MARLBOROUGH DISTRICT COUNCIL

MARLBOROUGH ENVIRONMENT PLAN

Section 32 Report

Chapter 16: Waste

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Contents

Overview

Background

Section 32 of the Resource Management Act 1991 (RMA) requires that in the process of reviewing its regional policy statement and resource management plans, the Marlborough District Council (the Council) must prepare and publish an evaluation report. The three documents being reviewed are the Marlborough Regional Policy Statement (MRPS), the Marlborough Sounds Resource Management Plan (MSRMP) and the Wairau/Awatere Resource Management Plan (WARMP). Each resource management plan is a combined regional, coastal and district plan.

Section 32[1] of the RMA requires that:

- reviewed regional policy statements and plans must be examined for their appropriateness in achieving the purpose of the RMA;
- the benefits, costs and risks of new policies and rules on the community, the economy and the environment be clearly identified and assessed; and
- the written evaluation must be made available for public inspection.

The Section 32 process is intended to ensure that the objectives, policies and methods the Council decides to include in the new resource management framework have been well tested against the sustainable management purpose of the RMA. The Section 32 evaluation report for the proposed Marlborough Environment Plan[2] (MEP) has been prepared on a topic basis, centred on the policy chapters of Volume 1 of the MEP. Individual reports have been prepared on the following:

Topic	Volume 1 Chapter of the MEP
Introduction to Section 32 evaluation reports	
Marlborough's tangata whenua iwi	3
Use of natural and physical resources	4
Allocation of public resources – freshwater allocation	5
Allocation of public resources – coastal allocation	5
Natural character	6
Landscape	7
Indigenous biodiversity	8
Public access and open space	9
Heritage resources	10
Natural hazards	11
Urban environments	12
Use of the coastal environment – subdivision, use and development activities in the coastal environment, recreational activities, fishing, residential activity, shipping activity and Lake Grassmere Salt Works	13
Use of the coastal environment – ports and marinas	13
Use of the coastal environment – coastal structures, reclamation and seabed disturbance	13

1 See Appendix A.

2 The Marlborough Environment Plan is a combined regional policy statement, regional plan, regional coastal plan and district plan.

Topic	Volume 1 Chapter of the MEP
Use of the rural environment	14
Resource quality – water	15
Resource quality – air	15
Resource quality – soil	15
Waste	16
Transportation	17
Energy	18
Climate change	19

Chapters 1 and 2 of the MEP are not included within the Section 32 evaluation as they provide an introduction and background to the proposed document. These chapters do not include provisions that must be evaluated in accordance with Section 32.

The Introduction report covers the scope of the review that the Council has undertaken including consultation and the nature of information and analysis that has occurred. An overview of the Council's statutory obligations, the relationship of the MEP with other plan and strategies and working with Marlborough's tangata whenua iwi is described. A set of guiding principles the Council has used in the development of the objectives, policies and methods for the MEP is provided. The Council acknowledges that the principles have no statutory basis and do not in themselves have specific objectives, policies or methods. However, they have been included as the philosophy and values underlying the content of the MEP and consequently help to inform the Section 32 evaluation.

The policy provisions for waste are included within Chapter 16 of Volume 1 of the MEP. Rules are included throughout a number of the various zones (Volume 2 of the MEP) as well as within the General Rules chapter of this volume. This Section 32 evaluation report on the provisions for waste is set out as follows:

- Description of issues – this provides an overview of the resource management issues for the management of waste.
- Statutory obligations – the extent to which there are direct links with Section 6 or 7 matters and whether the provisions are directed or influenced by national policy statements or national environmental standards.
- Information and analysis – whether specific projects or other information have influenced the inclusion of provisions or other responses to dealing with resource management issues.
- Consultation – an overview of the extent and nature of specific consultation undertaken on the proposed provisions.
- Evaluation – an assessment of the provisions under each of the identified issues. Where appropriate, reference is made to supporting material that has helped to inform why a particular option has been chosen. In some cases the evaluation is undertaken on an individual provision, while in others groups of policies or methods have been assessed together.

In some parts of this evaluation report there are references to provisions within other chapters of the MEP. This is due to those provisions assisting in implementing the management framework for the subject matter of this report or vice versa. A reader should consider the evaluation report for these other provisions where they are referred to in this report.

Key changes

The key changes in the MEP from the approach in the MRPS, WARMP and MSRMP are:

- Overall, the provisions for waste management are more focussed, detailed and comprehensive.

- The policies and methods of implementation highlight greater provision of facilities and services to deal with solid waste, especially in terms of recycling facilities and the options available for disposal rather than disposing waste at the landfill.
- While the policies for discharges of solid waste to land from primary production activities still have an enabling approach with permitted activity rules (and related standards), there are new resource consent requirements for such discharges where they occur in Groundwater Protection Areas or in a Soil Sensitive Area. This reflects greater understanding of the potential for contamination of groundwater and soils in these areas from discharges to land.
- A new resource consent requirement has been included for cleanfills.

Summary of reasons for the proposed provisions

Section 32(1)(b)(iii) requires a summary of the reasons for deciding on the provisions included in the MEP. The provisions for managing waste are set out in Chapter 16 of Volume 1 of the MEP. In part, the issues identified in this chapter are a response to legislation outside of the RMA, specifically the Waste Minimisation Act 2008, and to the outcomes sought in central government's New Zealand Waste Strategy.

This summary of reasons for the provisions in relation to issues concerning waste are set out below, however the more detailed evaluation is set out in the remainder of this report.

Solid waste

- Reducing the amount of solid waste that needs to be disposed of reduces the potential for adverse effects on the quality of Marlborough's water, land and air resources.
- This overall aim is strongly supported by the Council through the provision of facilities to make it easier for people to reuse, recycle and recover the solid waste that is generated. There has also been strong community support for these types of initiatives to be introduced, especially within the large urban centres.
- Policy has been included that acknowledges it is not always possible to reuse, recycle and recover solid waste generated and that as a consequence there needs to be a management response to deal with this situation. Again, the development of specialised facilities including transfer stations and the regional landfill has helped to avoid or mitigate potential adverse effects on the environment from the disposal of solid waste.
- There is the potential for some waste disposal activities, or for the disposal of waste in certain locations around Marlborough, to result in greater likelihood of adverse effects, particularly effects on groundwater resources and soil quality. Because of this, new resource consent requirements have been introduced to enable a more detailed assessment of the potential risks to be carried out and where appropriate, for conditions to be imposed to mitigate adverse effects. This will also allow the Council to more closely monitor the effects of these activities.
- As Marlborough is an extensive area with many remote locations, policy has been included to recognise the difficulties of waste disposal in isolated areas. Remoteness makes it difficult for people to take advantage of reuse, recycling and recovery opportunities provided to the remainder of the community through transfer stations or kerbside collection. The Council therefore acknowledges that on-site disposal may be the only option available in remote locations, but that this needs to be undertaken in a manner that avoids adverse environmental effects. An important aspect of this is that the Council will work with communities in remote areas to determine the most effective way to dispose of waste.

Liquid wastes

- A strong rural economy and residential living in rural and coastal environments in Marlborough means that a wide variety of liquid wastes are generated. There is strong policy direction within Chapter 15 of Volume 1 of the MEP (Resource Quality - Water, Air Soil) stating that discharges of liquid waste to land are preferred over discharges to water so as to maintain and enhance water quality in rivers, lakes, wetlands and coastal waters.

Generally, Marlborough's soils and climate are favourable to making discharges of liquid waste to land a viable option.

- However, it is important that the discharge of contaminants onto or into land is undertaken in a manner that is compatible with the ability of the land resource to treat and/or contain contaminants present in the wastewater. If this is not achieved, the discharge will adversely affect the immediate and surrounding environment.
- The policies that are included focus on the characteristics and constraints of the discharge site. In some cases, there are resource consent requirements to enable the Council to exercise discretion in determining whether a proposed wastewater management system is suitable given the volume of wastewater and the site conditions and constraints. This will occur in locations where there is a risk that the contaminants present in wastewater will not be able to be effectively treated (e.g. soils in the Marlborough Sounds have a high proportion of clay and corresponding low permeability rates) or where a significant volume of wastewater is produced. In many areas, the soil is also of inadequate depth to provide sufficient treatment of bacteria and the underlying geology can be prone to instability. Policy is included to help decision makers determine when consent should be granted having regard to a range of matters.
- In other cases, the framework for discharges is enabling (subject to meeting standards for permitted activities). This recognises that soils are capable of effectively treating the contaminants in wastewater.
- The Council recognises that soak pits are not an effective method of managing the discharge of wastewater to land. They result in a concentrated discharge of contaminants into the environment as the wastewater receives little or no treatment as it passes through the soak pit. The solids present in wastewater also tend to clog the soak pit in time, creating the potential for ponding. Because of this, the Council is prohibiting the future use of soak pits but will provide a phase-out period for existing discharges into soak pits to be replaced with a land application area.
- An important aspect in managing liquid discharges to land is ensuring that once installed, a wastewater management system is operated correctly and is well maintained on an ongoing basis. Inappropriate use and/or a lack of maintenance can affect the performance of the system, despite it being properly designed and installed in the first place, so monitoring is important. The Council has included policy to recognise this and the policy is supported through methods that will see information and guidelines for landowners and/or system operators.
- A second important aspect of managing liquid discharges to land is monitoring the effectiveness of the wastewater system through inspections. Where inspections show that a system is performing poorly, action will be taken that will require the system to be upgraded to perform according to the original design or to be replaced.
- The use of wetlands can provide an effective method of reducing the level of contamination in water, stormwater or wastewater prior to discharge into the environment. Wetland processes filter out and retain contaminants on a passive and ongoing basis. This may help a discharger to meet the objectives and policies that apply to the subsequent discharge of contaminants to land or water. For this reason, the Council has encouraged the use of artificial wetlands as a means of managing the discharge of contaminants. An additional benefit from this approach is that wetlands may also create new habitat, contributing to biodiversity values.

Description of issues

Wastes are unwanted solids and liquids that are to be discarded or discharged. The amount of waste disposed of in Marlborough has steadily increased over time, mostly due to an increasing population, economic growth and increasing consumer demand. Disposing of waste uses land and resources that would otherwise be available for other purposes. Waste disposal also incurs a cost to communities and the environment.

When an item enters the waste stream, the environmental effects vary depending on the nature of the waste, the method of disposal and the nature of the receiving environment. Effects previously

experienced include localised contamination of soil and water resources and nuisance problems, such as litter and odour. Uncontrolled waste disposal also has significant health implications for people and communities.

Avoiding waste altogether would be the best way to avoid the costs to people and the environment. However, not all waste can be avoided and management of waste is necessary to ensure that the costs and effects on the environment are minimised. The Council exercises waste management functions under a number of different statutes. The focus of Chapter 16 is to set a framework for addressing Marlborough's significant waste management issues under the RMA. In addition to waste minimisation, the chapter focusses on the way in which the Council exercises its function of controlling the discharge of contaminants into the environment.

The provisions for this chapter are based on two issues:

Issue 16A: Large quantities of solid waste are generated in Marlborough.

