

Cultural Impact Assessment
For Discharges associated with the
Sewage Treatment Plant (RC 060927)



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Marlborough District Council

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Cultural Impact Assessment: Seddon Sewage Treatment Plant

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Cover photo: Seddon sewage treatment plant ponds, Marlborough

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Executive Summary

Marlborough District Council (Assets and Services Department) is seeking resource consent to continue discharge to water and air activities associated with the operation of the Seddon Sewage Treatment Plant.

As part of seeking consent, Council has commissioned this Cultural Impact Assessment Report, to gain an understanding of the effects of the activity on cultural values, and to determine whether the activity is within the boundaries of cultural acceptance.

The report will Assist Marlborough District Council to take into account the *Te Rūnanga o Kaikōura Iwi Management Plan 2005*, and to assess Resource Consent Application 060927 against RMA section 6, particularly 6 (e), relationship of Māori with ancestral lands, waters and sites, and 6 (f) protection of historic (including cultural) heritage from inappropriate use and development; section 7 (a) Kaitiakitanga and section 8 Treaty of Waitangi.

In assessing the actual and potential effects of renewing the existing consent, Te Rūnanga o Kaikōura identified a number of issues of concern with respect to adverse effects on cultural values, including adverse effects (including cumulative) on the mauri of Starborough Creek, potential effects on the Awatere River, potential effects on groundwater, and the need to better consider the costs and benefits of alternatives to the status quo, and the potential for future population growth in Seddon.

An assessment of the nature and extent of effects led Te Rūnanga o Kaikōura to conclude that adverse effects of the activity on cultural values are significant, given the nature of the effluent (sewage), the quality of the effluent (considered poor), and the degraded health of the waterway.

While continuing the current activity is inconsistent with the protection of cultural values, consultation with tangata whenua for the purpose of this report indicated that options are available to avoid, remedy or mitigate adverse effects on cultural values. Six recommendations are provided to enable Council to find the best fit between cultural values and the proposed activity. The recommendations focus on:

- ④ Avoiding the discharge of contaminants to the Starborough Creek, by adopting discharge to land operations.
- ④ Improving the quality of the effluent.
- ④ Improving the receiving environment
- ④ Providing more information in the Consent Application
- ④ Recognising and providing for future growth in Seddon
- ④ Striving for the best!

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Section 1 - Introduction & Objectives

Marlborough District Council (Assets and Services Department) is seeking resource consent to continue activities associated with the operation of the Seddon Sewage Treatment Plant, in Seddon, Marlborough. Namely, Council is seeking consent to:

- Continue to discharge treated waste water from the Seddon Sewage Treatment Plant to the Starborough Creek
- Continue the discharge to air from the Seddon Sewage Treatment Plant

The Seddon Sewage Treatment Plant has been in operation for 30 years. The current consent (U960704) expires in February 2008.

A resource consent application (RC 060927) was lodged with Marlborough District Council on 28 August 2006, and notified on 21 September 2006. Te Rūnanga o Kaikōura submitted in opposition to the proposal, on the basis of adverse effects on cultural values associated with discharges of sewage to water,¹ and due to the highly technical nature of the application, which made understanding the science behind the proposed treatment and discharge difficult.

Marlborough District Council (Assets and Services Department) is seeking to engage with Te Rūnanga o Kaikōura, via this Cultural Impact Assessment, to provide Te Rūnanga o Kaikōura with an improved understanding of the discharge activity, and to determine whether the activity is within the boundaries of cultural acceptance.

Te Rūnanga o Kaikōura is the representative body of the hapū Ngāti Kuri (subtribe of the iwi Ngāi Tahu), the tangata whenua who have *manawhenua*² in the area from Te Parinui o Whiti (White Bluffs) to the Hurunui River.

1.1 Objectives

The objectives of this CIA report are:

- (1) To document the cultural values associated with the site of discharge activity.
- (2) To identify the potential effects on cultural values as a result of the proposed treatment, discharge to water and discharge to air.
- (3) To identify appropriate measures to avoid, remedy or mitigate, where practical, any adverse effects of the activity on cultural values (e.g. resource consent conditions).

¹ Te Rūnanga o Kaikōura policy, as per Te Poha o Tohu Raumati 2005, is to oppose consent applications for the discharge of sewage to water, and to require that sewage disposal involve filtration through land (Policy 3.4.8 (2))

² See Glossary for an explanation of terms

In meeting these objectives, the report will:

- Provide all parties with a level of confidence and understanding related to the proposed activity and the consultation process.
- Provide an endorsed response from iwi with respect to Resource Consent Application No. 060927.
- Assist Marlborough District Council to effectively take into account the Te Rūnanga o Kaikōura Iwi Management Plan 2005
- Assist Marlborough District Council to assess Resource Consent Application 060927 against RMA section 6, particularly 6 (e), relationship of Māori with ancestral lands, waters and sites, and 6 (f) protection of historic (including cultural) heritage from inappropriate use and development; section 7 (a) Kaitiakitanga and section 8 Treaty of Waitangi.
- Provide a foundation for future discussions between Te Rūnanga o Kaikōura and Marlborough District Council, if so desired by either party.

1.2 Methods

The preparation of this CIA report involved a review of information, a site visit to the proposed development, and a consultative process with Te Rūnanga o Kaikōura. Specifically, the process included:

- A review of background information provided by Marlborough District Council, including Resource Consent Application 060927.
- A review of the provisions of the Resource Management Act 1991, the Ngāi Tahu Claims Settlement Act 1998 and other relevant statutes and regulations.
- A review of historical cultural information and other written references relevant to this assessment.
- A review of *Te Poha o Tohu Raumati*, the Te Rūnanga o Kaikōura Iwi Management Plan 2005, specifically policies on sewage disposal, discharge to water, and freshwater management.
- On-site investigation of the Seddon Sewage Treatment Plant and Starborough Creek (March 26, 2007), with representatives of Marlborough District Council and Te Rūnanga o Kaikōura.
- Discussions with tangata whenua with knowledge and experience of the area and values.
- Distribution of draft report to Te Rūnanga o Kaikōura, and incorporation of feedback from those parties into the final version.
- Presentation of the final CIA report recommendations to Te Rūnanga o Kaikōura for the purposes of obtaining official approval of its contents.
- Forwarding of the endorsed CIA to Marlborough District Council for consideration.

