguard against unanticipated problems or future failure of the land application area. Soil and other site conditions can also vary across each of the proposed allotments, so the land treatment area and reserve area must be located on the most suitable soils and topography for on-site management of domestic wastewater. The Council will provide guidance on how these areas can be determined. In this manner, Policies 14.5.1.1 to 14.5.1.3 will assist to achieve a density of development that is consistent with the capacity of the surrounding environment to assimilate domestic wastewater.

In most cases it will not be possible to apply for the discharge permits required for each of the allotments at the same stage as the subdivision consent. This is because the nature of the dwellings to be built upon the allotment, the resultant wastewater loading and therefore the size of the land treatment area are not known. None-the-less, the applicant will still need to demonstrate that a dwelling is capable of being serviced on each of the proposed allotments.

In some cases, past subdivision of land has already created a development density that is not sustainable in the absence of some kind of community sewerage system. This is considered to have occurred in Okiwi Bay and Ngakuta Bay, where allotment sizes are typically between 800 and 1000 square metres. Water quality and shellfish monitoring has demonstrated that domestic wastewater discharges are probably not being contained within these allotments. There is still a substantial area of land zoned Sounds Residential that is yet to be subdivided into residential allotments in these two bays. It is considered to be inappropriate to allow for further residential allotments of a similar character to those that already exist, when the existing level of development is already adversely affecting the surrounding environment.

The Council also needs to establish whether past residential subdivision and development is now adversely affecting coastal water quality, soil quality, land stability or residential amenity values elsewhere in the Marlborough Sounds.

14.5.2 Methods of Implementation

Rules

The subdivision of land is regulated through rules in Volume Two of this Plan. The rules establish minimum lot sizes that provide sufficient area to provide for effective land application areas.

Applications for subdivision consent involving on-site management of domestic wastewater are to be supported

by detailed assessments of the capacity of the land to provide land treatment areas and reserve areas within the proposed lot size, configuration and dimensions. This information shall be supported by confirmation that on-site management is the best practicable option, compared to the alternatives of on-site cluster, cluster and community sewerage schemes.

Guidelines	The Council has prepared guidelines to assist industry practitioners to assess the characteristics and constraints of sites subject to the proposed subdivision of land relevant to the on-site management of domestic wastewater.
Other legislation	The Council is required to periodically assess wastewater services, including risks to the community where there is an absence of a community sewerage system, under the Local Government Act 2002.
Investigations	<p>Monitoring already undertaken has identified areas in the Marlborough Sounds where on-site domestic wastewater discharges are potentially degrading coastal water quality. These areas include:</p> <ul style="list-style-type: none"> • Okiwi Bay • Ngakuta Bay • Double Cove • Anakiwa/Tirimoana • Moenui <p>The Council will undertake investigations to identify and establish the scale and severity of these adverse effects. These investigations will include sanitary surveys.</p>
Monitoring	The Council will continue to monitor water and shellfish quality in the Marlborough Sounds, but will expand its programme to include areas adjacent to established residential (including bach) activity that have not been monitored previously.

All subdivision of land zoned Sounds Residential, Rural One or Rural Two for residential purposes requires resource consent. The rules in Volume Two of the Plan set minimum allotment sizes that, in most cases, will provide sufficient land area for the on-site management of domestic wastewater.

The requirement for resource consent will allow an assessment of the appropriateness of the proposed method of servicing each of the allotments and, where the proposal does not comply with minimum allotment sizes, whether each of the allotments is an appropriate size and configuration for effective on-site management of domestic wastewater.

The methods also seek to improve the standard of subdivision servicing through the use of local guidelines. These guidelines will provide practitioners with certainty in terms of the procedures to be followed to investigate the suitability of land for the on-site management of domestic wastewater.

The Council already monitors recreational waters for bacterial contamination on an annual basis. However, the sampling is restricted to beaches used for recreational purposes and although the results generally indicate the suitability of the monitored waters for contact recreation, they do not necessarily provide an indication of the impact of on-site discharges on coastal water quality. For this reason, the monitoring programme will be extended to include sampling of coastal waters adjacent to areas of established residential activity. Shellfish will also be sampled as, being filter feeders, bacteria tend to accumulate in the flesh (shellfish can therefore provide a better indicator of bacterial contamination than water samples).

