

The Hearing Panel

21 February 2018
9.00 am

Staff Report for Hearing

The recommendation in the staff report represents the opinion of the writer and it is not binding on the Hearing Panel. The report is evidence and has no greater weight than any other evidence that the Panel will hear and consider.

Hearing of Application – APP-20171375

D E and V J Stafford

Compiled by Courtney Guise, Consents Officer

- Hearing: The hearing is scheduled to commence at 9.00 am on Wednesday, 21 February 2018 in the Council Chambers, Environment Southland, corner of Price Street and North Road, Waikiwi, Invercargill.
- Application: D E and V J Stafford (the applicant) have applied to discharge dairy effluent to land and to abstract groundwater for stock drinking water and shed use.
- Notification: The application was publicly notified on 20 September 2017 and no submissions were received.
- Executive Summary:
1. This is an application for discharge permit and water permit consents relating to an existing dairy farm.
 2. The previously held consents expired 19 July 2017, three working days after the application was lodged, and the property has been operating without consent since this time.
 3. The receiving environment is sensitive, as shown by modelled mapping of groundwater nitrate concentrations and with groundwater monitoring results. Both methods identify that the groundwater nitrate concentrations are in excess of the Drinking Water Standards for New Zealand 2005 (revised 2008) (DWSNZ).
 4. The key issue is the effect of the effluent discharge activity, including the use of infrastructure, causing potential contamination of the groundwater receiving environment.

5. Groundwater contamination that may result from granting the consent would be is contrary to policies in the relevant planning documents which seek to maintain groundwater quality.
6. I recommend the application is declined on the basis that as the effects of the activity are unknown, I cannot determine if the application will meet the “gateway” test under Section 104D (a) and the application does not meet the “gateway” test under Section 104D(b), as it is contrary to policy in the Regional Water Plan 2010.

1. Introduction

1.1 Status and purpose of this report

This report has been prepared under Section 42A of the Resource Management Act 1991 (RMA) to assist in the hearing of the application for resource consent made by D E and V J Stafford. Section 42A allows local authorities to require the preparation of such a report on an application for resource consent and allows the consent authority to consider the report at any hearing.

The purpose of the report is to assist the Hearing Panel in making a decision on the application.

1.2 About the author

My name is Courtney Guise. I am a Consents Officer employed by the Southland Regional Council. I have been employed by the Council as a Consents Officer since July 2014. I have processed applications for similar activities since the beginning of my employment with the Southland Regional Council.

I hold the following qualifications from Lincoln University, Christchurch:

- Bachelor of Environmental Management and Planning;
- Minor in Professional Planning; and
- Minor in Ecology

I also hold a Certificate of Te Ara Reo Maori Level 2, from Te Wananga o Aoteroa run through the Southern Institute of Technology. I have recently completed the Certificate in Advanced Te Ara Reo Maori Level 4.

I am an associate member of the New Zealand Planning Institute.

I have been the officer in charge of the application since it was lodged and received by Council. I have also visited the site.

1.3 Information relied on in preparation of this report

In preparation of this report I have had regard to the following documents:

Document Name	Abbreviation / reference name	Writer	Date
Resource Consent Application	the Application	DE & VJ Stafford (Applicant) and Russell Davie (Consultant)	Received 14 July 2017
Amended Application to include Water Permit	the Amended Application	DE & VJ Stafford (Applicant) and Russell Davie (Consultant)	Received 2 August 2017
Further information request under Section 92(1) of the RMA	Further Information Request	Courtney Guise, Consents Officer	Sent 25 July 2017
Further information response (s92(1))	Further Information Response	Russell Davie (Consultant)	Received 24 August 2017
Technical Comment from Council's internal Scientist	Technical Comment	Ewen Rodway, Environmental Scientist (Chemistry / Groundwater) and Michael Killick, Technical Specialist (Groundwater Quantity & Soils)	Collated 25 January 2018
Copy of Technical Comment "Charlton sale yard settling pond – Stafford property..."	Technical Comment Sump	Diane Elliot, Groundwater Technician (no longer works for Council)	Written 16 March 2009
Resource Management Act 1991	RMA	NA – national legislation	1991 Includes amendments 2013 and 2017
National Policy Statement for Freshwater Management 2014	NPSFM	NA – national legislation	2014 Updated August 2017 due to Amendment Order.
Regional Policy Statement 1997	RPS	Environment Southland	1997
Proposed Regional Policy Statement 2012	PRPS	Environment Southland	2012
Regional Water Plan 2010	RWP	Environment Southland	2010
Proposed Southland Water and Land Plan 2016	pSWLP	Environment Southland	2016
Te Tangi a Tauira (Iwi Management Plan) 2008	Te Tangi or iwi management plan	Te Rununga o Ngai Tahu and Te Ao Marama Incorporated	2008

The application was lodged on 14 July 2017, prior to the 2017 amendments for the RMA and the NPSFM. These versions of the legislation are relevant for this application.

2. The application and procedural matters

2.1 The proposed activities

Applicant:	D E & J V Stafford
Application:	To discharge dairy effluent to land and to abstract groundwater for stock drinking water and shed washdown.
Site address or location:	86 Charlton Siding Road, Gore
Legal description:	Lot 2 DP 404063, Lot 1 DP 386615, Part Lot 39 DP 82, Part Lot 40 DP 82, Lot 1 DP 371364 and Lot 1 DP 11680
Map Reference:	NZTM2000 1283277E 4881590N

The applicant proposes to:

- discharge dairy shed effluent to land via a low-rate pods and a high rate and low depth umbilical system from up to 500 cows;
- abstract up to 60 m³ of groundwater per day from bore F45/0512 and F45/0465. This water will be used for dairy shed washdown and stock drinking water for 500 cows. A total annual abstraction of 18,240 m³ will be taken throughout the milking season (1 August–31 May). The annual volume does not include stock water during winter.

The applicant amended the application to include an application to abstract groundwater. This is appended.

A technical comment was sought from specialists with regard to groundwater quality. A copy of the technical comment was forwarded to the Consultant and Applicant on 31 August 2017. The Technical Comment is appended.