- Unmanaged, the large quantity of solid waste produced in Marlborough has implications for the environment in terms of land, water and air resource contamination. Because of this, the Council provides waste collection services (through kerbside waste collection in urban areas and transfer stations) and a regional landfill for safe disposal. Even when solid waste is managed in this co-ordinated and centralised way, there is still the need to collect and manage the gas and leachate caused by the decomposition and breakdown of waste within the landfill.
- A strong primary production based economy means that a wide variety of wastes are created in Marlborough from a wide variety of activities, ranging from agriculture, horticulture, forestry, viticulture, dairying and aquaculture. The contaminants associated with the different discharge activities may have their own inherent properties/qualities that contain a variety of potential contaminants including solids, nutrients, bacteria, viruses and hazardous substances.
- Over the past decade, the Council has invested heavily in alternatives to disposing of waste in the regional landfill, which has extended the life of the landfill. This is particularly relevant given the difficulties in finding suitable sites for, and the costs of, establishing new landfills.
- The regional landfill cannot take all solid wastes and does not cater for many forms of hazardous waste. Given the threat to human health and the environment posed by such solid wastes, it is important that there are other options available for safe disposal of such wastes.
- Waste management in remote locations also presents a considerable challenge. Providing opportunities to minimise solid waste and offering a collection and disposal service for residual solid waste is difficult due to the cost and practicality of providing these services. Some people have responded to the challenges created by geographical isolation and dispose of their solid waste on-site, especially where the waste is generated on farms (e.g. rubbish and offal pits). There is also the possibility that illegal dumping of solid waste on river reserves and on the roadside may occur.

Issue 16B: The discharge of liquid wastes onto or into land has the potential to adversely affect the surrounding environment.

- A strong rural economy and a prevalence of residential living in rural and coastal environments mean that a wide variety of liquid wastes are created in Marlborough, including domestic wastewater, dairy shed effluent, winery wastewater and vegetable and shellfish processing wastewater. These liquid wastes contain a variety of potential contaminants including solids, nutrients, bacteria, viruses and substances that can change soil properties.
- Fortunately, favourable soil properties in many parts of Marlborough and the District's dry climate make the discharge of liquid wastes to land a viable option. However, soil resources do vary across parts of Marlborough, which in turn means there is variation in the treatment capacity of soils across the District.

- Understanding this variation is critical in avoiding the adverse effects of discharging contaminants to land. If the rate of discharge exceeds the hydraulic capacity of the soil, then wastewater will pond on the ground surface and potentially run off (if on a slope). This creates an obvious health hazard and a risk of contamination of nearby surface water bodies.
- Discharges to steeper slopes, especially those that are already prone to be unstable, can cause instability and threaten people and property. The substances and solids present in wastewater can accumulate in the soil and build to levels that adversely affect soil quality. This in turn can affect the ability of the soil to continue to be used as a land application area or for productive purposes in the future.
- While it is possible in Marlborough to use the land resource to treat liquid wastes, it is essential that discharges to land are well managed as they could, in isolation or in combination, give rise to adverse effects of similar or greater magnitude than those caused by discharges to water.

Statutory obligations

In addition to the RMA, statutory obligations with respect to dealing with waste arise through a number of other statutes. These include:

- Waste Minimisation Act 2008;
- Local Government Act 2002;
- Hazardous Substances and New Organisms Act 1996;
- Health Act 1956; and
- Health and Safety in Employment Act 1992.

Central government has also developed a New Zealand Waste Strategy (the Strategy), which sets out the Government's long-term priorities for waste management and minimisation. The Strategy's two goals provide direction to local government, businesses (including the waste industry) and communities on where to focus efforts to deliver environmental, social and economic benefits to all New Zealanders. These goals aim to reduce the harmful effects of waste and improve the efficiency of resource use.

The Waste Minimisation Act, legislation designed to encourage waste minimisation and a decrease in waste disposal to protect the environment from harm and provide environmental, social, economic and cultural benefits, is crucial. This Act requires the Council to adopt a waste management and minimisation plan that provides objectives, policies and methods for achieving effective and efficient waste management and minimisation within the District.

There is no specific RMA Section 6 or 7 matters on waste management. However, some aspects of Section 7 may be considered relevant in terms of managing effects for waste. For example, Sections 7(c) and (f) on maintaining and enhancing amenity values and the quality of the environment, respectively can be considered to have a place in managing waste.

There are no national policy statements or national environmental standards specific to waste management. However, there are policies in Chapter 16 of the MEP to help achieve the policies of national policy statements. For example, Policy 4 of the New Zealand Coastal Policy Statement 2010 (NZCPS) concerns the integrated management of natural and physical resources in the coastal environment and activities that affect the coastal environment. Part of this Policy (4(c)(ii)) requires the Council to consider circumstances where the '*public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected.*' An example of this would be the illegal dumping of waste in the coastal environment – this could potentially affect people's use and enjoyment of this environment. This was certainly an aspect of concern raised by the community during feedback received through the review process.

For Issue 16B, there is a more direct link with the NZCPS. Policy 4, as described above and Policy 7(1)(b)(ii), which requires identification of areas of the coastal environment where particular activities *'may be inappropriate without the consideration of effects through a resource consent application,'* are both applicable. The requirement for resource consent applications to discharge waste to land is a matter the Council has identified through the development of policy and rules. This is particularly appropriate in the Sounds, where the soils tend to have a high proportion of clay and corresponding low permeability rates. Furthermore, in many areas soil is of inadequate depth to provide sufficient treatment of bacteria and the underlying geology can be prone to instability. Additionally, Policy 8(c) - *'ensuring that development in the coastal environment does not make water quality unfit for aquaculture activities in areas approved for that purpose'* - and Policy 21 - *'Enhancement of water quality'* - are also relevant for Issue 16B.

There are also objectives within the National Policy Statement on Freshwater Management 2014 (NPSFM) that are relevant to Chapter 16. These include Objective A1 and C1, as follows:

Objective A1 *To safeguard:*

a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and

b) the health of people and communities, at least as affected by secondary contact with fresh water; and

c) sustainably managing the use and development of land, and of discharges of contaminants.

Objective C1 *To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment.*

Sections 30 and 31 of the RMA also set out a range of statutory functions for the Council that enable it to establish management frameworks in response to the identified issues.

Information and analysis

A number of investigations and monitoring activities have helped to inform the review of waste management provisions, including state of the environment monitoring, compliance monitoring, development of the Waste Management and Minimisation Plan and investigations into soil and water quality. An overview of these is provided below.

State of the environment monitoring

Soil and water resources have been monitored since the establishment of the current resource management plans. The Council's understanding and knowledge of Marlborough's natural resources have subsequently increased. This monitoring is ongoing and results are made publically available on the Council's website.

Compliance monitoring

The Council undertakes annual compliance monitoring of the discharges to land of wastewater from two significant rural based industries in Marlborough: the viticulture industry and the dairy industry. Both industries rely on soils to treat and retain contaminants present in the wastewater.

For wineries, both liquid waste from the winemaking process (predominantly consisting of water used for cleaning floors, equipment, fermentation tanks and barrels) and grape marc waste (the solid end product after grapes have been pressed for juice) are assessed as part of the survey. Monitoring is undertaken according to resource consent conditions and/or the permitted activities provisions of the WARMP. Wineries are also required to keep records demonstrating compliance and these are checked during site visits. Though some wineries are non-compliant, over the life of the surveys rates of compliance have generally increased every year.

Dairy farms have been monitored in Marlborough since 1994. The dairy effluent systems on all operating dairy farms are inspected by the Council to check compliance with plan rules or resource consents. For the MSRMP area, dairy farms are checked against the permitted activity plan rules, while in the WARMP area farms are checked against their respective resource consent conditions for dairy effluent discharge. On some farms, the Council also inspects sites where cows continue to walk through waterways to monitor the progress made toward eliminating the use of waterways by dairy herds. Similar to the winery surveys, there are also some dairy farms with non-compliant systems and practices and these require remediation.

A third compliance survey related to discharges to land of cleanfill material[3]. Little is known about the effects of these discharges, but there is the potential for significant adverse effects to occur if inappropriate material is disposed of or if the disposal locations are inappropriate. Monitoring was undertaken in 2010 to determine the nature of the waste materials contained in six cleanfill sites across Marlborough. Overall, results of the investigation found that all sites accepted unauthorised material and a number of the sites had elevated concentrations of metals greater than the relevant guidelines; in some cases, the risk to human health and the local environment from elevated concentrations of metals was considered high. Some of the sites required remediation to ensure that the contaminants would not continue to have a harmful effect on human health and the wider environment.

The results from all of these surveys enable the Council to consider the extent to which the current permitted activity standards are being complied with and whether the standards are effective or efficient. Similarly, the results can help to determine where conditions of consent (where consent is required) are effective in avoiding, remedying or mitigating adverse effects. In several instances, results have directly influenced changes in approach to the management framework in the MEP for some discharges to land; these changes are described later in this report.

The results from these surveys are publically available on the Council's website.

Waste Management and Minimisation Plan

As indicated in the statutory obligations section of this report, the Waste Minimisation Act requires the Council to adopt a waste management and minimisation plan, which must include objectives, policies and methods for achieving effective and efficient waste management and minimisation within the District. The Council's most recent Waste Management and Minimisation Plan will cover the period 2015 to 2021. The Plan also helps to achieve the direction set out in the New Zealand Waste Strategy.

Through the Waste Management and Minimisation Plan, the Council is committed to reducing the amount of waste that is sent to landfill. This will be achieved through a combination of waste reduction and reuse options together with increasing the amount of material diverted from the landfill. This approach is also expressed through the policies in the MEP for managing solid waste, particularly in terms of setting a hierarchy with a reduction in the amount of waste generated being the priority.

Review of existing resource management plan rules

The current rules of the MSRMP and the WARMP have been analysed, including a review of the activities being undertaken in Marlborough and the different types of discharges associated with these activities. The review of the rules has been assisted by the other information, analysis and projects undertaken.

Identification of groundwater protection areas

Groundwater supply wells provide water to many large communities in Marlborough as well as to commercial and industrial activities. The water abstracted from these wells is vulnerable to contamination from discharges that occur in the immediate vicinity of the wells and in the surrounding areas from which the groundwater is drawn. The risk of contamination of these supply wells can be reduced by the development of Groundwater Protection Areas (GPAs) around each well and by imposing controls on activities within these areas. GPAs are areas in which contaminants could

[3] Cleanfill is material that has no potential to produce harmful effects on the environment. This material is generally a natural material such as clay, soil and rock, and such other materials as concrete, brick or demolition products that are free of combustible or organic materials.

migrate into the wells at concentrations that may adversely affect the quality of water drawn from the well. GPAs will be specifically identified and mapped in the MEP.

The identification of GPAs and the determination of their boundaries have been completed for the Council predominantly by Pattle Delamore Partners Limited. There has also been input from the Council's Environmental Science and Monitoring Department.

Identifying soils at risk

Throughout the review there has been consideration of the nature of Marlborough's soils and whether some types may be at risk of contamination depending on what activities occur on them. Subsequently, investigations have been carried out and a report has been produced[4] that identifies some high risk soils. From this the Council has produced a *Soil Sensitive Area* map that identifies three soil types within the District as being high risk: free draining, impeded or loess. The free draining soils are considered high risk because they are located over an underlying shallow, unconfined aquifer and therefore discharges onto these soils could result in groundwater contamination. Impeded soils are considered high risk because of the potential for movement of liquid waste across the soil surface, which can convey waste from land to surface water. Loess soils are considered high risk because of their potential for erosion.

The *Soil Sensitive Area* map will be used to prevent certain activities occurring on the three high risk soil types unless resource consent is granted. Through the consent process, an assessment will be made as to whether it is appropriate for an activity to occur on a particular soil type.

Consultation

Early consultation

In 2006, the first round of consultation was initially undertaken solely for the review of the MRPS and saw the distribution of a community flyer to all ratepayers advising of the review. The aim of this exercise was to find out the community's views on the most important resource management issues that Marlborough would face over the next ten years. Approximately 380 responses were received, including comments on waste disposal, recycling and the impact of discharges to land from septic tanks on coastal water quality in the Marlborough Sounds.