1.3 Description of Activity

The Seddon Sewage Treatment Plant is located on the true left bank of the Starborough Creek, 300 m upstream of the Awatere River. The Plant has been in operation for 30 years. The current consent (U960704) expires in February 2008, and thus Marlborough District Council (Assets and Services) is applying to renew existing consents.

The plant consists of a facultative (oxidation) pond designed in accordance with guidelines produced by the former Ministry of Works, followed by a series of maturation ponds. The pond has a nominal capacity to treat domestic wastewater from a population of 730, or 55 kg biochemical oxygen demand (BOD) per day. Current operations equate to a population of 630, or 38 BOD per day.

Council is applying for a discharge permit to discharge treated effluent to water, at a maximum daily discharge rate of 750 m³ day, for a duration of 10 years; and a discharge permit to air for the same duration.

It should be noted average inflow to the ponds is 165 m³ day. The maximum daily discharge of 750 m³ day, as per the consent application, will only occur "under extreme conditions", when major storm events result in rainwater entering the sewer and adding to the overall flow to the treatment plant. Under consent conditions, Council is required to advise of the greatest flow.³

Treated effluent discharges through an outfall to Starborough Creek. The creek at this point is deeply incised and particularly difficult to access. Council staff inspects ponds weekly. Samples of pond liquor are sent to Cawthron each month for analysis for the identification and relative abundance of algae.



Photo 1: Final oxidation pond, Seddon Sewage Treatment Plant

³ Email correspondence with S. Donaldson, Marlborough District Council. April 16, 2007.



Photo 2: Starborough Creek adjacent to treatment plant



Photo 3: Discharge outfall, on the true left bank of the Starborough Creek

Section 2 - Planning framework

There is a statutory and planning framework in which decisions relating to freshwater management (including discharges to water) are made, and that recognises and provides for tangata whenua interests in that management.

The **Resource Management Act (RMA) 1991** recognises the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga as a matter of national importance (Part II).

Section 7 of the Act identifies kaitiakitanga as a matter that particular regard must be given in relation to managing the use, development and protection of natural and physical resources, and section 8 establishes that all persons exercising functions and powers under the Act shall take into account the principles of the Treaty of Waitangi.

The **Ngāi Tahu Claims Settlement Act (NTCSA) 1998** records the apology given by the Crown to Ngāi Tahu in the 1997 Deed of Settlement, and gives effect to the provisions of that Deed as settlement of the Ngāi Tahu Claim. Such provisions are aimed at restoring the ability of Ngāi Tahu to give practical effect to kaitiaki responsibilities.

The **Marlborough Regional Policy Statement (RPS)** is the overarching resource management policy document for the Marlborough Region, and sets out a community vision for how natural and physical resources of Marlborough are to be managed. Section 3 of the Policy Statement contains general principles relating to the relationship between Marlborough District Council and iwi, including recognition of the concept of kaitiakitanga and the Treaty of Waitangi, and the need to incorporate, where appropriate, the aspirations, heritage and values of iwi into resource management decision making.

Section 5 of the RPS sets out issues, objectives, policies and methods for the protection of water ecosystems, including the maintenance and enhancement of water quality where it is currently degraded.

The proposed **Wairau / Awatere Resource Management Plan** is a combined regional, district and coastal plan prepared by Marlborough District Council to manage the resources of the Wairau / Awatere area in an integrated manner. Section 2 of the plan recognises the role of tangata whenua as kaitiaki of the environment, and sets out objectives, policies and methods to ensure recognise Māori values in the use, development and protection of all resources.

Te Poha o Tohu Raumati

Of particular importance to this report is ***Te Poha o Tohu Raumati, the Te Rūnanga o Kaikōura Environmental Management Plan 2005***. The plan is a statement of Ngāti Kuri values and policies with respect to natural resources and the environment, and contains specific policies on sewage disposal, discharge to water and freshwater management.

The plan is an Iwi Management Plan (IMP), recognised by Te Rūnanga o Ngāi Tahu as the iwi authority, and as such is applicable to RMA planning processes undertaken by district and regional councils. The IMP was lodged with councils, including Marlborough District Council, in February 2006.

Policies that are most relevant to this CIA are those applying to discharge of contaminants to water (Section 3.2.6):

3.2.6 (1) To avoid the use of water as a receiving environment for the direct, or point source, discharge of contaminants. Even if the discharge is treated and therefore considered "clean", it may still be culturally unacceptable. Generally, all discharge must first be to land.

3.2.6 (2) When existing rights to discharge come up for renewal, they must be considered in terms of alternative discharge options.

3.2.6 (3) To consider any proposed discharge activity in terms of the nature of the discharge, and the sensitivity of the receiving environment.

3.2.6 (4) The highest environmental standards should be applied to any consent application involving discharge of contaminants (e.g. standards of treatment of sewage).

3.2.6 (5) When assessing the alternatives to discharge to water, a range of values, including environmental, cultural and social, must be considered in addition to economic values.

3.2.6 (6) To avoid impacts on water, land, mahinga kai and biodiversity as a result of inappropriate discharge to land activities. Treatment and purification systems, including wetland systems, and close monitoring of the carrying capacity of soils must be part any discharge to land activity.