The Council has to consider the risk to the community of not providing wastewater services under the Local Government Act 2002. This may require investigations to be conducted to evaluate the current level of risk to community health as well as the surrounding environment. Where those risks are found to be significant, the construction and operation of community sewerage systems may need to be considered in order to ensure sustainable outcomes. The Council could also utilise other methods identified in this chapter, such as requiring systems to be upgraded or replaced.

5. Renumber 14.4 (Anticipated Environmental Results) as 14.6

Volume Two – Rules

25.0 Definitions

1. Insert the following:

ADVANCED ON-SITE WASTEWATER MANAGEMENT SYSTEM	<p>means an on-site wastewater management system that treats the domestic wastewater (via a secondary treatment unit) to the following standard before it is discharged into or onto land within the land application area:</p> <p style="text-align: center;">< 20 g/m³ BOD₅;</p> <p style="text-align: center;">< 30 g/m³ Total Suspended Solids.</p>
BEST PRACTICABLE OPTION (FOR MANAGEMENT OF DOMESTIC WASTEWATER)	<p>means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:</p> <ol style="list-style-type: none"> (a) The nature of the domestic wastewater discharge and the sensitivity of the receiving environment to adverse effects; (b) The financial implications, and the effects on the environment, of that option when compared with other options; and (c) The current state of technical knowledge and the likelihood that the option can be successfully applied.
BOD₅	<p>means Biochemical Oxygen Demand (five day), being a measure of the oxygen consumed by aerobic bacteria in degrading organic</p>

	material at 20 degrees C over five days. BOD ₅ values represent the organic strength of domestic wastewater.
CONVENTIONAL ON-SITE WASTEWATER MANAGEMENT SYSTEM	means an on-site wastewater management system consisting of a septic tank and a land application area (usually trenches, a bed or mound). The wastewater moves from the septic tank to the land application area by way of gravity.
DOMESTIC WASTEWATER	means wastewater originating from household or personal activities including toilets, urinals, kitchens, bathrooms (including shower, washbasins, bath, spa bath but not spa) and laundries. Includes such wastewater flows from facilities serving staff/employees/residents/students/guests in institutional, commercial and industrial establishments, but excluding commercial and industrial wastes, large scale laundry activities and any stormwater flows.
EFFLUENT FILTER	means a device, other than a pump screen, fitted at the outlet of a septic tank and designed to prevent solids 3 millimetres or greater in size passing from the tank to the land application area.
GARBAGE GRINDER	has the same meaning as a waste disposal unit, that is a unit installed in the sink to grind organic waste prior to it passing into the drainage system for the residential unit.
LAND APPLICATION AREA	means an area of land which is set aside to allow domestic wastewater from the treatment unit to be applied into or onto the soil for further in-soil treatment and absorption. The method of distribution and nature of the land application area can vary, and includes trenches, beds, mounds and dripper lines, but does not include soak pits.
ON-SITE WASTEWATER MANAGEMENT SYSTEM	means a system that services a residential unit, or other facility that generates domestic wastewater, by receiving, treating and absorbing the domestic wastewater within the property boundaries of the site of generation. The system consists of a treatment unit and land application area. New on-site wastewater management systems are those installed after 21 April 2005 and include extensions to, or replacements of, existing land application areas.
SEPTIC TANK	means a primary treatment unit comprising of single or multiple chambered tank through which domestic wastewater is allowed to flow slowly to permit suspended matter to settle and be retained, so that organic matter contained therein can be decomposed (digested) by anaerobic bacterial action within the sludge.
SOAK PIT	means an unfilled hole or a hole backfilled with media that creates a concentrated point of discharge and allows the rapid movement of wastewater to depth.
TREATMENT UNIT	means a primary or secondary treatment system.

27.0 Subdivision

1. Delete Rule 27.2.4.5.5, as follows:

~~Whether having regard to specific engineering design the site(s) is capable of receiving the discharge of on-site sewage and stormwater without adverse effects on the environment.~~

2. Insert a new Rule 27.2.4.5.5

Whether the proposed method of managing domestic wastewater is the best practicable option and, where the method is an on-site option, whether the contaminants within the domestic wastewater will be treated and contained on-site, given the site conditions and constraints.