The following tables summarise matters relevant to this application:

Property Details:-	
Catchment	Mataura River and Charlton Stream
Total Farm Area (ha)	181
Replacement Consents? Increase in area/cow numbers?	Yes, no increase in cow numbers

Water Permit Details:-	
Source of water (bore)	Bore F45/0512 and Bore F45/0465
Groundwater zone/name of watercourse	Lower Mataura
Aquifer type (for groundwater takes)	Lowland
Rate of take (L/s)	1.9
Freshwater storage onsite? How much?	60 m ³
Daily volume (m ³ /day)	60
Consistent with 120 L/cow/day? (estimate of efficient	Yes, consistent with 120 l/cow/day

Water Permit Details:-	
use for shed and stock water use)	
Yearly volume (m ³ /year)	18,240 (304 day milking season)
Discretionary allocation (m ³ /year) (RWP)	24,800,000
Amount currently allocated (m ³ /year and % of discretionary allocation) (RWP)	2,483,385 (10%)
Primary Allocation (m ³ /year) (pSWLP)	24,970,000
Amount currently allocated (pSWLP)	2,093,990
% of discretionary allocation currently allocated	8.4%

Discharge Permit Details:-	
Cow numbers	500
Stocking rate (cows/ha)	2.7
Winter milking proposed?	None
Other sources of effluent?	None
Effluent disposal area (ha)	42 ha
Irrigation method	Low-rate pods Umbilical
Application rate and depth	Low-Rate pods: 15 mm depth per application and 10 mm rate per hour. Umbilical: 5 mm depth per application
Storage available (m ³)	2,013
No of days storage? (90 days for high rate and 60 days for low rate systems recommended)	80
Massey pond calculator. 90% storage requirement (m ³)	1,508
Monitoring proposed?	None

2.2 Regional Planning framework

Resource consents are required under the Regional Water Plan (RWP) and the proposed Southland Water and Land Plan (pSWLP).

Regional Water Plan for Southland (2010)

- The discharge of dairy shed effluent to land is a **restricted discretionary activity** under Rule 50(d):
 - (d) *The discharge of farm dairy effluent to land, that was not being lawfully undertaken as at 17 July 2010 (including an increase in the scale of an activity) in any of the following situations is a restricted discretionary activity:*
 - (i) *low rate irrigation to soil/landscape categories A and B, and D and E as identified in Map 1 of Appendix N or determined by farm-scale soils mapping undertaken by suitably qualified person; or*
 - (ii) *... (not applicable)*
- The taking of groundwater is a **discretionary activity** under Rule 23(d)(ii).
 - (d) *Except as provided for in Rules 23(a) and 23(b) and the takes authorised by Section 13(3) of the Act, the abstraction and use of groundwater from any of the following sources is a discretionary activity:*
 - (i) *... (not applicable)*

- (ii) *a lowland aquifer where the total volume of water allocated from the relevant groundwater zone is less than or equal to 15 percent of mean annual land surface recharge;*
- (iii) ...
- (iv) ...
- (v) ...

Under the RWP the application is considered to be for a discretionary activity. The applicant increased the discharge area in 2012, therefore the application does not meet the controlled activity status of the rule. Matters of discretion for the discharge activity are restricted to the following:

- (a) application depth and rate, storage requirements, nutrient loading (in particular nitrogen) and contingency plans;
- (b) the separation distance (beyond that required) of the discharge from surface water bodies, artificial watercourses, subsurface drains, the CMA, residential dwellings, property boundaries, water abstraction points and registered drinking-water supplies;
- (c) other measures to avoid, remedy or mitigate adverse effects (including cumulative effects directly related to the discharge of farm dairy effluent) on water quality taking into account the nature and sensitivity of the receiving environment.

Proposed Southland Water and Land Plan (2016)

- The discharge of effluent to land is a **non-complying activity** under Rule 35(d).
 - (d) *The discharge of agricultural effluent or water containing agricultural effluent to land, in circumstances where contaminants may enter water, that does not comply with Rule 35 (b) or Rule 35 (c) is a non-complying activity.*
- The taking of groundwater is a **permitted activity** under Rule 54(a).
 - (a) *The take and use of groundwater is a permitted activity provided the following conditions are met:*
 - (i) *The rate and volume of abstraction does not exceed:*
 1. *A maximum of 76 cubic metres per day per landholding; and*
 2. *A maximum rate of 5 litres per second; and*
 3. *The point of abstraction is not within 50 metres of an existing lawfully established groundwater take*

Under the pSWLP the application is considered to be for a non-complying activity. Section 124(1) and (2) of the RMA do not apply as the application was lodged less than three months in advance of the existing consent expiring. Therefore, the discharge activity cannot comply with criteria (i) of Rule 35(b).

An application for resource consents was lodged with Environment Southland (the Council) in accordance with these requirements ([application appended](#)).

Overall, the application is considered to be a **non-complying** activity.

When considering a **non-complying activity**, the Council may only, in accordance with Section 104D, grant a resource consent for the activity if it is satisfied that the adverse effects of the activity are minor or the application is for an activity that will not be contrary to the objectives and policies of the relevant plan or proposed plan. If the application passes the “gateway” tests in Section 104D,

under Section 104B the Council may grant or refuse consent for a non-complying activity, and if it grants the application, may impose conditions under Section 108 of the RMA.

The policies of these plans are used in the following sections to inform and determine the significance of adverse effects associated with the proposed activity, as the direction of the policies help establish whether effects are less than minor, minor or more than minor.

2.3 Further information request

Further information was requested from the Applicant on the 25 July 2017. The request asked the applicant to:

- identify groundwater quality, including nitrate concentrations in groundwater;
- identify and assess adverse effects of the proposal on groundwater quality;
- identify if there will be measures put in place to avoid, remedy or mitigate the adverse effects and:
 - discuss if these measures will be good management practices or mitigation measures; and
 - how effective they are likely to be at avoiding, remedying or mitigating the adverse effects.

... The above information was provided by the applicant (appended).

2.4 Notification and Submissions

The application was publically notified on 20 September 2017. This was for the following reasons:

- I considered that the activity is not consistent with policy in the RWP which seeks to avoid adverse effect on groundwater quality as adverse effects are not being avoided. The groundwater quality is very degraded and is therefore a sensitive receiving environment. Environment Southland's groundwater quality monitoring shows seasonal fluctuations in nitrate concentrations with an average 20 milligrams of NO₃-N per litre (mg/L). This is in excess of the Drinking Water Standards for New Zealand (DWSNZ), the upper limit being 11.3 NO₃-N mg/L. At this time, Council's Environmental Scientist (Chemistry and Groundwater), and agreed by Council's Technical Specialist (Groundwater) identified that the continuation of farm dairy effluent (FDE) as applied for will not improve groundwater quality;
- I considered the mitigation measures outlined to be inadequate to avoid the adverse effects of the discharge to land, as directed by policies in the RWP;
- The activities are not legally in the existing environment as per Section 124 of the RMA as the application was lodged less than three months prior to the expiry of the previous consent. The adverse effects of the activity have already occurred are existing in the environment, despite the activity not legally existing in the environment;
- Council has limited certainty about what the likely effects will be.

The above decision to publicly notify the application was made under Section 95A(2)(a) of the RMA. This section means that the consent authority considered that the adverse effects on the environment from the activity would be, or would likely be, more than minor.

No submissions were received.