3.2.6 (7) To require the establishment of a minimum 50m buffer zone between any discharge of contaminants to land activity and a surface waterbody, to ensure that both surface water quality and groundwater quality are protected.

3.2.6 (8) To avoid adverse impacts on water quality as a result of non-point source pollution, and require that any non-avoidable impacts are mitigated.

3.2.6 (9) To encourage the development of comprehensive strategies, including regulatory measures, to address non-point source pollution.

3.2.6 (10) To encourage the effective management of existing riparian areas, and the restoration of other areas, as a means of maintaining and enhancing water quality and the quality of aquatic habitats.

3.2.6 (11) Any discharge activity must include a robust monitoring programme that includes regular monitoring of the discharge and the potential effects on the receiving environment.

3.2.6 (12) To require robust monitoring of discharge permits, to detect non-compliance with consent conditions and best practice. Non-compliance must result in appropriate enforcement action to discourage further non-compliance.

3.2.6 (13) Te Rūnanga o Kaikōura views proposed discharges to water as a community issue. For this reason, the Rūnanga may, where seen as appropriate, recommend that a consent application be notified.

Section 3.4.8 (Sewage Disposal) is also relevant, particularly the following policies:

3.4.8 (1) The highest environmental standards should be applied to any consent application involving the disposal of sewage.

3.4.8 (2) To require that sewage disposal involves filtration through land and not discharge into water. Water must not be used as a receiving environment for the discharge of contaminants. Any consent application for the discharge of sewage to water will be opposed.

3.4.8 (3) To avoid impacts on water and on land as a result of inappropriate discharge to land activities associated with sewage disposal. Consideration must be given to soil structure and permeability at discharge point, and the potential for adverse effects on soil and ground water. Treatment and purification systems, and close monitoring of the carrying capacity of soils, must be part of any discharge to land activity.

3.4.8 (4) To recommend, where appropriate, that wetland creation be a component of any sewage discharge to land scheme, in order to utilise the natural capacity of these ecosystems to filter contaminants.

3.4.8 (7) The duration of the sewage disposal consents must not exceed the lifetime of the disposal or treatment system. All consents must be considered in terms of cumulative and long-term impacts.

3.4.8 (8) To recommend that sewage discharge consents have a 10-15 year duration, depending on the scale of activity, with a review clause requiring upgrades if necessary, because of the potential impact on groundwater from systems that become inefficient over the longer-term consent duration.

3.4.8 (9) To require robust monitoring of sewage disposal related resource consents, to detect non-compliance with consent conditions and best practice. Non-compliance must result in appropriate enforcement action to discourage further non-compliance.

Finally, policies from section 3.5.16 (Repō Raupō) provide additional guidance as to cultural perspectives on discharge to water, particularly:

3.5.16 (4) To recommend, where appropriate, that wetland creation be a component of any sewage discharge to land scheme, in order to utilise the natural capacity of these ecosystems to filter contaminants.

3.5.16 (5) To require, where appropriate, the establishment of wetlands as a consent condition on development proposals where it is deemed necessary to facilitate the mixing of waters from different sources.

3.5.16 (6) To promote and support the restoration of wetlands as part of maintaining and improving water quality, due to the natural pollution abatement functions of such ecosystems.

Section 3 - Cultural Values

Tangata whenua perspectives on environmental management are based on a series of cultural values. Such values are the foundation of everyday management and decision making for Te Rūnanga o Kaikōura. They relate to recognising and protecting the *mauri*, or life supporting capacity, of air, land and water, and to ensuring that the relationship between people and the environment is characterised by respect and reciprocity.

This section of the report describes the cultural values and associations identified by tangata whenua as relevant to considerations of this activity. Much of the discussion is focused on the cultural importance of water.

3.2 Ngāti Kuri associations with the Awatere area

The Awatere River region has a long history of Ngāi Tahu land use and occupancy. The river was a major resource zone and travel route, and played a significant role in Ngāti Kuri history.

The ancestors of Ngāti Kuri used the area as a seasonal food gathering site from the time of the moa until the battles with Ngāti Toa in the mid 1800s. The river, its tributaries, and associated wetlands ensured that mahinga kai resources such as tuna, waterfowl, harakeke and raupō were readily available. The river mouth provided kaimoana, and the grasslands and forests of the inland valleys provided birds and a variety of plant resources. Such resources were depended on to supply coastal settlements.

Ngāi Tahu land use and occupancy in the area is evidenced by the presence of wāhi tapu and archaeological sites on the contemporary landscape. For example, a burial site exists on the north bank of the Awatere River, on a terrace above the river.⁴

Wāhi ingoa provide further evidence of the relationship between Ngāti Kuri and the coastal reaches of the Awatere River. A series of maps prepared by Ngāti Kuri kaumātua show the names and locations of ancient pā sites, significant sites and places associated with

⁴ New Zealand Archaeological Association Site record form for site P29/1

mahinga kai along the coast of the takiwā, from Te Paranui o Whiti to the Hurunui River.⁵ Places associated with the Awatere River region include: *Awatere, O Whetero, Tu Mutu, Te Paruparu, and Te Karaka*.

3.3 Cultural values associated with freshwater

Tangata whenua have a special relationship with water. Water is the lifeblood of Papatūānuku (Earth Mother), that in one form falls upon her as the tears of Ranginui (the Sky Father) and another as the coastal waters of Tangaroa (God of the Sea).⁶ For Ngāi Tahu, water is a taonga left by the ancestors to provide and sustain life.