3. Delete Rule 27.2.5.1(c), as follows:

~~Effluent disposal systems and maintenance requirements;~~

4. Insert a new Rule 27.2.5.1(c), as follows:

The method of managing domestic wastewater, including operational and maintenance requirements;

28.0 Standard Requirements for Subdivision and Development

1. Delete 28.1.3(j), as follows:

~~Details of sewage disposal (position of existing septic tank and effluent soakage fields) and any pertinent field data for each allotment, eg; strata, soakage etc.;~~

2. Insert a new 28.1.3(j), as follows:

Details of the method of managing domestic wastewater, including reasons why the proposed method is the best practicable option;

3. Delete 28.1.19.5, as follows:

~~Where a subdivision is to rely upon on-site disposal of sewage and greywater all allotments are to be the subject of a specific engineering design to confirm the lot's capability of meeting the needs of a 180m² dwellinghouse (occupied full-time) and satisfying all the standards for discharge for sewage and foulwater set out in the Plan.~~

4. Insert the following text as 28.1.21 with consequential amendment to the numbering of the existing 28.1.21 to 28.1.33:

28.1.21 On-site management of domestic wastewater

Where proposed allotments are to be serviced by on-site wastewater management systems, the allotments are to be subject to specific investigation to confirm that on-site management is the best practicable option, and that the contaminants within the domestic wastewater will be effectively treated and contained on-site. The investigation will require an on-site assessment of the site conditions and constraints, particularly soil properties. The Council has prepared guidelines to assist professionals to undertake such an assessment.

Any application for subdivision consent must be supported by a Site and Soil Evaluation Report prepared by a professional who has established credentials with the Council. The report should outline the nature of the investigation and provide detail about on-site wastewater management systems that are appropriate for the proposed allotments.

As the actual wastewater loading will not be known at the time of subdivision, the specific size of the land application area is difficult to determine. For this reason, the sizing of the land application area should be based on the loading from at least a four bedroom residential unit (full time occupancy). Parts of the allotments appropriate to be used as land application areas should be shown on the subdivision plan.

Changes affecting multiple zones

1. Amend the following bullet point in the list of permitted activities for the Urban Residential Rule 29.1:
 - **Domestic sewage, greywater, stormwater discharges;**

to read:

 - **Domestic wastewater and stormwater discharges;**

2. Amend the following bullet point in the list of permitted activities for the Sounds Residential Rule 30.1:
 - **Discharges – domestic sewage, greywater, stormwater;**

to read:

 - **Domestic wastewater and stormwater discharges;**

3. Insert the following bullet point in the list of permitted activities for the Rural Township Rule 37.1:
 - **Domestic wastewater and stormwater discharges;**

4. Amend the following bullet point in the list of permitted activities for the Conservation Rule 38.1, District Recreation Rule 39.1 and Local Recreation Rule 40.1:
 - **Greywater, sewage, stormwater discharge;**

to read:

 - **Domestic wastewater and stormwater discharges;**

5. Delete the permitted activity rules for “Domestic Effluent Disposal” identified in the table below and replace them with the following permitted activity rule:

Zone	Rule number
Urban Residential	29.1.7.1
Sounds Residential	30.1.9.1
Rural	36.1.7.1
Rural Township	37.1.5.1

Conservation	38.1.1.1
District Recreation	39.1.3.1

XX.X.X.X Domestic Wastewater Management

Provision must be made for the satisfactory management of all domestic wastewater in accordance with the requirements of the Plan. The requirements of the Plan are deemed to have been met where all domestic wastewater is connected to a public system expressly designed for this purpose or the conditions for on-site domestic wastewater discharges (Rule XX.X.X.X) are met.

6. Delete the permitted activity rules for "On Site Sewage Disposal" identified in the table below and replace them with the following permitted activity rule:

Zone	Rule number
Urban Residential	29.1.7.2 (including 29.1.7.2.1 to 29.1.7.2.14)
Sounds Residential	30.1.9.2 (including 30.1.9.2.1 to 30.1.9.2.14)
Rural	36.1.7.2 (including 36.1.7.2.1 to 36.1.7.2.15)
Rural Township	37.1.5.2 (including 37.1.5.2.1 to 37.1.5.2.12)
Conservation	38.1.1.2 (including 38.1.1.2.1 to 38.1.1.2.14)
District Recreation	39.1.3.1.1 (including 39.1.3.1.1.1 to 39.1.3.1.1.2)

XX.X.X.X The discharge of domestic wastewater into land

The discharge of domestic wastewater, through any on-site wastewater management system lawfully established without resource consent prior to 21 April 2005, into land is a Permitted Activity providing:

- XX.X.X.X.1** A public sewer is not located within 30 metres of the lot boundary or 60 metres of the closest building on the lot to be serviced.
- XX.X.X.X.2** Garbage grinders are not installed in any building that the on-site wastewater management system services.
- XX.X.X.X.3** The rate of discharge does not exceed 2000 litres per day, averaged over any one week period.
- XX.X.X.X.4** There is no increase in the rate of discharge due to an increased occupancy of the building(s) that the on-site wastewater management system serves following an extension or alteration of the building(s).
- XX.X.X.X.5** The domestic wastewater, following primary treatment, is able to infiltrate through at least 600mm of unsaturated soil or, following secondary treatment, is able to infiltrate through at least 300mm of unsaturated soil.