2.5 Section 99 Pre-hearing Meeting

A pre-hearing meeting for the application was not held, as decided under Section 100 of the RMA. There were no submitters to the application so a decision was made to proceed to hearing because the adverse effects from the activity would be, or are likely to be, more than minor.

3. Assessment

3.1 Statutory Considerations

Section 104 of the Act sets out the matters to be considered when assessing an application for a resource consent. Section 104(1) of the Resource Management Act, 1991, states:

- (1) *When considering an application for a resource consent and any submission received, the consent authority must, subject to Part 2, have regard to:*
- (a) *any actual and potential effects on the environment of allowing the activity; and*
 - (b) *any relevant provisions of:*
 - (i) *a national environmental standard;*
 - (ii) *other regulations;*
 - (iii) *a national policy statement;*
 - (v) *a regional or proposed regional policy statement;*
 - (vi) *a plan or proposed plan; and*
 - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

Those matters which are relevant for this application are discussed in the following sections.

Section 104 of the Resource Management Act requires consideration of the effects of the application and relevant policy and plan provisions, subject to Part 2 of the Resource Management Act. Case law indicates that the provisions of the regional plans (and the other instruments listed in s104) have been developed under, and give specific effect to, Part 2. Therefore the direction provided by the plan provisions should take precedence when deciding a resource consent, although the provisions of Part 2 will provide guidance where the plan provisions are unclear.

The Environment Court in *Saddle View Estate Ltd v Dunedin CC* [2014] NZEnvC 243, [2015] NZRMA 1 (paragraphs 92-93) inferred, from the approach taken in *Environmental Defence Soc Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593, that the matters in section 6 and 7 of the RMA (part 2) and in the higher order statutory instruments “...must be applied as particularised in regional and district plans¹”. Plans are to be applied as containing, in particularised form, all the relevant provisions of part 2. Any specific objectives or policies in plans must not be “subverted” by reference to part 2 or other matters². *RJ Davidson Family Trust v Marlborough District Council* [2017] NZHC 52, NZRMA 227 (Davidson Case Law), paragraphs 68-77, adopted a similar view, but confirmed the view in a consenting context rather than in the planning context which was the setting for the King Salmon case. The High Court held that where there has been

¹ *Saddle View Estate Ltd v Dunedin CC* [2014] NZEnvC 243, [2015] NZRMA 1. Paragraph 92.

² *Saddle View Estate Ltd v Dunedin City Council* [2014] NZEnvC 243, [2015] NZRMA 1. Paragraph 93.

invalidity, incomplete coverage or uncertainty of meaning within lower order “...planning documents, resort to Part 2 should then occur³”.

In *Aro Valley Community Council Inc v Wellington City Council* [2015] NZHC 532 (paragraph 24) the High Court said that the Act envisages the formulation and promulgation of a cascade of planning documents, each intended to ultimately give effect to part 2, including s6. A decision under the relevant plan provisions is at the bottom of that cascade and “...independent reference by the decision maker ... is not a mandatory consideration.”⁴

From this logic I have adopted a report format that largely reverses the order in s104(1)(b). This arises from case law concerning the hierarchy of planning documents and how each lower order document gives effect to the ones above it. After consideration of effects, the interpretation of the proposal is first against the relevant plans and then against the higher order documents unless there is invalidity, incomplete coverage or uncertainty of meaning in the relevant plans, in which case I then seek clarification from higher order documents.

I believe there is no invalidity, incomplete coverage or uncertainty of meaning in the regional plans and therefore have included a full assessment of policy in the relevant plans in the body of this report and a supplementary policy assessment against the higher order documents is appended.

Sections 108 and 108AA are relevant for this application and provide for consent to be granted subject to conditions and sets out the kind of conditions that may be imposed.

3.2 Description of the affected environment

3.2.1 What is the Existing Environment?

It is important to understand what the existing environment is so that we have a baseline from where to begin assessing the effects of the activity on the environment. Case law helps to define what should be included in the existing environment and what should not, and is discussed here.

The Environment Court in *Port Gore Marine Farms v Marlborough District Council* took the approach that “... we need to bear in mind that we must imagine the environment, for the purposes of Section 104(1)(a) of the Act, as if the three marine farms were not actually in it.”⁵. The approach taken in *D R Sampson v Waikato Regional Council* came to the same conclusion and the Court stated that for consents which are granted for a defined term and may not be renewed, “... the existing environment must be determined as the environment that might exist if the existing activity, to which the ... consents relate, were discontinued.”⁶

Additionally, the approach taken in *Ngati Rangī Trust v Manawatu-Wanganui Regional Council* is of the same vein and the Court outlined “I therefore agree that the approach taken... in *Port Gore Marine Farms Ltd v Marlborough District Council* was the approach which the Environment Court should have adopted in the present case”⁷. This was based on information from *Environmental and Resource Management Law* which states “... the

³ *RJ Davidson Family Trust v Marlborough District Council* [2017] NZHC 52, NZRMA 227. Paragraph 76.

⁴ *Aro Valley Community Council Inc. v Wellington City Council* [2015] NZHC 532. Paragraph 24.

⁵ *Port Gore Marine Farms v Marlborough District Council* [2012] NZEnvC 72. Paragraph 140.

⁶ *D R Sampson & Others v Waikato Regional Council* RMA741/99, RMA745/99, A178/2002

⁷ *Ngati Rangī Trust v Manawatu-Wanganui Regional Council* [2016] NZHC 2984. Paragraph 64.

existing environment cannot include, in the context of a renewal application, the effects caused by the activities for which the renewal consents are sought...”⁸.

This assessment of effects has used the approach to the “existing environment” taken in the case law above, that the environment does not include existing activities for which consent is sought, or effects arising from it.

3.2.2 The Physical Environment

The subject site is a 181 hectare dairy farm with an effluent discharge area of 38 hectares located at 86 Charlton Siding Road, Gore. There are no current permits for this farm and there are no rights of continuance under Section 124 of the RMA. The site is bound by farmland, predominantly stock finishing, with a dairy farm to the immediate east and south, and a smaller dairy farm which bounds part of the western boundary.

The property is located approximately 600 metres west of State Highway 1 and approximately 2 kilometres (km) west of the main stem of the Mataura River.

The property is located over top of two different Physiographic Zones. Physiographic Zones have been developed for use under the pSWLP and are described by areas with similar characteristics, such as climate, topography, geology and soil type, which affect water quality. Each zone is different in the way farm contaminants build up and move through the soil, areas of groundwater, and into surface waterways⁹.

3.2.2.1 Soils

According to Topoclimate soil maps, the effluent discharge area is located on Jacobstown and Gore soils.