Key cultural values associated with *Wai Māori*, or freshwater, include:

Mauri and wairua

All things are considered to have the qualities of *wairua* (spiritual dimension) and *mauri* (life force or life supporting capacity), to be living, and to have a genealogical relationship with each other. *Wairua* and *mauri* are important indicators in assessing environmental health at a physical and spiritual level, and are used to assess the condition of a resource or place, from a Ngāti Kuri perspective, based on mātauranga Māori.

The maintenance and enhancement of the *mauri* is a central management principle for all of Ngāi Tahu with regard to freshwater management.⁷

The discharge of contaminants to water, or the mixing of waters from different environments, can have adverse effects on the *mauri* of a waterway.

Ki uta ki tai

The principle of *ki uta ki tai*, or mountains to the sea, is used by Ngāi Tahu Whānui to describe an overall approach to freshwater management. *Ki uta ki tai* is about a catchment based approach to management: managing a waterway from its source, through a network of tributaries, on to lower floodplains, to its interface with saltwater at estuaries along the coast.

Mahinga kai

Mahinga kai is defined in the NTCSA 1998 as “the customary gathering of food and natural materials, and the places where those resources are gathered”.⁸

⁵ These maps were prepared by Ngāti Kuri Kaumatua to present to the Waitangi Tribunal during the Ngāi Tahu claim, as evidence of the relationship between Ngāti Kuri and the Kaikōura coast.

⁶ Te Rūnanga o Ngāi Tahu, 2002

⁷ Te Rūnanga o Ngāi Tahu 1999

⁸ NTCSA 1998: Section 167

A series of maps prepared by Ngāti Kuri kaumātua (see Section 3.2) identify mahinga kai values associated with the Awatere River catchment, including rākau (wood, timber) such as karaka, mānuka, ngaio, koromiko, raureka, ake ake, kōwhai, karamu, hinau and mahoe; manu (birds) such as kererū, weka, kōkō, kiwi, korimako, toroa, karoro, and torea, plant resources as aruhe, harakeke, whīnau, raupō, taramea, and tikumu; and cultivated kumara gardens.

Kaitiakitanga

The relationship of the tangata whenua with the landscape - the land, water and cultural heritage sites - is often expressed through the principle of kaitiakitanga, or the rights and responsibilities associated with being manawhenua, or holding customary authority over an area.

Part 2 of the Resource Management Act 1991 defines kaitiakitanga as:

...the exercise of guardianship by the Tangata Whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship.

Mō tātou, ā, mō ka uri ā muri ake hei

As kaitiaki, Te Rūnanga o Kaikōura has a responsibility for the sustainable use and management of the environment and natural resources - *mō tātou, ā, mō ka uri ā muri ake hei* (for us and our children after us). For the Rūnanga, this responsibility is about ensuring that activities do not compromise the mauri, or life supporting capacity, of the air, land, water and biodiversity. It is about asking the question "what will the impact of this activity be on those that come after us?"⁹

⁹ Te Rūnanga o Kaikōura 2005:32

Section 4 - Assessment of effects on cultural values

The second objective of this report is to identify the potential effects on Ngāti Kuri cultural values as a result of discharge activities associated with the Seddon Sewage Treatment Plant.

In assessing the actual and potential effects of renewing the existing consent, Te Rūnanga o Kaikōura identified a number of issues of concern with respect to adverse effects on cultural values:

- Effects on the mauri of the Starborough Creek
- Cumulative effects
- Potential effects on the Awatere River
- Potential effects on groundwater
- Consideration of alternatives
- Consideration of future growth of Seddon

Each of these issues is discussed below:

4.1 Effects on the *mauri* of Starborough Creek

The main concern raised by Te Rūnanga o Kaikōura with respect to this consent application is the adverse effects of the discharge on the health of the Starborough Creek. For the Rūnanga, waterways must be managed in a way that sustains the *mauri*, or life force, of the waterway (see Section 3). Discharging wastewater to water, and the mixing of waters from different environments through discharge activities, can have adverse impact on the mauri of the waterways.

Assessing the potential effects of a discharge activity on the mauri of a waterway involves consideration of two factors: a) the quality of the effluent entering the waterway, and b) the ability of the waterway as a receiving environment to absorb or cope with the discharge.

Indicators used by the runanga to assess the condition, or the mauri, of a waterway include:

• Flow characteristics / movement of water	• Nature and extent of riparian vegetation
• Is it safe to gather plants for kai?	• Abundance and diversity of species
• Clarity of the water	• Water temperature
• Suitability of waterway for cultural use	• Catchment land use
• Ratio of native plants to exotic and/or noxious weeds	• Smell of the water and surrounding environment

A 300 m walk from the confluence of the Awatere River and Starborough Creek to the discharge outfall highlighted a number of indicators that led Rūnanga representatives to conclude that the quality of the effluent is having an adverse effect on the Starborough. Such indicators include:

- Obvious odour at three locations
- Blue white algae or scum on areas with running water near the outfall
- Discolouration of water
- Not a suitable environment for mahinga kai such as *tuna*¹⁰
- Would not gather plant from this environment
- Would not want stock to drink from the water
- Would not want human contact with the water

It is noted that the poor condition of the Starborough Creek is also attributed to upper catchment activities. However, tangata whenua conclusions relating to the impacts of the sewage effluent discharge are supported by Cawthron monitoring report (2000), which concludes that "the discharge does cause some degradation of water quality in the Starborough Creek".¹¹



Photo 4: Blue and white algae seen by runanga representatives during a site visit to the Starborough creek. The alga was present in running water directly below the outfall.

¹⁰ Investigations by the Cawthron Institute showed that *tuna* are present in Starborough Creek (information provided during site visit).

¹¹ Resource consent application page 6

While Rūnanga representatives concluded that the quality of the effluent has adverse effects on the Starborough Creek, the nature of the waterway as a receiving environment is also seen as contributing to the overall impact of the discharge on waterway health.