The feedback received on waste disposal and recycling suggested there appeared to be little incentive for the community to recycle, reuse and reduce. It was suggested the Council change its approach in this regard, from (effectively encouraging) landfill use to sustainable use by replacing rubbish removal for residential properties with recycling and compost/kitchen waste removal in order to divert 'rubbish' from the landfill. Education and awareness programmes were highlighted as essential to support such an approach. It was acknowledged that the need remains to deal with the waste that cannot be recycled.

In terms of discharges to land, most feedback received related to wastewater systems in the Marlborough Sounds. The need to bring these systems 'up to scratch' to protect water quality was identified as being important, as there were some areas where shellfish could not be safely collected or eaten because of poor water quality. Some respondents stated that the Council needed to ensure there were higher standards for effluent disposal. An equity issue was also identified by some respondents, who suggested there was more concern given to the standard of septic tanks and their installation than to discharges from the large number of boats operating in the Marlborough Sounds, which did not have holding tanks.

Following this initial consultation, a series of discussion papers were prepared by the Council and released for public feedback in late 2007. Two of these are particularly relevant to this Section 32 evaluation report: *Discussion Paper 4: The Future of the Marlborough Sounds*; and *Discussion Paper 11: Waste Management*.

[4] AgResearch (Seth Laurenson and Dave Houlbrooke). Information to support Marlborough District Council's Land Discharge Permit Trigger Soil Profile Map using the AgResearch Soil and Landscape Risk Framework. July 2015.

In total, 43 responses were received from individuals, iwi, industry groups and environmental groups on *Discussion Paper 11*. Five issues were identified in the paper: the amount of waste produced, changing behaviours to manage waste, dealing with waste in remote locations, managing residual waste and managing hazardous waste. Comments received through the feedback noted the following:

- There was strong agreement that waste management was a significant issue in Marlborough and as a result many people supported an objective of a 'zero waste Marlborough,' even if it was "unrealistic" or "unachievable". Particular concern was expressed regarding the amount of packaging and advertising waste generated.
- There was overwhelming agreement that recycling efforts needed to be increased in Marlborough. Many people identified the major barriers to recycling were poor recycling facilities and even poorer access to those facilities that do exist. It was not surprising therefore that almost all responses supported the provision of a new recycling facility in Marlborough and the commencement of kerbside recycling. These facilities and operations are now functioning and well supported by the community.
- Dealing with waste generated in remote locations drew a high level of response from Marlborough Sounds residents, all of whom agreed that this was a significant issue. There was general agreement that there was a need to provide facilities for waste disposal in the Marlborough Sounds. Numerous suggestions were made in this regard, including: provision of skips and recycling bins at strategic locations, especially marinas and other exit points; providing skips on barges for waste from boats and vessels; use of barges to collect waste, including septic tank sludge from areas with no road access; and one-off collections of old household appliances.
- Many people expressed concern that charging for such facilities would only encourage illegal dumping, which many already identified as a significant issue. Several responses stressed that the Council needed to make it easy for people to be responsible with their rubbish but that greater monitoring was needed in rural and coastal areas where illegal dumping of waste was occurring.
- Feedback on dealing with residual and hazardous waste was limited, although there was agreement that these were significant issues.

Seventy responses were received on *Discussion Paper 4*, which included a specific issue concerning the reliance of residential development on on-site wastewater management systems threatening coastal water quality and public health. Reflecting the value placed on coastal water quality in the Marlborough Sounds, there was agreement that this was a regionally significant issue. Comments received through the feedback noted the following:

- Plan Change 7 to the Marlborough Sounds Resource Management Plan (which introduced new provisions for on-site wastewater management systems) had helped in improving the standard of design and installation of new on-site systems. Other responses encouraged the Council to continue using up-to-date technology to determine appropriate on-site systems. However, concerns remained about the effect of existing on-site systems on coastal water quality.
- Several responses stressed the importance of education in ensuring that the necessary maintenance of on-site systems occurs. One respondent suggested that this was particularly important, considering the high rate of property ownership turnover in the Marlborough Sounds. Several people highlighted the need to make maintenance easier by finding a simpler way of removing and disposing of septic tank sludge.
- Some respondents did not believe that a voluntary approach would be sufficient to improve on-site system performance and called for an inspection regime to be implemented.
- Making it a requirement to consider the capacity of the existing on-site wastewater management system when upgrading baches and holiday homes was positively received.
- Many respondents felt that the Council should require community schemes as opposed to individual on-site systems, especially for subdivisions and larger residential

developments. Others felt that the likely effectiveness of on-site systems should be an overriding factor in determining the scale and density of residential subdivision.

- There was support for ongoing monitoring of coastal water quality in densely populated bays.

Later consultation

Early in the review process, the Council decided on an iterative approach in developing provisions for the MEP. This sought to 'test' as many of the provisions as possible before the new resource management documents were formally notified under the First Schedule of the RMA. The rationale for this was that the greatest flexibility for change to provisions exists prior to notification of a proposed document; once notified, only those provisions submitted on can be changed and then only within the scope of those submissions. The Council therefore established a number of focus groups with the task of reviewing the provisions to discuss their likely effectiveness or otherwise. The aim was to have as much community participation in developing the provisions as possible to reflect the community's views and to resolve any substantive issues prior to notification.

In terms of the external focus groups, the policy provisions have been considered and, as a consequence, refined through the Sounds Advisory Group, Freshwater Focus Group, Marine Focus Group, Practitioners Focus Group and the Iwi Working Group. Chapter 16 was also released for public comment in 2013 as part of a package of MEP provisions, but no specific feedback was received on the provisions of this chapter. Through the focus group process of refining the provisions of Chapter 16, there was a continued drive for appropriate management of the disposal of waste to occur to ensure good environmental outcomes were achieved.

Given that dealing with waste is a core responsibility of the Council, there was also extensive consultation with the Assets and Services Department of the Council, with a particular focus on aligning the MEP with the direction of the Waste Management and Minimisation Plan.

In August 2014, two industry-based working groups were established to review the draft rules for the discharge of agricultural waste (liquid and solid) to land. These groups included representatives from the wine and farming industries, as these two sectors produce the largest volumes of solid and liquid waste discharged to land in Marlborough. The Wine Working Group consisted of 18 individuals from local wineries and Sustainable Wine Growers, while the Farming Working Group consisted of four representatives from Federated Farmers and Fonterra.

Each of the two working groups met with staff from the Environmental Policy and Environmental Protection Groups on a number of occasions to review and provide feedback on the draft rules. After initial feedback had been incorporated into the draft document, opportunity was given to each working group to provide further feedback on the rules. The Farming Working Group provided subsequent feedback, while the Council received no further communication from any representatives of the Wine Working Group.

Other industry representatives were also given the opportunity to review and provide feedback on the draft rules. In particular, the rules were provided to the local representative for the New Zealand Deer Farm Association (NZDFA), the New Zealand Agricultural Aviation Association (NZAAA) and the New Zealand Helicopter Association (NZHA). Opportunity was given to meet directly with the Environmental Policy Group to discuss feedback. One representative met with Council staff to review specific feedback.

Upon request, in July 2015 the final draft version of the draft rules were circulated to the Farming Working Group, NZAAA, NZHA and a small number of individuals who had requested to be informed of the rules.

Evaluation for Issue 16A

Issue 16A – Large quantities of solid waste are generated in Marlborough.

Appropriateness of Objective 16.1

Objective 16.1 – Reduce the amount of solid waste generated in Marlborough.

Relevance
The objective is considered to be highly relevant as it responds directly to the issue. It reflects a community desire and support for minimising waste through options for recycling, reducing and reuse. It is important for community wellbeing, particularly from a public health perspective, in terms of Section 5 of the RMA, but also in terms of fulfilling the direction in Sections 5(2)(a), (b) and (c). The objective is also highly relevant to Section 7(f) - maintaining and enhancing the quality of the environment - and assists the Council to carry out its functions as a unitary authority under Sections 30 and 31 of the RMA; in particular, functions set out in Sections 30(1)(c), (f) and (gb) and Sections 31(1)(a) and (b).

The objective complements the Council's Waste Management and Minimisation Plan, required by central government to help achieve effective and efficient waste management and minimisation within Marlborough. A zero waste option is not advocated in the Council's Waste Management and Minimisation Plan, nor is this advocated through central government's New Zealand Waste Strategy. For this reason, this objective focusses on waste minimisation rather than a zero target.

Feasibility
Achieving the objective is realistic when set alongside the more specific targets set out in the Council's Waste Management and Minimisation Plan for 2015 to 2021. For example, the Council's targets are as follows:

- Having a Commercial Industrial Sorting Facility operational and achieving a 60% diversion rate from the regional landfill by 2017.
- Increasing the amount of recycling collected from Renwick, Grovetown, Spring Creek, Tuamarina, Rapaura and Rarangi by up to 400 tonnes per year.
- Reducing the amount of food waste sent to landfill each year by 20% (200 tonnes) by 2017 through kerbside collections.
- Increasing the amount of greenwaste processed each year by 10% (800 tonnes) by 2018.

Regular assessments of the volumes and nature of waste are reported regularly; therefore it will be relatively easy to determine the achievability of the objective.

Acceptability
The objective is reasonable in that the whole of community will benefit from it. Minimising waste prolongs the life of landfills, thereby reducing costs to ratepayers in having to fund new sites for disposal. Although there are costs to ratepayers in implementing systems such as kerbside collection of material to be recycled and reuse shops, there are markets for material to be recycled. Importantly, there are reduced impacts on the environment, with a reduction in waste generated in Marlborough having to be disposed of in the landfill.

The community feedback on this issue recognises that there is a need to reduce waste. There has been widespread support for the Council's current efforts to achieve this outcome.

Assessment of provisions to achieve Objective 16.1

Policy 16.1.1

Policy 16.1.1 – Encourage waste minimisation practices by establishing a waste management hierarchy that ensures waste is managed in the following order of priority:
(a) promoting lower levels of solid waste generation; then

(b)	promoting higher levels of reuse, recycling and recovery of solid waste; then
(c)	disposal of residual solid waste.

Benefits
The benefits of the policy are that it provides a framework for prioritising how waste is to be managed in Marlborough. A priority has been placed on reducing waste at source, as this is considered the most efficient and effective way of minimising waste. Within this, there are opportunities or flexibility as to how this can be achieved. Taking advantage of changing community attitudes by making it easier to reduce, reuse, recycle and recover solid waste will help to achieve the priorities. The community has expressed acceptance and an expectation that there will be systems in place to achieve the outcome, with a focus on minimisation through (a) and (b) of the policy over disposal in (c).

Costs
Set up costs have been incurred in providing for the options in (b). These are in place for the larger centres of Blenheim and Picton, especially through kerbside recycling and the resource recovery centres. There is a whole of community cost in setting up the regional facilities and an individual cost through rates where kerbside recycling is in place. Although there is kerbside recycling in place in Blenheim and Picton, there is the possibility that other centres may have the same service implemented in the future.

In 2014, the Council undertook a survey of residents in Renwick, Grovetown, Spring Creek, Tuamarina and Rarangi about how they currently handle their rubbish and recycling, and what, if any, changes they would like to see considered in the future. The responses[5] received indicate that there is already a large number of residents using the centralised recycling facilities in Blenheim or having recycled items collected by a private contractor. In both cases, there is an existing cost to residents, either through having to travel into Blenheim or through the costs of the contractor. The introduction of kerbside recycling into these other centres would therefore not likely result in significantly additional costs.