XX.X.X.X.6 There is no ponding of any domestic wastewater, or no run-off or infiltration of any contaminant beyond the property boundary or into any surface waterbody, groundwater or coastal water.

XX.X.X.X.7 The on-site wastewater management system is maintained in an efficient operating condition at all times.

XX.X.X.X.8 No objectionable odours can be detected.

6. Delete the following bullet point from Urban Residential Rule 29.2.1:

- **Distance requirements for effluent disposal fields up to 25%;**

7. Delete the following bullet point from Sounds Residential Rule 30.3.1:

- **Distance requirements for effluent disposal fields up to 20%;**

8. Insert the following bullet point to the list of limited discretionary activities for the Urban Residential Rule 29.2, Sounds Residential Rule 30.3, Rural Rule 36.3, Rural Township Rule 37.2, Conservation Rule 38.3, District Recreation Rule 39.2, and Local Recreation Rule 40.2:

- **The discharge of domestic wastewater authorised by resource consent prior to 21 April 2005, or the discharge of domestic wastewater through any on-site wastewater management system installed after 21 April 2005, into or onto land.**

9. Insert the following new section in the Urban Residential, Sounds Residential, Rural, Rural Township, Conservation, District Recreation, Local Recreation zone rules at the point indicated in the table below:

Zone	Section number
Urban Residential	29.2.6
Sounds Residential	30.3.6
Rural	36.3.4
Rural Township	37.2.3
Conservation	38.3.2
District Recreation	39.2.3
Local Recreation	40.2.5

XX.X.X The discharge of domestic wastewater authorised by resource consent prior to 21 April 2005, or the discharge of domestic wastewater, through any on-site wastewater management system installed after 21 April 2005, into or onto land.

XX.X.X.X Standards and Terms

- a) The domestic wastewater shall not be discharged into soil determined to be Category 1, 4, 5 or 6 soil (in accordance with the Council's guidelines for the investigation, design, installation and maintenance of on-site wastewater management systems) if it is proposed to use a conventional on-site wastewater management system; and
- b) The term of the discharge permit shall not exceed 15 years;

XX.X.X.X Matters to which the Council has restricted the exercise of its discretion:

- a) The proximity of the discharge to any surface water, groundwater or coastal water and any actual or potential adverse effects of the discharge on water quality;
- b) The proximity of the discharge to any public sewer;
- c) The proximity of the discharge to other discharges of domestic wastewater and the potential for cumulative effects;
- d) The potential for the discharge to adversely affect the quality of water in any river or aquifer, or in the coastal marine area;
- e) The potential for the discharge to initiate instability or make existing instability worse;
- f) The extent to which the proposed on-site wastewater management system complies with the Council's guidelines for the investigation, design, installation and maintenance of on-site wastewater management systems;
- g) The site conditions, including the nature of the soil and soil depth;
- h) The nature of the on-site wastewater management system and the appropriateness of the system to the site conditions;
- i) The capacity of the treatment unit and the level of treatment;
- j) The rate and method of discharge;
- k) The size of the land application area and alternative locations for the land application area;
- l) The necessity for monitoring the performance of the on-site wastewater management system; and
- m) The management and maintenance of the on-site wastewater management system, including the ability to access the on-site system for maintenance purposes.

10. Insert the following bullet point to the list of limited discretionary activities for the Local Recreation Zone Rule 40.2:

- **Minor Non Compliance;**

11. Insert the following bullet point in the list of prohibited activities for the Urban Residential Rule 29.5, Sounds Residential Rule 30.6, Rural Rule 36.6, Rural Township Rule 37.5, Conservation Rule 38.6, District Recreation Rule 39.5 and Local Recreation Rule 40.5:

- **The discharge of domestic wastewater, through any soak pit established after 21 April 2005, into land.**

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