Several factors lead tangata whenua to conclude the Starborough is not a suitable receiving environment:

- Absence of suitable riparian or wetland vegetation, to assist with filtering waste and maintaining waterway health. The Starborough Creek, from the discharge point to the Awatere River is dominated by exotic species, which would be doing very little in terms of mitigating effects of the discharge on waterway health.
- Dilution is not a mitigating factor in this creek, due to low or no surface flows
- As an ephemeral waterway, the Starborough clearly flows underground, or is connected to groundwater (via springs) from the discharge point to the Awatere (this means that groundwater and the Awatere River are at risk).

It is important to note that the Rūnanga does not consider the deeply incised, inaccessible nature of the Starborough, or the current 'moderately enriched' condition of the waterway a mitigating factor for this activity.¹² Further, that the waterway is "unlikely used for fishing" does not provide adequate justification for inconsistencies with statutory plans for the area.¹³

Time and time again, Te Rūnanga o Kaikōura is told that because a waterway is a minor watercourse, inaccessible or remote, ephemeral, or that it already has reduced water quality due to other land issues, the adverse effects of a proposed discharge on the environment will be minor. This logic is culturally unacceptable, as it does not recognise or provide for the inherent value of a waterway, and the need to improve those waterways that are currently degraded.

Questions asked by runanga members during consultation for the purposes of this CIA included:

Is MDC content to have the Starborough degraded, through this and other discharges?

Is this activity consistent with Council's vision for Marlborough waterways?

¹² Page 7 of the Resource consent application recommends that the Status Quo is the most suitable option for managing the discharge, stating that "although the existing pond effluent discharge causes some degradation of the Starborough Creek, the water quality upstream is already poor and Cawthron describes the Starborough upstream and downstream of the ponds as 'moderately enriched'.

¹³ Consent application section 4.2, pp.7-8

4.2 Cumulative effects of discharges

A second issue highlighted by Te Rūnanga o Kaikōura with regard to this activity relates to the cumulative effects of point and non-point source discharges to the Starborough Creek.

Information supplied by Marlborough District Council indicates that discharges upstream from the oxidation ponds, likely due to agricultural and other land use activities within the catchment, are contributing to poor water quality in the Starborough Creek. Further, Council's website indicates that stormwater from the Seddon township is also discharged to the Starborough Creek.

Consultation with Te Rūnanga o Kaikōura for the purposes of this CIA highlighted that cultural assessments of activities associated with waterways do not separate the effects of one activity from another. Rather, such assessments look what is happening in the entire catchment, *ki uta ki tai*, and the cumulative effects of discharges, abstractions and other activities on waterway health generally.

It is culturally unacceptable to use poor water quality measures upstream of the oxidation pond discharge as a control (baseline) for downstream measures, or as a justification for further degradation of the waterways. Rather, poor water quality upstream should necessitate a broader approach to assessing effects, and provide an impetus to address land use issues catchment wide.

Just because a waterway is already polluted, it does not mean the effects of additional discharges can be assessed as minor.

Te Rūnanga o Kaikōura considers that the adverse cumulative effects of discharges of contaminants (direct and indirect) on the health of the Starborough Creek are significant. Further, such effects have not been recognised or provided for in the current consent application.

4.3 Potential effects on the Awatere River

The potential for adverse effects on the Awatere river was also identified by runanga representatives as a issue of cultural concern. The Awatere is a highly valued river system, used extensively by Ngāti Kuri for mahinga kai, travel and other purposes (see Section 3).

As a tributary to the Awatere, poor water quality in the Starborough Creek can potentially adversely affect water quality in the Awatere. Further, it can have adverse effects on other cultural values associated with the Awatere, such as *wāhi tapu* or archaeological sites. For example, there is a burial site on the banks opposite of the confluence of the Starborough and Awatere (NZAA site P29/1). It would be culturally unacceptable to have water contaminated with sewage effluent to come into contact with such sites, directly or indirectly.

While at the time of the site visit, there was no visible evidence of surface connections between the two waterways, runanga representatives identified a high probability that the waterways were connected through sub-surface flow, and further that mixing of waters may occur run high due to flood or freshes. From a cultural perspective, there is a relationship between the Awatere and the Starborough that transcends physical evidence of surface flow.