There is a reliance on markets to recycle items that are collected. If these items cannot be forwarded to recycling facilities immediately, storage costs could be incurred.

Efficiency
The policy is considered efficient as there is a whole of community benefit in approaching waste minimisation in this way. Even for areas without kerbside recycling, there is still a benefit in reducing overall waste produced in Marlborough, thereby reducing costs for everyone. In turn this helps to extend the operational life of the regional landfill.

Effectiveness
The policy helps to achieve the objective of reducing the amount of waste generated in Marlborough. Having a priority on the approach to dealing with waste means that the Council's resources can be targeted to the areas where the most will be achieved in terms of reducing the residual waste that goes to the regional landfill. The policy is reflective of an existing approach to waste minimisation, which is set out in more detail in the Waste Management and Minimisation Plan 2015 to 2021.

Policy 16.1.2

Policy 16.1.2 – Encourage the diversion of inert waste and putrescible waste from the waste stream disposed of at the regional landfill.

Benefits
Historically, a large proportion of the solid waste disposed of at the regional landfill has been either inert (e.g. construction and demolition waste) or putrescible (e.g. green waste and kitchen waste). These wastes can be converted into useful products such as compost, or disposed of in a manner that avoids the need to use the regional landfill, such as cleanfilling or on-site disposal. Therefore, encouraging the diversion of these wastes from the regional landfill will help to extend the operational

[5] Marlborough District Council. Rubbish and Recycling Survey Summary of Responses from the Residents of Renwick, Grovetown, Spring Creek, Tuamarina, and Rarangi. May 2014.

life of the landfill. Not having to find and establish a new regional landfill and will reduce capital costs and possibly reduce environmental costs.

Inert wastes are now disposed of at suitable cleanfill operations where there is an element of reuse activities being undertaken. As a consequence, disposal of inert material at the regional landfill is now minimal. The reduction of putrescible material at a household level and the increased reuse of green waste through composting are also key drivers for the Waste Management and Minimisation Plan 2015 to 2021.

Costs
Having facilities to divert waste from landfill does incur costs, but where waste is able to be converted into a useful product - for example, compost - these costs can be offset. There are costs for an individual in having to pay to dispose of these forms of waste. However, if people choose not to recycle these wastes they will still need to pay the cost of disposing of them at transfer stations. Alternatively, there could be an environmental cost in people not wanting to recycle, especially if the costs are considered too high. Such attitudes could result in people illegally dumping their waste.

Efficiency
There is a whole of community benefit in diverting inert waste and putrescible wastes from the regional landfill.

Effectiveness
The policy is considered to be effective relative to the costs and benefits as it encourages separation of wastes that may be able to be converted into useful products and will prolong the life of the regional landfill. It is important that alternatives are provided to divert inert waste and putrescible waste. Presently green waste may be dumped at a composting site adjacent to the Blenheim transfer station and the cost of this is cheaper than dumping in the regional landfill (through the transfer station).

Methods of implementation

The most significant change in the methods of implementation from the current MRPS and the two resource management plans is the inclusion of a method for sorting and recycling services/facilities and for composting operations. These services and facilities have been established post notification of the MSRMP in 1995 and the WARMP in 1997 (hence why these methods were not included in either of these resource management plans).

Other options considered to achieve Objective 16.1

Two other options were considered by the Council to achieve Objective 16.1. They were:

1. Status quo in terms of the existing provisions of the MRSP, the MSRMP and the WARMP
Within the MRPS, one of the five regionally significant issues identified is the control of waste. Under an objective of '*To avoid, remedy or mitigate the effects of waste and contamination on the environment*,' there are two policies, one of which is directed at hazardous substances and one directed at waste minimisation. Specifically, in terms of solid waste, the waste minimisation policy at 9.1.5 is fairly generic in:

- encouraging producers of waste to reduce, reuse, recycle and recover;
- advocating to the Minister for the Environment for national systems to address waste management; and
- promoting best practicable means of disposing of waste that cannot be reused, recycled or that remains after recovery processes.

Policies 16.1.1 and 16.1.2 in the MEP have taken these a step further in promoting a hierarchy in minimising waste and specifically encouraging a diversion from the regional landfill of inert, green and kitchen waste. Given the advances made with the recycling facilities now available in Marlborough, the two new policies are considered to be more proactive in minimising waste than those in the current MRPS.

The policies of the WARMP for waste minimisation (15.4.2.1 and 2) are more minimalist than those in the MRPS. For the MSRMP, Policy 14.2.1.1 encourages a reduction in waste produced, while Policy 14.2.5.1.1 encourages recycling and reuse, including composting. The methods of implementation included in both of the current resource management plans do not reflect the current situation in regards to the extent of recycling and reuse facilities available today. The policies for the MEP are therefore preferred, especially when taken in conjunction with the range of methods identified to implement the policies. These reflect advances in the provision of services to deal with waste since both of the resource management plans were made operative.

2. Not having a resource management focus on waste minimisation

This option would see the Council only considering the adverse effects of managing waste in terms of effects on water, soil and air quality. Waste minimisation could have been handled by the Assets and Services Department of the Council solely to promote and encourage production of less waste. However, the adverse effects of waste are largely dependent on the volumes of waste being produced, so there is a clear connection between the two. If the volume of waste can be minimised, there are fewer adverse effects on the environment to deal with.

Appropriateness of Objective 16.2

Objective 16.2 – Avoid, remedy or mitigate actual or potential adverse effects arising from solid waste management activities.

Relevance

Though Objective 16.1 focusses on waste minimisation, there is still a need to dispose of the residual solid waste once reuse, recycling and recovery efforts have been exhausted. Given the nature of solid waste, its disposal in the local environment has the potential to create significant adverse effects. This includes from contaminants present in the waste or produced by the breakdown of the waste material adversely affecting soils at the site of the disposal and/or leaching into underlying groundwater or nearby surface water bodies. For this reason Objective 16.2 is considered relevant to helping address the overall issue.

The objective helps the Council to carry out its functions as a unitary authority under Sections 30 and 31 of the RMA. In particular, functions described in Sections 30(1)(c), (f) and (gb) and 31(1)(a) and (b). The objective is focussed on achieving the purpose of the RMA, particularly Sections 5(2)(b) and (c). Other matters in Section 7 that are also highly relevant include Sections 7(b) - the efficient use of natural and physical resources, 7(c) - the maintenance and enhancement of amenity values, 7(d) - intrinsic values of ecosystems and 7(f) - maintaining and enhancing the quality of the environment.

Feasibility

In many respects the objective reflects current practice in terms of the facilities and processes already in place to deal with solid waste in Marlborough. It can therefore be said that Objective 16.2 is being achieved to a large extent and is already proving feasible. These facilities and processes have been established to ensure that the actual or potential adverse effects from disposing of solid waste are appropriately managed. However, there will be a need for ongoing monitoring to ensure this continues to be the case.

Objective 16.2 is important in that it complements Objective 16.1, especially as a zero waste target is not advocated through the Council's Waste Management and Minimisation Plan. The objective effectively recognises the reality of this situation and importantly helps to achieve other objectives for managing the effects arising from solid waste activities on water, soil and air quality.

While frameworks can be put in place to appropriately deal with the solid waste management activities, this does rely on the community responding appropriately and using the facilities made available for disposal, recycling and reuse. Where facilities are not in place or if the costs of disposal are considered too high by some in the community, there is a risk of inappropriate disposal of waste creating adverse effects on the environment. This is referred to as 'fly-tipping' - disposal of waste in rural areas alongside roads or rivers - and has been witnessed by the Council in some locations.)

Acceptability
There is recognition within the community that there does need to be a response to deal with the adverse effects of waste on the environment and there was widespread support for this indicated in the feedback received during the early consultation.

Assessment of provisions to achieve Objective 16.2

Policy 16.2.1

> Policy 16.2.1 – Continue to centralise solid waste disposal activities through the operation of a regional landfill and associated transfer stations.

Benefits
Inappropriate disposal methods or locations can give rise to significant adverse effects on the surrounding environment through odour, the discharge of contaminants to air, water and land, noise and traffic. Therefore, centralising solid waste management at a regional landfill avoids the need for disposal elsewhere in Marlborough and helps to minimise the potential for these adverse effects. The policy is considered to have significant environmental benefits in managing the effects of solid waste disposal.

Costs
Because the regional landfill is already in place, there is no additional direct cost to ratepayers from implementing the policy. Operational costs on an ongoing basis are planned for through the Long Term Plan and have been for some time.

Efficiency
The regional landfill has been proven to be an efficient method of dealing with solid waste in Marlborough - much more efficient than managing the environmental effects from a number of landfills located throughout the District, including the need for monitoring of these landfills.

Effectiveness
Having a centralised facility and associated transfer stations for the disposal of solid waste has proven to be effective in helping to manage the adverse environmental effects of waste.

There has been an issue with 'fly-tipping,' whereby individuals dispose of their waste in rural areas alongside roads or rivers rather than taking the waste to a transfer station. Although it is impossible to determine the reasons for this, it could be because the costs of disposing waste at transfer stations is considered too high. This matter aside, the Council still considers having a centralised system is the most effective system for waste disposal in Marlborough, particularly in terms of the costs of having to manage multiple landfills.

Policy 16.2.2

> Policy 16.2.2 – All residual waste shall be stored and disposed of in a manner that avoids or mitigates actual or potential adverse environmental effects.

Benefits
The benefit of this policy is that the actual or potential effects of dealing with residual waste are avoided or appropriately mitigated. It is important that all storage and disposal of residual waste is managed in a manner that reflects best practice and minimises the impacts of operations on the surrounding environment. This will involve the Council (as a provider of waste collection and disposal facilities) and private operators complying with national guidelines for the storage and disposal of solid waste.

Costs
Compliance with standards will introduce additional costs for ratepayers through the Council having to meet national guidelines.

Efficiency
The costs are considered warranted given the potential for significant adverse environmental effects. Efficiency is also achieved through the use of national guidelines for storage and disposal of solid waste.

Effectiveness
It is considered that the effectiveness of Policy 16.2.2 will be significant given the Council has established a priority for managing waste in Policy 16.1.1 with residual disposal being the lowest priority in the hierarchy. Policy 16.2.2 is also considered to be effective in respect of using nationally consistent guidelines for the storage and disposal of solid waste.

Policies 16.2.3 and 16.2.6

Policy 16.2.3 – Require resource consent for the establishment of cleanfills to ensure the appropriate disposal of waste.
Policy 16.2.6 – In deciding whether to grant resource consent for any discharge of solid waste to land and the need to impose conditions to avoid, remedy or mitigate adverse effects, decision makers need to determine whether there will be: (a) soil contamination from the accumulation of heavy metals and other hazardous substances; (b) contamination of waterbodies through runoff of sediment or leachate; (c) erosion, land instability and/or run-off of sediment into waterbodies due to land disturbance activities associated with the activity; (d) reduced amenity values due to disposal of unauthorised material resulting in odours, rubbish accumulation and vermin; or (e) adverse effects on the mauri of ecosystems, waahi tapu sites and other sites of cultural significance by discharges of sediment or leachate onto or into land.