Soils	Soil Type	Vulnerability Factors		
		Structural Compaction	Nutrient Leaching	Waterlogging
	Jacobstown (50%)	Severe	Slight	Severe
	Gore (50%)	Moderate	Very Severe	Nil
Physiographic Zone	50% Lignite Marine Terraces (artificial drainage variant) – overlays with Jacobstown Soil 50% Lignite Marine Terraces (no variant) – overlays with Gore soil			
Land Category	50% Category A; Artificial drainage or coarse soil structure – overlays with Jacobstown & Lignite Marine with artificial drainage variant 50% Category E; other well-drained but very stony flat land – Overlays with Gore and no variant			

The discharge area is approximately split evenly over the soils types, physiographic zones with artificial drainage variant and no variant, and the land categories.

⁸ *Ngati Rangī Trust v Manawatu-Wanganui Regional Council* [2016] NZHC 2984 citing Derek Nolan *Environmental and Resource Law* (5th ed. Lexis Nexis, Wellington, 2015) at 610.

⁹ *Water and Land 2020 & Beyond* website, accessed 24/01/2018. <http://waterandland.es.govt.nz/southland-science/physiographic-zones>

Where the Jacobstown soils are found (50% of the discharge area), the Lignite Marine Terrace physiographic zone with artificial drainage variant is also found, as well as the Category A (artificial drainage or coarse soil structure). Key characteristics of the Lignite Marine Terrace (artificial drainage variant) in response to sustained or heavy precipitation events includes large amounts of nitrogen being mobilised due to the limited time the water is held in the soil, which reduces the denitrification potential. Mitigation measures that can be used for this physiographic zone variant include:

- protecting soil structure, particularly in gullies and near stream areas;
- reduce phosphorus use or loss;
- reduce the accumulation of surplus nitrogen in the soil, particularly over autumn and winter; and
- avoid preferential flow of effluent through drains; and capture contaminants at drainage outflows.

The physiographic characteristics outlined above correspond well with soil type characteristics, as the Jacobstown soils have severe waterlogging characteristics. According to the land category, this area is highly likely to have artificial drainage and the physiographic zone also outlines that artificial drainage is a characteristic of this area. The application included a map which outlines where there are known tile drains and where there are on-farm drains and waterways. There are no known tile drains within the discharge area and there are no waterways within the Jacobstown/Category A section of the discharge area.

Where the Gore soil is found (50% of the discharge area), the Lignite Marine Terrace physiographic zone with no variant is also found, as is the Category E (other well-drained but very stony flat land). There is no overlapping between this soil type, physiographic variant and land category, and those outlined in the previous paragraph. Key characteristics of Lignite Marine Terrace with no variant are lateral drainage through the soil structure and deep drainage when soils are wet.

The characteristics of the soils, physiographic variants and land categories corresponds well to each other as the Gore soil has very severe nutrient leaching characteristics, the Lignite Marine Terrace physiographic zone (no variant) has deep drainage characteristics and the land category also identified that the land is well-drained, hence the very severe nutrient leaching characteristic in this area.

Generally, within the Lignite Marine Terrace physiographic zone the potential for elevated nitrate concentrations in groundwater is limited by the high denitrification potential. This is reliant on the filtration and sorption of excess water or effluent through the soil profile¹⁰. Due to the features of this zone (variant and no variant) and the predominant contaminant pathways, the main risk for this site with regard to water quality is through the artificial drainage network.

¹⁰ Southland Physiographic Zones – Lignite / Marine Terraces Technical Information sheet.

3.2.2.2 Groundwater

Quantity

Groundwater is to be abstracted from a bore which is within the Lower Mataura groundwater zone which is a lowland aquifer. The groundwater zone is not facing any allocation issues as detailed in Section 2.1 of this report.

Quality

The groundwater concentrations underneath the proposed discharge area are very high. Groundwater quality monitoring results range from approximately 15 mg/L (total oxidised nitrogen) to about 55 mg/L (Figure 2). Water quality underneath the proposed discharge area is low and groundwater nitrate concentration has been classed as in excess of the Drinking Water Standards NZ (above 11.3 NO₃-N mg / L). While these results are measured with slightly different parameters, the technical Comment outlines that results measured in total oxidised nitrogen include nitrite however these are comparable as nitrite concentrations do not contribute significantly to the totals in these cases.