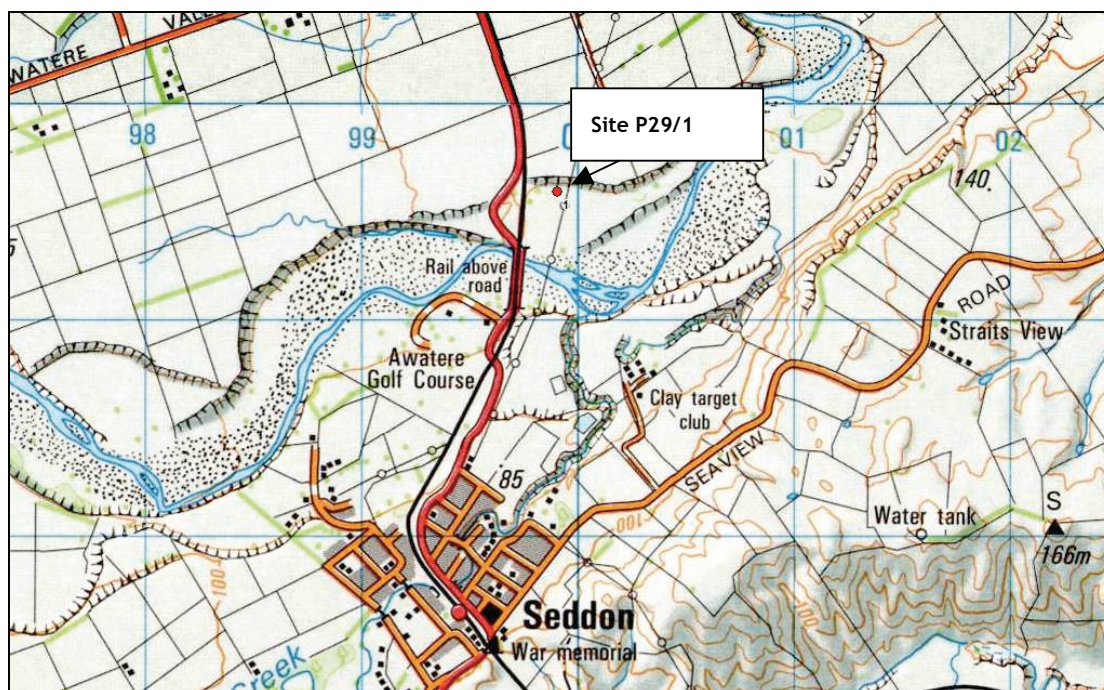


Figure 1: Location of NZAA site P29/1 (burial site), on the north bank of the Awatere River¹⁴

4.4 Potential effects on groundwater

Starborough Creek displays many of the representative characteristics of an ephemeral waterway (i.e. v-shaped gully, lack of surface flow in areas, presence of surface springs or seepages, damp and boggy areas). Ephemeral streams are key components of hydrological systems, providing an important connection between groundwater and surface water. Although seemingly insignificant and inconsequential, such streams are beneficial to catchment ecosystems.¹⁵

The potential adverse effect of the Seddon Sewage Treatment Plant discharge on groundwater is a concern to Te Rūnanga o Kaikōura. Rūnanga representatives voiced concern that Council does not have enough information about the hydrology of the Starborough Creek, particularly in terms of the existence and/or location of groundwater resources (e.g. aquifers), to fully consider the potential risk to groundwater as a consequence of the discharge activity.

¹⁴ Map provided by Historic Places Trust

¹⁵ NSC 2006

4.5 Consideration of alternatives

Te Rūnanga o Kaikōura is more likely to accept discharges to water if it can be demonstrated that such discharge is the best option available to the community – culturally, environmentally and economically. Rūnanga policy states that:

Policy 3.2.6 (5) When assessing the alternatives to discharge to water, a range of values, including environmental, cultural and social, must be considered in addition to economic values.

Several issues were identified by runanga members with regard to the assessment of alternatives provided as part of Resource Consent Application 060927:

- Is there undue weight placed on economics as opposed to what the best option is environmentally, economically and culturally?
- The assessment of alternatives should identify the best possible available option (i.e. best practice environmentally, technologically), and if such options are not considered practical, the assessment should explain why. The treatment plant was designed in accordance with the guidelines that would be at least 20 years old (i.e. produced the former Ministry of Works and therefore pre-1984).
- Disagreement with Council's assessment of Option 4 Wetlands. The Rūnanga does not agree that wetlands will have "little if any impact on nutrients longer term and few other treatment benefits", and that further, wetlands will "attract more waterfowl and the microbiological quality of the effluent would suffer for this". Rūnanga policy is to recommend, where appropriate, that wetland creation is a component of any sewage discharge to land scheme, in order to utilise the natural capacity of these ecosystems to filter contaminants.¹⁶
- The assessment of alternatives does not sufficiently recognise the costs to the Starborough Creek, in terms of mauri and waterway health, of continuing with the status quo.

Economic values are important to tangata whenua. However, they are not given precedence over other values. For Te Rūnanga o Kaikoura, it is all about finding a balance between all the different values. It is about finding a balance between using resources to sustain human activities and protecting values such as environmental and cultural health.

4.6 Future growth of Seddon Township

The Sewage Treatment Plant serves the residential and commercial population of the town of Seddon. The plant (based on the first oxidation pond surface area and depth) has a nominal capacity to treat domestic wastewater from a population of 730. With 221 current connections to the sewage scheme, the approximate population serviced by the scheme is

¹⁶ IMP policy 3.5.16 (4)

597. The consent application states that a hotel will add to this number¹⁷, but that the pond is comfortably within current capacity.

Te Rūnanga o Kaikōura is concerned that the application is not forward thinking enough. That is, future growth in Seddon, via increased residential, commercial or transient (vineyard workers) populations is considered as part of the application.

Specially, the rūnanga is concerned that:

- The 'buffer zone' between current operations and plant capacity is insufficient to accommodate future growth within a 10 year consent duration.
- The consent application does not adequately recognise or provide for future growth of the Seddon township.
- While Marlborough District Council has indicated that the first pond can be expanded if required, provisions for such expansions are not included in the consent application.

The Rūnanga does not want to see the plant operating at or near capacity for extended periods of time, as this may compromise effluent quality.

Positives

In addition to the issues of concern identified above, Te Rūnanga o Kaikōura representatives identified a number of positive features of this consent application, and the consultation process with tangata whenua.

- Commitment to monitoring effects
- Independent testing of results by the Cawthron Institute
- Commitment to 'raising the bar' – Rūnanga representatives attending the site visit to the Seddon Sewage Treatment Plant felt that council members wanted to improve the activity.
- Presentation and site visit allowed for plain language information transfer.
- Having a good team on site for the site visit, particularly having Councillors involved.

¹⁷ Resource Consent Application, page 2

Section 5 -Addressing adverse effects on cultural values

Te Rūnanga o Kaikōura has a baseline or benchmark policy of no discharge to water. The policy is particularly relevant to the discharge of sewage (treated or untreated) to water. The policy comes from years of watching waterways in the takiwā become degraded as a result of uncontrolled discharges of effluent, rubbish, industrial waste, hospital waste, grey water, and sewage. Over time, the impacts on waterway health, water quality, and mahinga kai have been significant.