Benefits
Through the results of the limited monitoring on cleanfills, which thus far shows potential human health risks and environmental degradation, there is a strong indication that there needs to be a more coordinated response to manage the effects of this activity. Having a greater degree of control over what is disposed of in cleanfills, along with the ability to undertake more comprehensive monitoring, means implementation of the policies is likely to result in positive benefits for the environment in the long term. There are also likely to be positive social and cultural benefits from these policies, due to reduced contamination of waterways and from an iwi perspective, greater protection for the mauri of Marlborough's ecosystems. Policy 16.2.6 is not specific to cleanfills, as there may be other discharges to land that need to be considered through the resource consent process to ensure beneficial environmental outcomes. The provisions of Policy 16.2.6 also apply where discharges of solid waste to land that is provided for a permitted activity do not meet the standards for permitted activities and a resource consent is required.

Costs
Resource users and landowners will need to pay to obtain resource consent for these activities. There may also be costs associated with meeting conditions of any resource consent granted.

Efficiency
The policies are efficient in that they provide a direct solution to an issue that has arisen through the limited monitoring of cleanfills. It is considered that the approach of these two policies will lead to greater environmental, social and cultural benefits to the wider community, acknowledging that costs may increase for the individual consent holder. Such costs are considered justified as they will prevent potentially harmful human health and environmental effects caused by inappropriate disposal of waste. Any costs for monitoring of resource consents will be the responsibility of the consent holder, which in turn means there is a reduced cost to ratepayers. These policies will likely need to be supported by providing information to landowners about the need for resource consent.

Effectiveness
The policies are considered to be effective relative to the costs and benefits of implementation, for example improved environmental benefits through greater control over what can be disposed of in rural environments, and where. This increases the likelihood of Objective 16.2 being achieved. While

there could be some debate about whether the policies will successfully help to address the issue of the amount of waste produced in Marlborough (Issue 16A), at the very least they will result in an assessment of the nature of waste being deposited in cleanfills, its volume and whether particular disposal locations are appropriate.

Policies 16.2.4 and 16.2.5

Policy 16.2.4 – Enable the application of solid waste to land from the processing of primary products, the disposal of animal waste in offal pits, the disposal of biodegradable material in farm rubbish pits or the processing/storage of compost or silage, where:

(a) this does not occur within a Groundwater Protection Area or into or onto soils identified as a Soil Sensitive Area as being at risk; and

(b) standards for permitted activities are met.

Policy 16.2.5 – Where resource consent is required for the discharge of solid waste to land from primary production activities, decision makers shall consider the following matters in deciding whether or not to grant consent and whether conditions can be imposed to avoid or mitigate any adverse effects on the environment:

(a) the soil characteristics at the discharge location and whether the nature and volume of waste to be discharged will adversely affect soil structure;

(b) where the discharge is within a Groundwater Protection Area or into or onto soil identified as a Soil Sensitive Area, the risks to groundwater, surface waterbodies or soil quality;

(c) contamination of freshwater resulting from nutrient (nitrogen and phosphorus) and organic nutrients (BOD) through leaching, runoff and/or direct discharge;

(d) the proximity of the discharge location to waterbodies with a high natural state or to waterbodies identified as having degraded water quality that needs to be enhanced through Policies 15.1.4 to 15.1.7 in Chapter 15 - Resource Quality (Water, Air, Soil); and

(e) the potential for reduced amenity values due to odour, vermin or visual effects from the discharge, particularly where this occurs in close proximity to residentially zoned land.

Benefits

The two policies provide greater clarity about the nature of discharges of organic waste material that is produced through primary production activities to land. The current resource management plans also have an enabling approach to the activities identified in Policy 16.2.4, although for most farm rubbish dumps there is a resource consent requirement. However, over time, through the Council's monitoring activities and knowledge gained generally through research, some of Marlborough's water and soil resources have been identified as potentially being at risk from discharges to land. The policies signal that in the Groundwater Protection Areas or Soil Sensitive Areas there is a need for a more detailed assessment of the discharge to ensure that the potential risks are not realised.

The criteria included in Policy 16.2.5 aim to assist decision makers in determining resource consent applications for discharges in Groundwater Protection Areas or Soil Sensitive Areas and also to guide decision making where permitted activity standards cannot be met. Collectively, the matters included in the policy reflect the social, cultural and environmental benefits likely to result.

Aside from identifying areas where a more detailed assessment of a discharge is proposed, there are also economic benefits from Policy 16.2.4 in terms of providing an enabling approach to the discharge of solid waste to land of organic and biodegradable material. This helps to support the recognition given to the significance of primary production activities in Marlborough through Chapter 4 - Use of Natural and Physical Resources and Chapter 14 - Use of the Rural Environment (Volume 1 of the MEP).

Costs

There will be costs to resources users/landowners for resource consent in Groundwater Protection Areas or Soil Sensitive Areas. In extreme cases this may mean that resources users and landowners may be refused consent because soils and groundwater at a particular location are at risk. However, where permitted activity standards are not met and a consent is required, no additional costs will be incurred beyond those required by the current resource management plans.

There could be significant environmental, social and cultural costs if the unconstrained discharge of organic waste material to land from primary production activities was allowed, which would make it difficult to achieve the purpose of the RMA.

Efficiency
Policy 16.2.4 is enabling for a range of discharges to land, which is the current approach in circumstances where standards are met and is considered efficient for many discharges. However, because in some locations discharges pose risks to Marlborough's groundwater resources (especially on the Wairau Plain, from which municipal supplies are drawn) a more detailed assessment for the identified areas in Policy 16.2.4(a) is considered necessary.

Policy 16.2.5 is also efficient in that it focusses decision makers and resource consent applicants alike on the matters that need particular attention in any application.

Effectiveness
Objective 16.2 is much more likely to be achieved through implementing these two policies. Furthermore, by enabling provisions for the discharge of organic waste material to land it is more likely that the issue will be addressed. Much of the organic waste material generated in Marlborough can be and is reused for beneficial purposes - for example, grape marc can be used for stock feed - and as long as the standards for this use can be met, the approach is considered effective. Similarly, for the mapped areas at risk the approach is also considered effective, as the extent of mapped areas has been limited to reflect the information and knowledge the Council currently has concerning the potential risk for groundwater and soil contamination. Alternatively the Council could have taken a much more precautionary approach requiring resource consent over a much large area.

Policy 16.2.7

Policy 16.2.7 – Avoid the disposal of hazardous waste in Marlborough, except where the hazardous waste can be safely accepted at the regional landfill.

Benefits
Although hazardous wastes may only form a small part of the general waste stream in Marlborough, by their very nature they have the potential to do the most damage to people and the environment. Given this significant risk, any disposal of hazardous waste in the Marlborough environment should be avoided. Policy 16.2.7 therefore seeks to control that which has the greatest potential to cause significant adverse environmental effects. The policy signals that the Council is taking a strong stance on this issue.

Costs
Implementing programmes to deal with the disposal of hazardous waste will result in costs to ratepayers and potentially to individuals if they cannot meet the requirements for disposal in Marlborough (meaning they may have to take their waste out of Marlborough). The Council has run programmes for the appropriate disposal of hazardous waste for some time, often in conjunction with national programmes. Where and when this occurs there is a cost saving for ratepayers.

Efficiency
The costs of the policy are considered warranted given the potential for significant adverse environmental effects if hazardous wastes are disposed of inappropriately.

Effectiveness
Policy 16.2.7 will help to ensure that a coordinated approach to managing hazardous waste is achieved. There is a reliance on people to act responsibly and check how their hazardous wastes can be disposed of safely. There will always be individuals who do not take care in this regard, and so a slight risk remains that hazardous substances will enter into the wider environment and adversely affect the quality of water and soil. Provided the majority of individuals and businesses using hazardous wastes act responsibly, there should be no adverse environmental effects.

Policy 16.2.8

Policy 16.2.8 – Encourage the responsible disposal of solid waste from remote locations.

Benefits
The policy acknowledges that it is difficult to apply the waste minimisation hierarchy set out in Policy 16.1.1 to those parts of Marlborough that are a great distance from transfer stations or that lack road access. This is particularly true for large parts of the Marlborough Sounds. Such circumstances make it difficult to take advantage of the reuse, recycling and recovery opportunities already provided to the much of the community through transfer stations or kerbside collection.

Policy 16.2.8 seeks to ensure that disposal is undertaken in a manner that avoids adverse environmental effects. The Council recognises that it will be important to work with communities within the Marlborough Sounds and other remote locations to determine how their waste disposal needs are best served.

Costs
The costs of the policy are difficult to quantify at this point, as costs depend on the outcomes or initiatives that eventuate from working with the relevant communities. It is anticipated that costs will be incurred if some form of collection and transfer service is provided to remote locations. Method of Implementation 16.M.15 indicates there will be support for community initiatives to remove solid waste from remote locations. If central government can provide support (funds) to better manage solid waste in remote locations (as set out in Method Implementation 16.M.14), costs could be reduced locally.

Depending on the nature of the wastes to be disposed of, there may be some regional rules controlling the discharge of contaminants to land and in some cases a need for resource consent to enable the discharge to occur. In some extreme cases, such as the disposal of hazardous waste into the environment, there will be a prohibited activity rule. However, these rules will apply regardless of location, i.e. in both remote locations and in close proximity to urban environments. In this case, there is no additional cost from implementing this policy.

Efficiency
The efficiency of the policy is difficult to determine for the same reasons as described in the Costs assessment above.

Effectiveness
It is difficult to predict how effective the policy will be without knowing exactly what initiatives will be created to deal with this matter. However, the policy has recognised the difficulties for people in remote locations to be able to take advantage of reuse, recycling and recovery facilities located elsewhere. Additionally, the community response to this matter, especially from people within the Marlborough Sounds, highlighted this is an issue requiring a response from the Council. Policy 16.2.8 acknowledges this community feedback.

In addition, the policy helps to give effect to the Council's Waste Minimisation and Management Plan through its actions for reviewing options for waste management in the Marlborough Sounds.

Methods of implementation

One of the major differences in the methods of implementation from the current MRPS, WARMP and MSRMP is in terms of the provision of waste collection and disposal facilities. At the time the previous resource management plans were prepared and the provisions for waste disposal effectively became operative, there were no centralised disposal facilities or transfer stations in place at any of the District's landfills. The establishment of these facilities has made a significant difference in dealing with the adverse environmental effects of waste disposal and explains why there is now explicit recognition of them.

Two new methods relevant to dealing with waste disposal in remote locations have been included to support Policy 16.2.8. These are methods of advocacy for national funds to support initiatives to better manage waste disposal in remote areas and of supporting community initiatives to remove solid waste in remote locations. The evaluation for Policy 16.2.8 describes why it is appropriate to employ these types of methods.

The other major difference is that a resource consent is required for cleanfills, the discharge to land of organic waste material from primary production activities and disposal of biodegradable material in

farm rubbish pits where the discharge occurs in a Groundwater Protection Area or in Soil Sensitive Areas. The reasons for their inclusion are as described in the evaluation report for Policies 16.2.3 to 16.2.7.

Other options considered to achieve Objective 16.2

1. Status quo in terms of the existing provisions of the MRSP, the MSRMP and the WARMP

The status quo would be to retain the existing provisions of the MRSP, the MSRMP and the WARMP. A discussion on these provisions, including why they were not considered as a preferred option, is mostly described in consideration of options to achieve Objective 16.1. The reason this was the only other option considered was because the Council is not having a zero waste target, there needs to be a framework in place to protect resource quality in terms of other objectives and policies elsewhere in the MEP for air, water and soil quality.

Other provisions from the current MSRMP and WARMP that have not been evaluated in this assessment for other options considered to achieve Objective 16.1 are those in relation to farm rubbish dumps and cleanfills.

Cleanfills

The WARMP has permitted activity standards for cleanfills in rural zones under a land disturbance rule, the '*filling of land,'* in which the activity is not classed as a discharge to land. In contrast, the MSRMP has permitted activity standards for cleanfills as a discharge into or onto land in rural and conservation zones. Both plans define cleanfills, including limitations on the type of material that can be dumped.