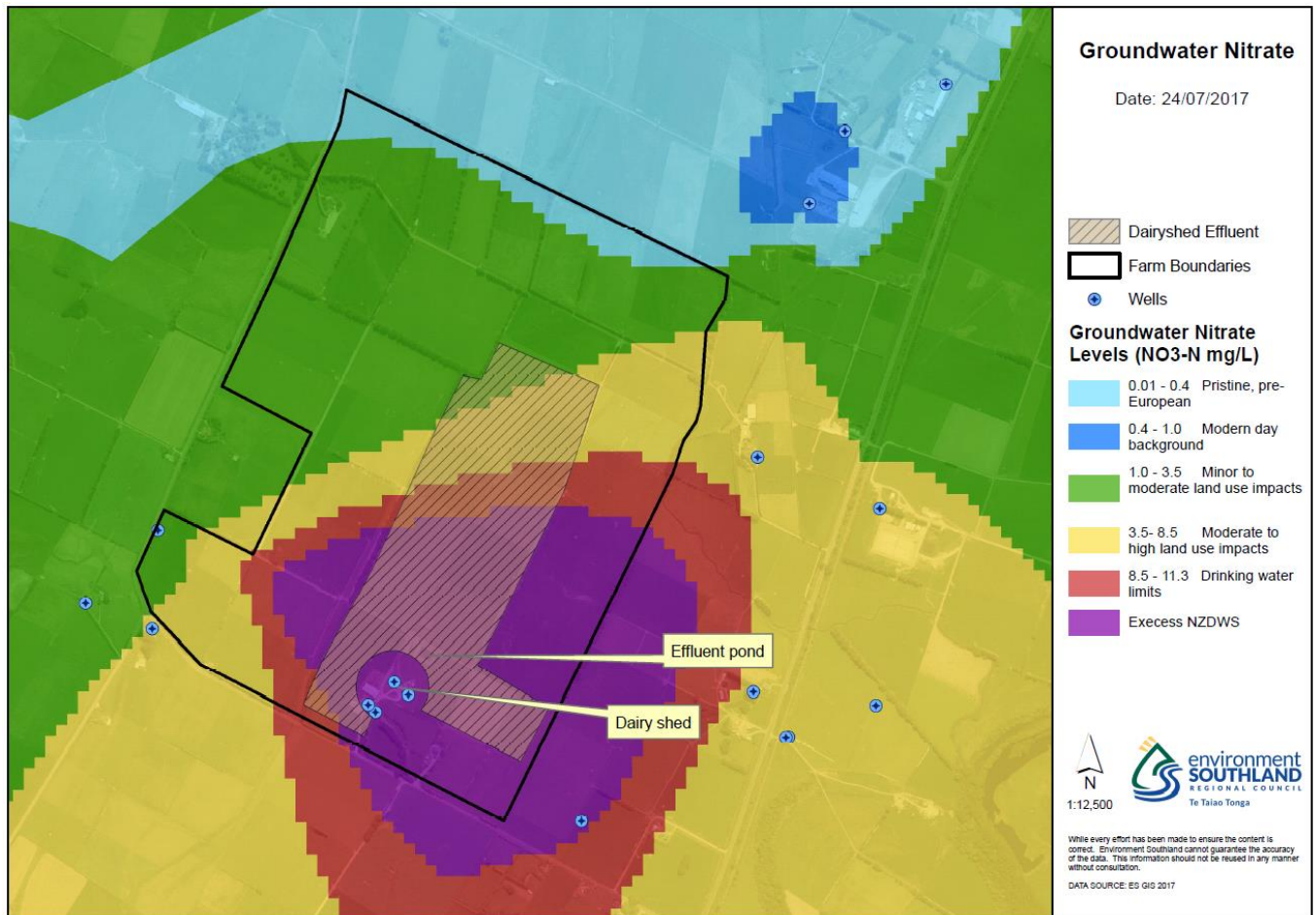


Figure 1: Showing groundwater nitrate levels underneath the property.

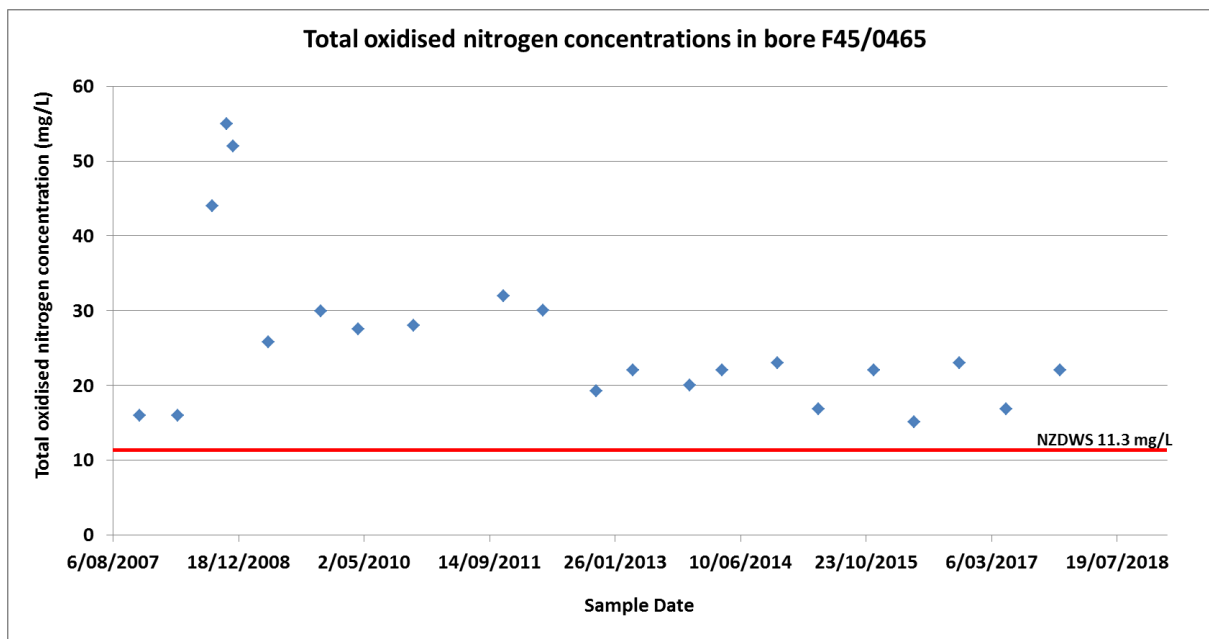


Figure 2: Showing the groundwater quality monitoring results (provided in the Technical Comment)

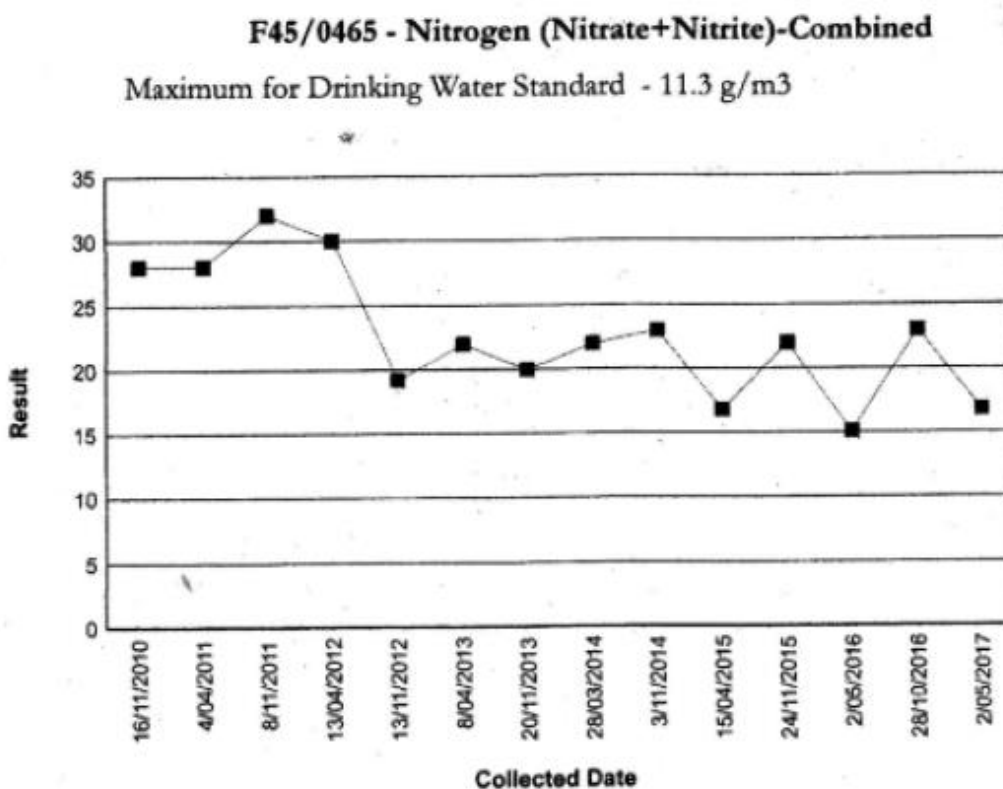


Figure 3: Groundwater nitrate concentrations. This graph was included in the further information response under Section 92(1) of the RMA.

The technical comment received for this application outlines that groundwater quality is very degraded and is therefore sensitive to additional contamination.