From this baseline policy, the Rūnanga can assess discharge to water applications on a case by case basis, usually via a Cultural Impact Assessment. The focus of such assessments is the volume and quality of the effluent, the nature of receiving environment, and available alternatives.

Within this Cultural Impact Assessment Report, Te Rūnanga o Kaikōura has assessed the impacts on cultural values as a result activities associated with the Seddon Sewage Treatment Plant, a plant that currently discharges treated sewage into the Starborough Creek. The assessment concluded that:

- Ⓢ The adverse effects of the activity on cultural values are significant, given the nature of the effluent (sewage), the quality of the effluent (considered poor), and the degraded health of the waterway.
- Ⓢ The Status quo (continue existing activity as it) is inconsistent with policies in the Te Rūnanga o Kaikōura Environmental Management Plan 2005, and is thus outside of the bounds of cultural acceptability.
- Ⓢ It is culturally unacceptable to use poor water quality measures upstream of the oxidation pond discharge as a control (i.e. baseline) for downstream measures, or as evidence that the adverse effects of additional discharge will be minor.
- Ⓢ The application is not “forward thinking enough”, in terms of best practice, new technologies, water quality, stream health, catchment based management.

Further, the runanga notes that:

- Ⓢ The activity is inconsistent with the Proposed Wairau / Awatere Resource Management Plan, which aims to manage the use of freshwater in a manner which safeguards the life supporting capacity of the resource¹⁸, and to manage the lower Awatere River and its tributaries for fisheries purposes¹⁹, and with Marlborough District Council Regional Policy Statement objectives and policies, which aim to maintain water quality at levels which provide for the sustainable management of fish and plant life, and to maintain and enhance freshwater habitats and natural species diversity.

¹⁸ Proposed Wairau / Awatere Resource Management Plan, section 6.2.1

¹⁹ Resource Consent application pg. 7

Recommendations:

A significant part of the CIA process is determining whether adverse effects on cultural values can be avoided, remedied or mitigated.

While the activities associated with the Seddon Sewage Treatment Plant are considered to have significant adverse effects on cultural values, consultation with rūnanga representatives for the purposes of this report indicated that there are options to avoid, remedy or mitigate such effects, through addressing issues such as quality of the effluent and the ability of the receiving environment to absorb or cope with waste.

The following recommendations are provided to assist Marlborough District Council to address cultural concerns, and to provide a basis for both parties to achieve a 'best fit' between cultural values and the receiving environment.

Recommendation 1: Discharge to land / avoid discharge of contaminants to the Starborough Creek.

The most culturally appropriate option for managing the Seddon Sewage Treatment Plant discharge is to adopt discharge to land operations for the Seddon Sewage Treatment Plant, and cease discharging treated sewage to the Starborough Creek. Discharge to land is consistent with Rūnanga policy, which state that water should not be used as a receiving environment for the discharge of contaminants, particularly sewage. It is also consistent with Ngāi Tahu tribal policy, as per the *Te Rūnanga o Ngāi Tahu Freshwater Policy Statement* 1999.

Discharge to land, with high quality effluent sourced from treatment ponds that include wetland systems is identified by Te Rūnanga o Kaikōura as the ideal option from a cultural perspective. Passing or filtering waste through land, where the carrying capacity of the land is not compromised, can restore the mauri or balance of that water. This outcome cannot be achieved through dilution of waste using water as a medium.

Recommendation 2: Improve the quality of the effluent.

Whether the discharge is to land, or water (see below), the quality of the effluent must be improved.

Information provided by Marlborough District Council indicates that the quality of the effluent is on some days, good enough for stock to drink, but that that level of quality is not consistent or reliable.²⁰ Poor quality effluent is clearly having significant adverse effects on the mauri of the Starborough Creek, thus posing a risk to the Awatere River and the relationship of Ngāti Kuri to it.

²⁰ A focus of the site visit with MDC and TRoK representatives was communicating technical water / effluent quality data into plain language information, to enable informed consultation. Using a measure of "is the quality of the effluent such that stock can drink it" is one example.

Ideally, the runanga believes that, given current technology, sewage should be treated to a standard similar to drinking water. However, for the purposes of this application, the runanga recommends that the effluent is treated to a state that the quality is consistent with contact recreation (as a measure of quality, not of activities that tangata whenua believe should occur).

Recommendation 3: Improve the receiving environment

As described in the section 4, the Rūnanga does not consider the Starborough Creek a suitable receiving environment for the oxidation pond discharge, given the nature of the effluent (sewage), the quality of the effluent (considered poor), and the degraded health of the waterway.

If Marlborough District Council chooses to continue the discharge of treated sewage to the Starborough Creek, the only means of addressing cultural issues is to a) improve the quality of the effluent (as per recommendation 2), and b) improve the receiving environment.

Improvement of the Starborough Creek as a receiving environment can only occur through:

- Wetland /riparian plantings of appropriate native species from the discharge outfall to the confluence of the Starborough and Awatere (300 m).
- Wetland systems incorporated into treatment plant operations.
- Improving the health of the waterway by addressing all other discharges to the waterway, including stormwater from the Seddon township, and non-point source discharges from agricultural and other land use in the upper catchment. It is the responsibility of Marlborough District Council to regulate these activities and address water quality issues throughout the catchment.

Further, if Council decides to continue to use the Starborough Creek as a receiving environment for the discharge, the Assessment of Effects (AEE) in Resource Consent Application 060927 must be expanded and updated to provide better information upon which to base this decision (see Recommendation 4 and 5).