The permitted activity status of cleanfills means most do not come under the Council's monitoring programme for environmental effects on groundwater, surface water or soil environments. However, the limited monitoring of cleanfills undertaken by the Council has shown a range of issues with the material being disposed of.

Due to the non-cleanfill nature of some of the material and in some cases the sheer volume dumped at cleanfill sites, cleanfill activity is considered to have potentially high environmental impacts, warranting a change from permitted activity status to discretionary activity status. By changing the activity status for cleanfills, the types of materials, setbacks, soil sampling and erosion control measures can be included in the regular monitoring of these sites through the *Cleanfill and Quarry Monitoring Project*. This will allow Council to proactively monitor cleanfill operations and undertake comprehensive assessments of the environmental effects that may arise from cleanfill activities and enable the Environmental Protection Group to fulfil its compliance obligations.

Farm rubbish dumps

The range of material disposed of in farm rubbish dumps is likely to be broader than that for cleanfills, so there is potential for even greater adverse effects on the environment. It is acknowledged that the volume at any one farm rubbish dump is likely to be less than that for a cleanfill. However, based on the predominantly rural nature of Marlborough, there are likely to be hundreds of farm rubbish dumps.

In the Rural 1 and 2 Zones of the MSRMP, rural rubbish disposal sites are a permitted activity provided that properties are larger than two hectares and specific standards are met (Rule 36.1.7.7). Rural rubbish disposal sites on properties smaller than two hectares are considered non-complying activities and application for resource consent must be made. There are no permitted activity provisions for farm rubbish dumps in the Rural 3 and 3 Zones of the WARMP; therefore, this is a non-complying activity and application for resource consent must be made. To date, no resource consent application has been submitted to the Council for farm rubbish dumps on properties smaller than two hectares in the Marlborough Sounds or in the WARMP area. Through complaints received, the Council is aware of three locations where rubbish is dumped on farms. However, given there are approximately 1,700 farms throughout Marlborough, the number of farm rubbish dumps is likely to be significantly greater than these three locations. There may be some confusion about the expression of the rules in the current resource management plans, which has resulted in no resource consent applications being made.

Little information is available to determine the extent of adverse effects on soil and water quality from discharges of this type. The Council did consider continuing with a resource consent requirement but making the rules clearer that there is a need for resource consent to enable an appropriate assessment of the effects on the environment to occur. A range of statuses were considered, from permitted to discretionary.

Ultimately the Council decided that a permitted activity status would apply for the disposal of biodegradable waste only and for waste generated on the farm. Other standards that would apply include the siting of the pit to prevent surface runoff entering the farm rubbish pit, the need for setbacks from Groundwater Protection Areas, waterbodies and from neighbouring properties, and avoiding locating the pit within a Soil Sensitive Area. There would also be requirements to fill the pit to a level below the original land surface and cover the contents when it is no longer used.

The disposal of hazardous and other types of waste (e.g. plastics and glass) to land is a prohibited activity. Where the standards for the permitted activity cannot be met, or where other waste is proposed to be disposed of (and is not otherwise prohibited), then a discretionary activity consent will be required. This will enable all the adverse effects of the activity to be considered, including the appropriateness of disposing non-biodegradable material that will persist in the environment.

Along with this approach, the Council is putting in place related non-regulatory methods through educating the farming community about what should be disposed of in farm rubbish pits and the potential adverse effects that can arise through such disposal. This approach would also be supported by investigations to gain a better understanding of the number of properties that have farm dumps, the volumes and nature of the material disposed of in these dumps (historically and currently), the use and knowledge of the current services provided by Council for the rural community and alternative options for the rural community to deal with farm waste material.

While the Council could have continued with and extended the current discretionary activity status district-wide, this method has not proven itself to be particularly effective as no resource consents have been applied for. Therefore, a different approach was considered necessary to determine the extent and nature of adverse effects that may be arising from farm rubbish pits.

2. No regulation of discharges to land in the Groundwater Protection Areas or Soil Sensitive Areas
Currently the resource management plans do not have specific rules that trigger a need for resource consents in the way that has been proposed through Policy 16.2.4 for land in the Groundwater Protection Areas or Soil Sensitive Areas. Option 2 would have seen the continuation of this approach and would potentially have saved resource consent costs for resource users/landowners. However, when different types of waste are discharged to land, the soil effectively becomes part of the treatment system, with contaminants in the waste being broken down or absorbed as the liquid portion passes through the soil. Marlborough's soil is diverse, resulting in a variation in the treatment capacity across the District. Understanding this variation is critical in avoiding the adverse effects of discharging contaminants to land. This is why discharges to land for areas identified Soil Sensitive Areas require resource consent to enable a detailed assessment of the appropriateness of the discharge in these locations.

There is also potential for the discharge of contaminants to have significant adverse environmental effects over the unconfined Wairau Aquifer, where contaminants can more easily enter the aquifer. Given the significance of the Wairau Aquifer for the supply of community drinking water, it is important that activities located in this area are subject to more detailed assessment. For this reason the Council has opted for resource consent requirements in Groundwater Protection Areas.

In both cases, the difference in approach from the current permitted activity approach stems from the additional information and knowledge that the Council has gained about Marlborough's natural systems since the current resource management plans were first notified. The new approach reflects what is now known and the potential risks to these natural systems in certain locations.

Risk of acting or not acting

Very little information is available about the number, location or materials disposed of farm rubbish dumps in New Zealand; the rural waste stream faces particular management and disposal problems nationwide. Waste management practices carried out by farmers vary and depend on many factors,

including the geographical location of the farm and its relative proximity to off-farm disposal options, farmer attitudes, farm management type, farm size, waste material to be disposed of and time available to dispose of waste. With the permitted activity status for some farm rubbish dumps in Marlborough and no consents for other farm rubbish dumps, little is known about the effects of this activity.

While the Council could have included a rule requiring all farm rubbish dumps to be authorised by resource consent, it was considered a more effective option would be to have a permitted activity status for disposal of biodegradable material and an associated education and investigation programme. There are some risks with this approach, however it is considered likely that the Council will be able to gather the necessary information to make more informed decisions in the future about the long term effects of disposing rubbish in rural environments.

In 2010 monitoring was undertaken to determine the nature of the waste materials contained in six cleanfill sites across Marlborough. Of the six sites, one operated under the WARMP permitted activity standards and the remaining five operated under resource consent. Overall, results of the investigations found that all sites accepted unauthorised material and a number had elevated concentrations of metals greater than levels outlined in the relevant guidelines. In some cases, the risk to human health and the local environment from elevated concentrations of metals was considered high. Some of the sites required remediating to ensure that the contaminants would not continue to have a detrimental effect on human health and the wider environment. Because of this, and because there are other cleanfill sites across Marlborough in unknown locations due to the permitted activity status, the Council considers there is great potential for adverse effects on the environment to occur if the permitted activity status is allowed to continue. Given the information that the Council has on the monitoring of the approved cleanfill sites, there is a significant risk of not acting to change the status of cleanfill activity.

Evaluation for Issue 16B

Issue 16B – The discharge of liquid wastes onto or into land has the potential to adversely affect the surrounding environment.

Appropriateness of Objective 16.3

Objective 16.3 – The discharge of liquid wastes onto or into land is managed in a way that avoids adverse effects on water and soil quality, land and water ecosystems, slope stability and cultural and amenity values.

Relevance

The water quality provisions of the MEP encourage the discharge of contaminants to land in preference to water. This policy position, set out in Chapter 15 recognises that we live in an environment well suited to using soil as a treatment medium. While it is logical in Marlborough to use the land resource to treat liquid wastes, it is essential that discharges to land are well managed as they could, in isolation or in combination, give rise to adverse effects of similar or greater magnitude than those caused by discharges to water. Consistent with other provisions contained in the MEP, the objective seeks to avoid such adverse effects. This can be achieved by carefully designing, constructing, managing and maintaining on-site wastewater management systems so that they reflect environmental constraints. Objective 16.3 is therefore considered relevant and necessary to avoid the issue identified in 16B. It is also important to acknowledge that the objective includes the various types of liquid waste that we produce in Marlborough, including domestic wastewater, dairy shed effluent, winery wastewater and vegetable and shellfish processing wastewater.

The objective is focussed on achieving the purpose of the RMA, particularly Sections 5(2)(b) and (c). Other highly relevant sections include Sections 7(b) - the efficient use of natural and physical resources, 7(c) - the maintenance and enhancement of amenity values, 7(d) - intrinsic values of ecosystems and 7(f) - maintaining and enhancing the quality of the environment. The objective helps the Council carry out its functions as a unitary authority under Sections 30 and 31 of the RMA, in particular the functions set out in Section 30(1)(f) relating to control of discharge of contaminants into or onto land.

Feasibility
Achieving the objective is considered entirely feasible. Currently, the MSRMP has a very similar approach in dealing with the effects of people living, holidaying or providing visitor accommodation in the Marlborough Sounds. The MSRMP recognises that in areas not serviced by a reticulated sewerage system, an appropriate on-site wastewater management system needs to be installed and be well managed to ensure adverse effects on the environment from disposal to land are avoided. Specific provisions were included in the MSRMP to address this issue through Plan Change 7 in 2006. This occurred partly in response to monitoring undertaken by the Council that showed elevated levels of bacteria in some coastal waters over summer months, but also to ensure that the significant marine farming and tourism industries that rely upon a high standard of water quality were able to continue. From a cultural perspective, the coastal waters of the Sounds are seen as an important recreational resource and are of significant spiritual and cultural importance to local iwi.

Plan Change 7 introduced rules requiring resource consent for a discharge permit for all proposed on-site systems. This approach, to be carried through into the new MEP, has been effective for a number of years in helping to improve the type of wastewater management systems being used, with greater consideration being given to the nature of soil constraints at a site. The use of mapping to identify areas at greatest risk of being affected by contaminants from on-site discharges from a variety of activities will be included in the MEP. Not all discharges will require a resource consent however, as there are areas where the soil capability (or other site factors) do not constrain the discharge of contaminants to land. In these situations the management approach will be in the form of permitted activity rules with standards to be met to ensure the objective will be achieved on an ongoing basis.

Given the Council's previous experience with Plan Change 7 to the MSRMP, the approach through Objective 16.3 is considered to be feasible, especially when accompanied by the risk-based approach to the requirement for resource consent.

Acceptability
As outlined in the Consultation section of this report, there is community acceptance for the Council to require improved systems to manage the discharge of contaminants to land. It is acknowledged that most of the community feedback related to the Marlborough Sounds environment and focussed on the public wanting to ensure coastal water quality was not degraded. However, with the direction in Chapter 15 to prefer discharges to land over water, there is a need for a management framework to be place for this to occur.

The objective is considered acceptable as it does not prescribe how management is to occur; that comes through the subsequent policy. However, what is important is that there is the flexibility within the objective to set up an enabling regime through permitted activity rules for discharges to land (as required by Section 15 of the RMA) and a requirement for resource consents where the soil or other site constraints are of a nature that requires more detailed consideration.

Assessment of provisions to achieve Objective 16.3

Policies 16.3.1, 16.3.7 and 16.3.8

These policies have been grouped for assessment as they are applicable to situations where a discharge to land is a permitted activity (subject to standards being met) or where a resource consent is required and granted.