3.2.2.3 *Surface Water*

The property is located directly to the south west of Charlton Stream, which runs along the farm boundary on the eastern side of the property. The Charlton Stream is a tributary of the Matura River. An unnamed tributary of the Charlton Stream flows along the northern border of the farm. There is also an identified stream on topomap which starts on the farm and runs east into the Charlton Stream. Another unnamed tributary of the Matura River runs through the property and has been modified to straighten it. It enters the property on the western side, does a 90 degree turn and exists in the south.

The Matura River is one of Southland's main rivers, and is protected by the Water Conservation (Matura River) order 1997. While the order does not relate directly to this application, it does give some context as to the wider receiving environment. The Matura River is internationally recognised for its outstanding fisheries and angling amenity features, however water quality in the river has been steadily declining due to point and non-point source discharges.

Information contained in the technical comment indicates that samples taken and identified in the Technical Comment Sump written in 2009 outline that surface water quality degrades as the waterway flows through the property (Figure 5). This is most likely through artificial drainage networks.

In 2009 there was an investigation to identify why groundwater nitrates under the farm were as high as 55 mg/L. It was found that the likely source was a leaking effluent sump which was made of fibreglass. This was replaced in 2010 and as per the above graphs, the groundwater nitrate concentrations improved. However, they are still well above the Drinking Water Standards for New Zealand and seem to have hit a seasonal plateau (Figures 2 & 3).

3.2.3 **Activities previously consents**

The assessment of effects under Section 104 of the RMA can be informed by the compliance history. I have outlined the compliance history below.

3.2.3.1 *Compliance History*

The applicant has held dairy discharge and water abstraction consents for this property since October 1999.

Under most recent discharge permit, 204546, the applicant received a total of 12 compliance inspections, including routine inspections and re-inspections, from February 2008 to April 2017. Throughout this time two compliance ratings of "10: non-compliant (significant issues)" were received, the first in December 2008 and the second in October 2010. These ratings were given because the sump had a hole in the bottom (2010) and the pods were very close together and probably overlapping, causing over-application, the stone trap was full and overflowing and effluent and sludges were being stored on unsealed ground beside a track, causing leaching (2010).

Two inspection ratings of "5: non-compliant (minor issues)" were given in March 2009 and February 2010. These were given because a nozzle on the irrigator was blocked causing over-application of effluent and at the start of the run the irrigator had stalled, causing

over-application to land (2009) and in 2010 the effluent was being applied outside of the discharge area, the sump level was getting high, the pond level was getting high and the new sump had not been installed at that point.

The remaining compliance inspections for this discharge permit were good. Overall, compliance history under this permit was mediocre, meaning neither good nor bad.

General compliance history with previous discharge permits (202213 and 93171) for this property has been very good, with ratings of “1: Fully compliant” and “2: Partially compliant (technical issues)”.

Figure 4 demonstrates that the applicant was taking above the consented volume of water and is based on water take data returned to Council. In the 2015/16 and 2016/17 years the applicant was taking from both Bore F45/0465 (West Bore) and Bore F45/0512 (East Bore) as per water take data forms returned to the Council. Bore F45/0512 is not included on the water permit as an abstraction bore. There was no graph associated with Bore F45/0512. Under the most recent water permit, 204547, the applicant returned the water take data sheets on time (as required by consent conditions) 7 times out of 12.

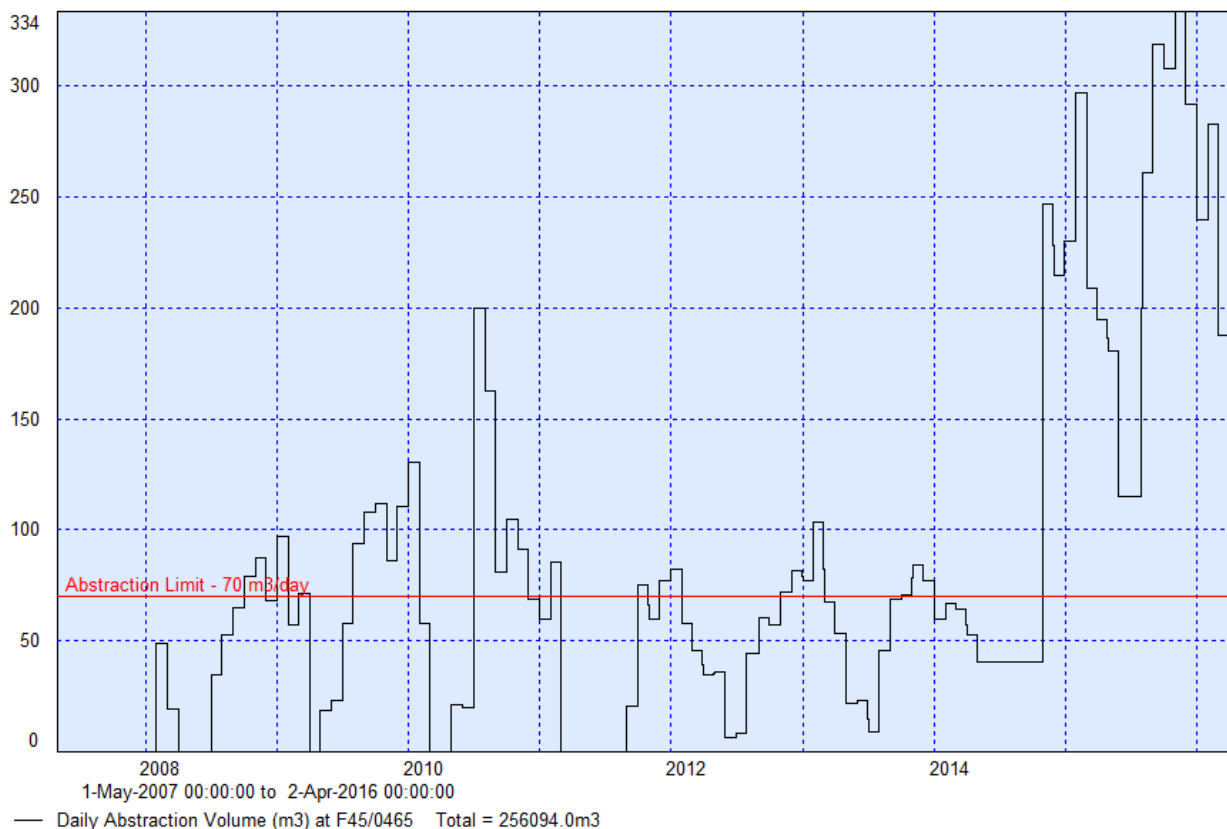


Figure 4: Water abstraction records for Bore F45/0465. The red line represents the 70,000 litres allowed to be abstracted under Water Permit 204547.

There have been no other previous water permits relating to this property.