Recommendation 4: Provide more information

Cultural issues can also be addressed through the inclusion of more information in Resource Consent application. In particular, the Assessment of Environmental Effects (AEE) should be expanded to include a wider range of issues. Specific information needs identified by Te Rūnanga o Kaikōura include:

- A more current ecological survey for the Starborough Creek (last one 7 years old), before lodgement of consent, to provide more up to date information and thus a better assessment of effects.
- Hydrological information, to assess potential risk to groundwater resources.

- Information pertaining to cumulative effects of discharges on the Starborough Creek (e.g. agricultural, stormwater, sewage).
- Assessment of cultural effects, as per this Cultural Impact Assessment.

The Assessment of Alternatives also requires additional information to ensure that alternatives to the status quo can be fully considered. Specifically:

- The benefits of discharge to land, particularly with respect to using wetlands to facilitate the process, must be fully recognised and discussed as part of the assessment of alternatives. For example, improved water quality in Starborough Creek has not been recognised as a benefit.
- A sound basis for comments included under Option 4 (Wetlands) must be provided. Option 4 states that wetlands will have 'little if any impact on nutrients longer term and few other treatment options'? In addition to being a culturally appropriate method of filtration and nutrient removal, the runanga believes that the role of wetland ecosystems in addressing wastewater issues is scientifically sound.

Recommendation 5: Recognise and provide for future growth in Seddon

The consent application should explicitly recognise and provide for future residential, commercial and industrial growth in Seddon within *and beyond* the consent duration. The current application does not demonstrate long term planning.

Recommendation 6: Strive for the best!

Rūnanga policy is that *the highest environmental standards should be applied to any consent application involving discharge of contaminants (e.g. standards of treatment of sewage).*²¹ Further, the runanga consistently encourages developers and local authorities to strive for the best – to be innovative, creative and forward thinking.

The runanga encourages Marlborough District Council to set an example of best practice on the landscape, while achieving the best possible outcomes socially, environmentally and culturally. In doing so, Council can give effect to the principle of *mō tātou, ā, mō ka uri ā muri ake hei* (for us and our children after us).

For Te Rūnanga o Kaikōura the focus of freshwater management must look beyond maintaining *what is there*, to at enhancing our waterways to restore the values that *were once there*. The Rūnanga seeks to restore the waterways of the takiwā to a state where they can once again sustain customary uses, from ceremonial use of the most pure waters through to ecosystem support for mahinga kai species.

²¹ *Te Poha a Tohu Raumati* section 3.2.6 (4)

Section 6 - Conclusions

This Cultural Impact Assessment has found that current discharge to water activities associated with the Seddon Sewage Treatment Plant are not within the bounds of cultural acceptability. However, the CIA also found that there are ways to improve the operations to address cultural impacts.

An important *kaupapa* of the CIA is the relationship between tangata whenua and freshwater, and how that relationship influences runanga responses to activities such as the discharge of contaminants to water. While for many members of the community discharge to water is often preferable to discharge to land (e.g. vineyards), particularly when the waterway is consider minor, already degraded, inaccessible or remote, clearly such activities can have significant adverse effects on cultural values.

Ngāti Kuri believe that all waterways are *taonga*, treasures that should be managed and enhanced for future generations. A key policy objective for Te Rūnanga o Kaikōura is to restore the waterways of the takiwā to a state where they can once again sustain customary uses, from ceremonial use of the most pure waters through to ecosystem support for mahinga kai species.

Rūnanga representatives participating in this CIA highlighted that they believe Marlborough District Council, particularly Councillors, are aware that current Seddon Sewage Treatment Plant operations need to be improved, but are less clear about how or by how much. It is the hope of Te Rūnanga o Kaikōura that the issues and recommendations in this CIA will provide a basis for which such improvements can occur.

Where to from here?

This CIA Report is intended to provide information that can assist Marlborough District council to understand the potential impacts of discharges associated with the Seddon Sewage Treatment Plant on tangata whenua values. The Rūnanga believes that the issues and recommendations provided the report can help to ensure good cultural, social, and environmental outcomes, *mō tātou, ā, mō kā uri ā muri ake nei*, for us and our children after us.

Te Rūnanga o Kaikōura expectations are that the issues raised in this CIA will contribute to a more comprehensive AEE for Resource Consent Application 060927, one that recognises and provides for cultural effects (as per RMA section 88). Further, expectations are that policies in the Te Rūnanga o Kaikōura Iwi Management Plan, as articulated in this CIA, will be taken into account in decision making on this consent application, as per section 104 of the RMA.

The CIA provides a basis for future communication and cooperation between Marlborough District Council and Te Rūnanga o Kaikōura. It is important that Council maintains a consultative relationship with the Rūnanga with respect to this consent application. If the Council wish to meet with Te Rūnanga o Kaikōura with regards to this report, a meeting can be arranged via the Te Rūnanga o Kaikōura Natural Resources Office at Takahanga Marae.

Glossary

Hapū	Sub-tribe
Harakeke	Flax
Iwi	Tribe
Iwi authority	The authority that represents an iwi
Kaimoana	Seafood
Kaitiaki	Iwi, hapū or whānau group with the responsibilities of kaitiakitanga
Kaitiakitanga	The exercise of guardianship
Kaumātua	Elders
Kaupapa	Theme
Kō iwi tangata	Human bones
Mahinga kai	Food / resources and the areas they are sourced from
Mātauranga Māori	Customary / traditional knowledge
Ngāi Tahu	An iwi of the South Island
Ngāti Kuri	Hapū of Ngāi Tahu
Pā	Fortified settlement site
Raupō	Bulrush
Takiwā	Area or region
Tangata whenua	The iwi or hapū that holds manawhenua over an area
Taonga	Treasure
Te Waipounamu	South Island
Tuna	Eel
Urupā	Burial site
Wāhi ingoa	Place names
Wāhi taonga	All things that are treasured and valued
Wāhi tapu	Places of sacredness and immense importance

Reference List

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