Policy 16.3.1 – Ensure that wastewater management systems are designed, located and installed to effectively treat and/or contain the contaminants present in wastewater.
Policy 16.3.7 – Promote good practice in the use of wastewater management systems.
Policy 16.3.8 – Monitor the operational performance of existing wastewater management systems and require poorly performing systems to be upgraded to or replaced with systems that effectively treat and contain all wastewater to the discharge site.

Benefits
These three policies work together to ensure good environmental outcomes. It is important that the discharge of contaminants onto or into land is undertaken in a manner that is compatible with the ability of the land resource to treat and/or contain contaminants present in the wastewater. However, without making sure that the system is operated correctly and well-maintained, and without monitoring

to check whether this occurs, a well-designed system may still fail, with the consequence being that the discharge will adversely affect the immediate and surrounding environment.

The first two policies target the critical role that designers and installers of wastewater management systems have in avoiding the potential for adverse effects and the important role that operators of wastewater management systems have on an ongoing basis. Once installed, it is essential that any wastewater management system is operated correctly and is well maintained. This is because inappropriate use and/or lack of maintenance can affect the performance of the system, despite proper design and initial installation. It is important that the landowner and/or system operator is aware of actions required for effective performance and that those actions are undertaken. This can be achieved through the preparation and provision of operation and maintenance guidelines when new wastewater management systems are designed. However, alternative methods may have to be used for existing wastewater management systems.

The most significant benefit of Policy 16.3.8 is that it is proactive rather than reactive: potential issues can be identified early and rectified before significant adverse environmental effects can occur. The data and information gathered through this policy also allow an assessment to be made as to whether environmental quality is improving, remaining the same or becoming degraded. The policy essentially closes the loop in the 'Plan-Do-Monitor-Review' cycle.

Policy 16.3.8 reflects community feedback received during the review process. For example the discussion paper prepared by the Council on the future of the Marlborough Sounds (*Discussion Paper 4*), included an issue highlighting the reliance of residential development on on-site wastewater management systems, which could threaten coastal water quality and public health. A number of respondents commented that given the importance of maintaining water quality in the Sounds environment, a voluntary system to improve the quality of effluent disposed was not appropriate and that a regulatory inspection regime should be in place.

Costs

There are costs associated with the implementation of all three policies, both to individuals and to ratepayers. The costs to ratepayers include the overall cost of state of the environment monitoring (a requirement of Section 35 of the RMA), as well as specific programmes and investigations into particular issues. For example, the Council regularly monitors the discharges from dairy sheds, wineries and commercial accommodation facilities in the Marlborough Sounds. Some of the discharges are operated under permitted activity standards in the relevant resource management plan, while others operate under resource consents. Some of these surveys, such as the winery wastewater surveys have been carried out for some time.

Financial provision for these surveys has previously been included in the Council's Long Term Plan and the new plan for the period 2015 to 2025 sees the continuation of these surveys under the Environmental Protection Group of Activities. The surveys will be continued as the activities involved have either a greater environmental impact, warranting special consideration, are activities that generate community concern, or are related to trends highlighted through the State of the Environment Report. The costs associated with the activities of the Environmental Protection Group are subject to public consideration and there is expected to be a whole of community benefit from these activities. Wider state of the environment monitoring, including of fresh and coastal waters and soils, also are a cost to ratepayers.

Costs to individuals arise from the need to install appropriate wastewater management systems (whether for dwellings, wineries, dairy sheds, etc). In some cases this may also involve costs associated with the purchase or lease of land to provide enough area for land application of the discharge. It is difficult to quantify the costs of a wastewater management system, as it will depend on the nature of the discharge and the receiving environment.

At present, costs are incurred in installing wastewater systems and Policy 16.1.1 introduces no new costs. For example, discharges to land in the Sounds Residential and Rural One Zones of the MSRMP already require consent for the on-site disposal of domestic wastewater. Additional costs may relate to where resource consent is needed under the new framework (depending on where the discharge is to occur), whereas the current resource management plans do not require consent.

Efficiency
The costs associated with implementing the policies are considered to be warranted given the potential for significant adverse effects to occur from discharges of wastewater on water, soil and air quality, and human health. In this respect, the efficiency of the policies relates to the whole of community benefit that arises from a framework focussed on avoiding these adverse effects. The policies also apply irrespective of whether a resource consent is needed or not – the outcome being sought is the same.

Effectiveness
The effectiveness of Policies 16.3.1 and 16.3.7 is that wastewater management systems will be designed, located and installed to effectively deal with the contaminants present in wastewater. Evaluating site and soil constraints is an important aspect of this and increases the likelihood that Objective 16.3 will be met. The policies build on the Council's 'Guidelines for new on-site wastewater management systems', New Zealand Standards and the provision of information to landowners about the use of septic tanks. The Council also maintains a list of accredited providers able to undertake site and soil evaluations.

The policy on monitoring (16.3.8) is important in establishing whether the objective is being met on an ongoing basis. The monitoring of discharges is therefore essential to the objective being achieved. It is important to note that not all discharges will be systematically monitored, but predominant discharges will be monitored, as explained in the *Costs* section above.

Policies 16.3.2 to 16.3.5

These are resource consent policies for the discharge of contaminants to land where permitted activity standards cannot be met or for discharges to land in areas that have been mapped as being more susceptible to the adverse effects of the discharges of contaminants. Accordingly, the policies are considered collectively.

Policy 16.3.2 – Require discharge permits for the discharge of contaminants onto or into land where there are significant environmental constraints to effective wastewater management.

Policy 16.3.3 – Approve discharge permit applications to discharge contaminants onto or into land where:

(a) the discharge is within the ability of the land to treat and/or contain contaminants present in the liquid waste, taking into account:

  (i) the rate of discharge (including variability in the rate of discharge);

  (ii) the nature and concentration of contaminants within the liquid waste;

  (iii) the hydraulic properties of the soil within the land application area and any relevant physical, chemical or biological soil properties;

  (iv) any other discharge of contaminants to the same land or to land in close proximity to the discharge;

(b) the discharge does not adversely affect the drinking water quality of groundwater adjacent to or down gradient of the discharge, either alone or in combination with any other discharge;

(c) the land application area is located as far as practicable from any surface waterbody or coastal water;

(d) it is inappropriate (due to the potential impact on the performance of treatment plants and associated infrastructure) or impracticable to discharge the liquid waste into reticulated sewerage system;

(e) the discharge will not initiate instability or make existing instability worse; and

(f) the treatment unit and land application area are accessible for servicing.

Policy 16.3.4 – When considering discharge permit applications to discharge contaminants onto or into land, have regard to:

(a) the extent of treatment prior to discharge;

(b) the method of distribution to and within the land application area following treatment;

(c) alternative options for managing the contaminants, including discharge to an alternative location or to a reticulated community sewerage system;

(d)	the need for reserve land application areas;
(e)	site constraints, including geology, topography, slope, climate, the presence of waterbodies or structures;
(f)	relevant guidelines and standards; and
(g)	potential cumulative effects.
Policy 16.3.5 – When considering discharge permit applications to discharge contaminants onto or into land, have regard to the cultural values of Marlborough's tangata whenua iwi.	

Benefits

Collectively, the policies allow for the management of risk associated with on-site discharges. Although policy in Chapter 15 encourages the discharge of contaminants to land rather than water (Policy 15.1.8), there are some areas where the soil type or environment is such that there is a greater risk of adverse effects to human health and the environment from discharges to land. Through the application of Policies 16.3.2 to 16.3.5, the consent process scrutinises systems to be used to ensure they are appropriate.

The policies are collectively aimed at ensuring the assimilative capacity of soils is not exceeded hydraulically, chemically or biologically and that treatment has an important role in ensuring this does not happen. The policies also encourage consideration of the cultural values of Marlborough's tangata whenua iwi during the consent process. The main benefit of this group of policies therefore is that they provide a framework for both applicant and decision makers on the circumstances in which consent will be granted. This results in more certainty for all concerned.

Costs

For the resource user, there is a cost associated with having to apply for resource consent, but this is limited to areas that are mapped based on site and soil constraints, i.e. consents will not be required in every location. The cost of the policy over the current practice will be limited for a number of reasons, including the fact there is already a resource consent requirement in the MSRMP for the disposal of on-site domestic wastewater and so any additional resource consent costs over current practice will be limited to discharges within the current WARMP area. Furthermore, on-site systems already require building consent, a process that requires appropriately designed systems. Although it could be argued that the building consent process should suffice, the considerations under that process are limited to human health and therefore do not allow the effects on the environment to be assessed.

There is the potential for reduced costs in the WARMP area for the discharge of liquid wastes and animal effluent. Currently these discharges require a controlled activity resource consent. However, under the MEP, subject to meeting standards only those discharges within the Groundwater Protection Areas or within Soil Sensitive Areas will require consent.

There is an element of 'precaution' built into the mapping of areas where consent will be required. This may in some circumstances include areas where there is no issue with the discharge of contaminants to land, but there are concerns due to the scale of the mapping around the boundary of the areas needing consent. In time, these boundaries will be refined and amended through the First Schedule process of the RMA.

Efficiency

The policies and associated rules are considered efficient as they target the requirement for resource consents to areas that the Council has identified as being at risk from contamination from the discharge of wastewater because of the nature of the soils involved (Policy 16.3.2). The costs are considered warranted because of the environmental risk present in the identified areas. Additionally, because the Council has included detailed criteria in subsequent policy to assess any application, costs for applicants will be kept to a minimum. This is further supported by the Council providing guidelines to assist designers and installers of wastewater systems in considering site and soil properties.

For decision makers, the policies are also efficient in that a very clear framework is described for making decisions, and where the matters can be satisfied, there is clear direction that consent should be granted.

Effectiveness
Policy 16.3.2 provides certainty with respect to the risks involved with discharging contaminants to land at certain locations. By requiring resource consents, the policy allows the application of specific tests to treat and contain contaminants on-site. This helps to achieve Objective 16.3 and importantly ensures that the adverse effects on water and soil quality, land and water ecosystems, slope stability and cultural and amenity values are avoided. When coupled with Policy 16.3.3 (which essentially directs that consent is to be granted where the matters set out are met), the approach is an effective one. The policy is not open ended as to whether or not consent will be granted, as 16.3.3 identifies that consent will be granted where the matters set out are satisfied on an ongoing basis.

Policy 16.3.6

Policy 16.3.6 – Avoid the use of soak pits for the disposal of contaminants in liquid waste.

Benefits
The Council is aware that soak pits are not an effective method of managing the discharge of wastewater to land. A soak pit results in the concentrated discharge of contaminants into the environment as the wastewater receives little or no treatment as it passes through the soak pit. The solids present in wastewater also tend to clog the soak pit over time, creating the potential for ponding. For these reasons, policy has been included to avoid the use of soak pits as part of any wastewater management system. This policy provides very clear direction to resource users that this type of system is not appropriate and must be replaced with a land application area consistent with Policy 16.3.1. To support Policy 16.3.6, a prohibited activity status will apply to the use of soak pits, though there will be a grace period of five years from when the MEP becomes operative to allow time for replacement systems to be put in place.

Costs
Where a soak pit is the current means by which discharges to land are dealt with, costs will be incurred to resource users. However, this cost is considered warranted because if liquid wastes are not managed correctly on-site, there are significant costs to human health and the environment, particularly for soil and water quality, and potentially on the community's use of the wider environment.

Efficiency
Having to replace a soak pit with an appropriate wastewater management system does involve significant cost (as described in the *Costs* assessment above). However, in this situation there is a significant benefit to society from implementing the policy (rather than allowing the continued use of soak pits for disposing of liquid waste).