3.2.3.2 *Effect of compliance history on the environment*

Whilst I have no scientific degree in my opinion, based on information available to date, the overall compliance history, and the sump incident in 2009 have increased the groundwater nitrate concentrations and have degraded the groundwater quality. This is based on results given from groundwater quality monitoring (Figures 2 & 3) as the results show a marked increase in nitrate concentrations at about the same time the broken sump was found, the sump was replaced in 2010 and as seen by the monitoring results, the nitrate concentrations have decreased. The technical comment identified that Southland's groundwater lag times are between 3-5 years. If the sump incident alone had caused high groundwater nitrate concentrations then the effects of this in the groundwater resource should have ceased between 3 and 5 years after the incident. I infer from Figures 2 & 3 that the high groundwater nitrates are not solely caused by the sump incident.

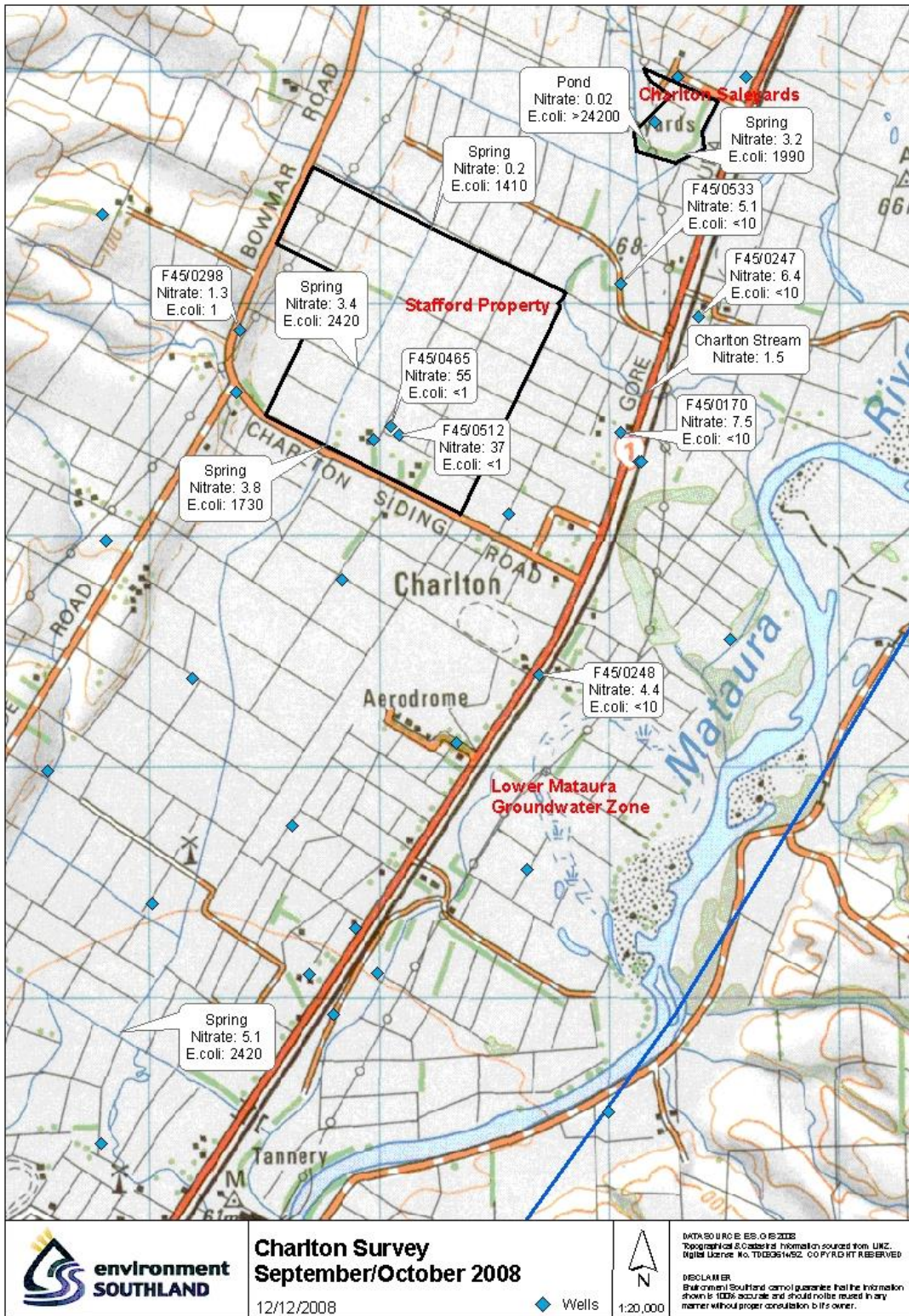


Figure 5: Taken from "Technical Comment (COPY) 16 March 2009" and detailed in an email from Council's Technical Scientist (appended)

3.3 Actual and potential effects

3.3.1 Effects that must be disregarded (Section 104(2))

Section 104(2) of the RMA states:

- (2) *When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.*

It is not useful to apply permitted baselines in this case because the baseline only relates to a fraction of the effects of the proposed activities. It is not appropriate to disregard any environmental effects using the permitted baseline concept, and the applicant has not done this. This is because the baseline only relates to a fraction of these effects. Therefore, the assessment of effects and risks of the proposal has not disregarded any effects on the basis of whether they are permitted by the plan.

In terms of the water abstraction activity, Rule 54(a) of the proposed Southland Water and Land Plan (pSLWP) and Rule 23(a) and (b) of the Regional Water Plan (RWP) includes permitted activity criteria for the abstraction of water. The activity is consistent with permitted activity criteria of the pSWLP but not of the RWP. In the RWP, subsection (a) limits the volume and subsection (b) is limited by the date of the existing take. Neither of these criteria can be met. Any permitted baseline would only relate to a fraction of the effect of the water take.

In terms of the effluent discharge activity, Rule 35(a) of the pSWLP and Rule 50(a) of the RWP allows for effluent from up to 20 cows to be discharged to land (among other criteria) as a permitted activity. As the application is for discharge from up to 500 cows, neither of these criteria can be met. Any permitted baseline would only relate to a fraction of the effect of the discharge.

The proposed conditions of consent and Farm Environmental Management Plan are the primary methods for ensuring that good environmental management practices and mitigation measures are documented and implemented by the Applicant.

3.3.2 Effects to be considered (Section 104(1)(a))

The application is for a non-complying activity and a determination is to be made under Section 104B of the RMA. Therefore, the consideration of the assessment of effects is not fettered by Sections 104A or 104C.

Consideration of the following effects is required:

- effects on water quality, including potential for contamination of groundwater and surface water;
- soil health;
- effects on water quantity (including stream depleting effects);
- odour;
- cumulative effects.