Effectiveness
The policy will be effective in helping to achieve Objective 16.3. By prohibiting the use of soak pits for the discharge of contaminants, it removes a very real risk to the environment. This is particularly the case in those parts of Marlborough where the risk that contaminants present in wastewater will not be able to be effectively treated and/or contained on-site is great, given the site and soil constraints set out in the explanation for Policy 16.3.2.

Policy 16.3.9

Policy 16.3.9 – Encourage artificial wetlands as a means of managing the discharge of contaminants.

Benefits
Wetland processes filter out and retain contaminants on a passive and ongoing basis. The use of wetlands is therefore effective in reducing the level of contamination in water, stormwater or wastewater prior to discharge into the environment. The policy provides an alternative for areas where there may be site and soil constraints for land disposal. This may help the discharger to meet the objectives and policies that apply to the subsequent discharge of contaminants to land or water. Wetlands may also create biodiversity benefits by creating new habitat. This approach reflects feedback provided through the focus group process.

A potential benefit is that the creation of a wetland over a confined area may free up land for primary production, especially where the discharge is related to a primary production activity. The policy would effectively result in a more efficient use of rural land.

Costs
As the policy is of an 'encouraging' nature, there are no direct costs associated with implementing it; it is an option available to resource users that does not have to be used. It is not possible to quantify any costs of this approach as this will depend on a number of factors, including site influences, the nature of the discharge and the amount of waste to be discharged.

Efficiency and Effectiveness
The efficiency and effectiveness of the policy lies in the fact that is an alternative to other waste systems. In one respect it offers an alternative method to achieve Objective 16.3; in another, it is an alternative available to a resource user, especially when there may be little in the way of options available if site and soil constraints are such that any discharge to land might be problematic.

Methods of implementation

The main changes in the methods of implementation from the current MRPS, the MSRMP and the WARMP are the inclusion of an identification method (16.M.15) and a warrant of fitness scheme (16.M.20).

The identification method relates to mapping those areas that are more susceptible to the adverse effects of discharges of contaminants to land. Although the intent of identifying areas has been expressed previously in the WARMP and MSRMP, mapping the areas will provide greater certainty for resource users and therefore offers a much more effective and efficient approach.

The intention of the warrant of fitness scheme is to assess existing on-site wastewater management systems located in the Marlborough Sounds or in Groundwater Protection Areas that have not been authorised by resource consent. The scheme will require an initial inspection of the adequacy and effectiveness of existing on-site wastewater management systems and re-inspections every five years. This scheme has been introduced to assess the adequacy of systems that have not been subject to the same level of scrutiny as those approved under resource consent. Implementing this method should result in environmental benefits, especially where the existing system is older and needs to be upgraded to meet standards.

Other options considered to achieve Objective 16.3

Three other options were considered by the Council to achieve Objective 16.3. These options were:

1. Status quo in terms of the existing provisions of the MRSP, the MSRMP and the WARMP
Within the MRPS, one of the five regionally significant issues identified is the control of waste. Under Objective 9.1.2 - '*To avoid, remedy or mitigate the effects of waste and contamination on the environment* - there are two policies: one directed at hazardous substances and the other directed at waste minimisation. While the discharge of liquid wastes is mentioned within the explanation of the issue, there is no specific provision to deal with the discharge of liquid waste to land under this regionally significant issue.

There are also a range of policies under a regionally significant issue in Part 5 of the MRPS ('*the protection of water ecosystems*') aimed at avoiding a reduction in water quality due to the discharge of contaminants into the environment. This includes Policies 5.1.5(a), (b) and (c) concerning point source discharges, as well as Policy 5.2.3, which is related in part to a reduction in groundwater quality caused by infiltration through contaminated land. There are similar policies in the section on coastal water quality, specifically Policy 5.3.3. There is limited reference to contamination of soil in the regionally significant issue *'protection of land ecosystems,'* but it is not specific to the discharge of liquid waste to land. Overall, there is limited recognition of the effects of discharging to land within the current MRPS.

Regarding the MSRMP, as explained in the evaluation of policies to achieve Objective 16.3, there is an existing framework for on-site management of domestic wastewater systems that requires resource consent (Issue 14.3 of Volume One of the MSRMP). This framework has informed the review process

and is the basis of the approach now described in the MEP, the major difference being that it is now extended to all discharges to land, not just those on-site. Other policies in the MSRMP relevant to the discharge of liquid waste to land are more generic and do not provide the level of criteria necessary to assist decision makers in determining whether consent should be granted. There are few rules requiring resource consent. These include discharges for activities such as intensive farming, piggeries and wineries, while the discharge of dairy farm effluent is a permitted activity subject to the meeting of standards. However, a resource consent is still required for new dairy farms.

The WARMP is more enabling of discharges to land. Most discharges are provided for as a permitted activity with standards to be met and consent is generally only required for a discharge where those standards are not met. Some of the standards are intended to be more restrictive in locations where there is a risk of discharges having more significant adverse environmental effects. For example, in the explanation to policies under 15.3, it is stated that activities over the unconfined aquifer will be subject to more restrictive controls to protect municipal supplies taken from the Wairau Aquifer.

While elements of the existing policy framework from the MRPS, the MSRMP and the WARMP are being carried through to the MEP, overall those policies do not provide enough direction to decision makers or resource users about the circumstances in which resource consent will be required. The new approach is to map the areas that have the greatest risk, providing a resource user greater clarity about where the discharge of wastewater to land needs careful management because of the risks posed by site or soil constraints. This is considered to be a more effective approach than currently set out (particularly in the WARMP).

The new policy framework has the benefit of a number of years of monitoring data from a range of sources that suggests the status quo is not an appropriate option for the future.

2. Not to have risk-based mapping and require resource consent in every location

The Council is using risk-based mapping to identify areas where consent will be required for the discharge of wastewater to land. If the Council chose not to use this option and instead chose to require resource consent at every location, this would not reflect the issue being considered, which has identified that the discharge of liquid wastes to land has the potential to adversely affect the surrounding environment. Not all locations are at risk from discharges to land, as identified in Policy 16.3.2, which defines areas at potential risk.

There would be greater costs for resource users in having to apply for resource consent and the Council would certainly be able to determine every application on its merits. Therefore, while it could be said there would be a greater benefit to the community in environmental terms, the Council considers that where the risk is low then the permitted activity rules will be sufficient to protect the wider environment and human health. Given this a more regulatory approach, it was not considered to be effective or efficient in dealing with the issue or in achieving Objective 16.3.

3. A more permissive approach to the management of discharges to land

This option would see a more enabling approach to the discharge of wastewater to land through greater use of permitted activity rules and standards. There are already a high number of permitted activity rules used in the current MSRMP and WARMP and one of the most significant changes that would result from this option would see a permitted activity status return for the on-site disposal of new domestic wastewater systems in the MSRMP area.

Although there would be benefits to dischargers in not having to go through a resource consent process (e.g. a potential cost saving), the Council does not consider this option to be appropriate. Notwithstanding policy in Chapter 15 to encourage discharges to land, the Council has determined the site and soil constraints at a number of locations present a risk that contaminants in wastewater will not be effectively treated and/or contained on-site. The Council considers this level of risk cannot be determined through a permitted activity rule with standards, as there could be significant environmental and human health costs from such an approach. Requiring a resource consent will enable the Council to exercise discretion to determine whether the proposed wastewater management system is suitable given the volume of wastewater and the site conditions and constraints.

Risk of acting or not acting

As indicated earlier in this evaluation report, there is an element of 'precaution' built into the mapping of areas where consent will be required. This is due to the scale of the mapping around the boundary of the areas needing consent and therefore there is some risk that landowners will be required to obtain a resource consent unnecessarily. In time however, these boundaries will be refined and amended through the First Schedule process of the RMA.

The Council has opted to act in relation to implementing a warrant of fitness scheme for existing on-site wastewater management systems that have not been granted resource consent. Because the Council is not aware of the state of all existing systems, it considers there is a risk of adverse environmental effects if this action is not taken.

Appendix A – Section 32 of the RMA

32 Requirements for preparing and publishing evaluation reports

(1) An evaluation report required under this Act must—

(a) examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and

(b) examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—

(i) identifying other reasonably practicable options for achieving the objectives; and

(ii) assessing the efficiency and effectiveness of the provisions in achieving the objectives; and

(iii) summarising the reasons for deciding on the provisions; and

(c) contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.

(2) An assessment under subsection (1)(b)(ii) must—

(a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—

(i) economic growth that are anticipated to be provided or reduced; and

(ii) employment that are anticipated to be provided or reduced; and

(b) if practicable, quantify the benefits and costs referred to in paragraph (a); and

(c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

(3) If the proposal (an **amending proposal**) will amend a standard, statement, regulation, plan, or change that is already proposed or that already exists (an **existing proposal**), the examination under subsection (1)(b) must relate to—

(a) the provisions and objectives of the amending proposal; and

(b) the objectives of the existing proposal to the extent that those objectives—

(i) are relevant to the objectives of the amending proposal; and

(ii) would remain if the amending proposal were to take effect.

(4) If the proposal will impose a greater prohibition or restriction on an activity to which a national environmental standard applies than the existing prohibitions or restrictions in that standard, the evaluation report must examine whether the prohibition or restriction is justified in the circumstances of each region or district in which the prohibition or restriction would have effect.

(5) The person who must have particular regard to the evaluation report must make the report available for public inspection—

(a) as soon as practicable after the proposal is made (in the case of a standard or regulation); or

(b) at the same time as the proposal is publicly notified.

(6) In this section,—

objectives means,—

(a) for a proposal that contains or states objectives, those objectives:

(b) for all other proposals, the purpose of the proposal

proposal means a proposed standard, statement, regulation, plan, or change for which an evaluation report must be prepared under this Act

provisions means,—

(a) for a proposed plan or change, the policies, rules, or other methods that implement, or give effect to, the objectives of the proposed plan or change:

(b) for all other proposals, the policies or provisions of the proposal that implement, or give effect to, the objectives of the proposal.

Appendix B – Bibliography

AgResearch (Seth Laurenson and Dave Houlbrooke) (July 2015). *Information to support Marlborough District Council's Land Discharge Permit Trigger Soil Profile Map using the AgResearch Soil and Landscape Risk Framework.*

Marlborough District Council (November 2006). *Community Views on Significant Issues for Marlborough – Summary of responses received on the review brochure.*

Marlborough District Council (2007). *Discussion Paper 4: The Future of the Marlborough Sounds.*

Marlborough District Council (2007). *An Overview of the Future of the Marlborough Sounds.*

Marlborough District Council (2007). *Discussion Paper 11: Waste Management.*

Marlborough District Council (2007). *An Overview of Waste Management Issues.*

Marlborough District Council (2008). *Summary of responses to Discussion Paper 4/The Future of the Marlborough Sounds.*

Marlborough District Council (2008). *Summary of responses to Discussion Paper 11/Overview on Waste Management Issues.*

Marlborough District Council (May 2014). *Rubbish and Recycling Survey Summary of Responses from the Residents of Renwick, Grovetown, Spring Creek, Tuamarina and Rarangi.*

Marlborough District Council. *Waste Management and Minimisation Plan 2015 to 2021.*

Pattle Delamore Partners Limited (March 2012). *Preliminary Definition of Site Specific Groundwater Protection Zones for Community Water Supply Wells in Marlborough.*

Pattle Delamore Partners Limited (August 2015). *Additional Groundwater Protection Zones for Woodbourne and the Wairau Valley*.

Sustainable Environmental Engineering Limited (June 2010). *Cleanfill Site Investigations, Marlborough 2010. MDC Technical Report No: 10-010. Report prepared for Marlborough District Council.*