3.3.2.1 Water Quality

The applicant has provided an assessment of the effects of the discharge activity on water quality. This is primarily a qualitative assessment. Good management practices which will be undertaken to minimise the adverse effects of the activity have been identified in the Farm Effluent Management Plan included in the application as an appendices.

The technical comment received for this application outlines that groundwater quality is very degraded, and is therefore sensitive to additional contamination. The comment outlined that farm dairy effluent, as applied for, is not likely to improve water quality. The technical comment recommended the following:

- continuance of groundwater quality monitoring;
- no discharge when soil temperature is below 7°C in autumn and 5°C in spring or when soils are at field capacity;
- in addition to on-farm assessments, using the Edendale Soil Moisture site as guidance and only discharging when the site reads “low rate” or “safe to irrigate”;
- depending on soil conditions (as described above), no discharge of effluent during the three winter months.

The technical comment also mentions that removing Gore soils from the discharge area could additionally mitigate adverse effects, especially because of the very free draining nature of the Gore soils.

Potential adverse effects of discharging effluent to land include contamination of groundwater and contamination of surface water ways. The main risk for the receiving environment, as a result of the activity, is contamination of groundwater causing a reduction groundwater quality.

The level of risk to groundwater quality on the property from the discharge of effluent correlates to the soil types and the landscape classification of the site. The discharge area is split relatively evenly over soils which have very severe nutrient leaching characteristics (Gore soil) and soils which have severe waterlogging characteristics (Jacobstown soil). There are no known artificial drainage networks (tile and mole drains) within the discharge area. Due to the fact that the farm is flat and there are no artificial drainage networks within the discharge area, the highest risk for the property is the possibility of effluent being transported through the Gore soil profile and contaminating the groundwater resource. The applicant has not discussed removing the area of Gore soils from the discharge area.

...

As identified in the technical comment sought from Council’s Scientists (appended), the groundwater resource is a sensitive receiving environment due to the nitrogen concentrations being very high. The discharge of farm dairy effluent to land, as proposed in the application and confirmed in the further information response, is unlikely to improve groundwater quality. This is the opinion of the Scientists who have written the technical comment. I agree with this opinion.

Groundwater quality monitoring from Bore E45/0465 on the property identifies that groundwater nitrate concentrations increased dramatically in about 2010. The applicant

has commented that at about this time a sump was found to be damaged and leaking. This sump was replaced in 2010. Groundwater monitoring shows that groundwater quality improved slightly since this date, but nitrate concentrations remain at double the maximum allowable volume (MAV) of the Drinking Water Standards for New Zealand (Graph 1).

In the absence of site specific modelling, it is hard to assess the effect of the discharge activity on groundwater quality. However, from the soil types and land classification it can be inferred that there is a level of risk to groundwater quality on the property if effluent is not applied in accordance with acknowledged best practice methods.

The level of risk to groundwater quality, as a result of the application of effluent for this specific site is classified as moderate to high. This reflects the soils on the property. The background levels of nitrates in the groundwater do not reflect a high accumulation of nitrates.

The effects of dairy shed effluent discharge to land represents a proportion of the overall loss of nutrients from a dairy farm activity. Modelled outputs for the effluent block are not available.

The applicant has proposed good management practices that will be adopted to minimise adverse effects on water quality arising from the activity. These measures are in line with, but do not extend beyond good practice for the discharge of effluent to land and include:

- use of low rate effluent irrigation, in addition to a high rate umbilical system;
- ability to defer the disposal of effluent until soil moisture conditions is suitable. The effluent pond has been tested and is not leaking. It is considered the effluent pond is suitable for effluent storage. Application when soils are at field capacity would likely accelerate the loss of nutrients out of the root zone and into groundwater via deep drainage;
- the use of the closest Environment Southland Soil Moisture Monitoring site to inform when soil moisture conditions are suitable for the discharge of effluent;
- most stock will be wintered off the property;
- not irrigating within 20 metres of waterways. This is in accordance with Council's standard buffers for the distance between an effluent disposal area and a waterway. The intent behind the buffer is to decrease the potential for effluent to enter into waterways.

The use of the above practices is consistent with the approach of encouraging best practice. The applicant states that provided that the proposed measures are adopted and adhered to, then adverse effects from the discharge of dairy shed effluent on water quality should be avoided as far as practicably possible. I disagree with this statement and have come to this conclusion for the following reasons:

- proposed activities and measures are in line with current practice and do not extend further beyond that; and
- the activity is not changing so I expect that high groundwater nitrate levels shown in Figures 2 & 3 will remain constant as the same activities are occurring, and will continue, in the same manner.

Please note that the discharge permit covers the discharge of effluent from the dairy shed, not the discharge from urine patches and the cows in the paddocks. Further, the above are measures specific to the discharge of effluent via the effluent disposal system.

3.3.2.2 *Water Quantity*

The daily abstraction applied for is 60,000 litres per day. The rate of abstraction is 120 litres per cow per day, which is consistent with the Council's standard estimate for dairy operations for combined shed and stocking drinking water permits. At this rate of abstraction, stream depletion effects do not need to be considered under the policies of the Regional Water Plan. The abstraction is also unlikely to cause more than minor effect on neighbours' bore water supplies.

The water will be abstracted from a lowland aquifer within the Lower Maitara groundwater management zone, which under the Regional Water Plan has a preliminary allocation of 24,800,000 m³/year. Cumulative allocation from the groundwater zone, including this application, is 2,465,655 m³/year, about 9.9% of the preliminary allocation and 1 % of the mean annual land surface recharge.

Adverse effects of the proposed water take are expected to be less than minor.

3.3.2.3 *Consideration of Alternatives*

The applicant has identified an alternative effluent disposal system. The applicant chose the proposed systems because they consider it to have fewer adverse effects on the environment and is consistent with Council policies¹¹. The alternative considered by the applicant (slurry tanker), and the use of a travelling irrigator, are used on other farms. The use of a slurry tanker can be more costly if a contractor is required and the use of a travelling irrigator reduces the ability to control rates and depths of application. I consider the use of a low rate system is appropriate for this activity. The use of an umbilical system would be suitable to ensure pond levels can be managed. The use of these systems are suitable if depths are kept to the recommended levels as outlined in the relevant plan and suitable soil moisture deficit is available prior to the discharge. The applicant has applied to discharge at a higher depth than recommended in the RWP.

In addition to the above identified alternatives, effluent could be discharged directly to water, however, this would cause more significant adverse effects on surface water quality and is not consistent with Council policy.

3.3.2.4 *Cumulative Effects*

I am unable to determine the cumulative effects as modelled losses of nutrients from the farm have not been included.

The RMA defines a cumulative effect as an effect that arises over time or in combination with other effects.

There is a degree of uncertainty about the cumulative effects of the activities on this sensitive receiving environment, specifically with regard to the discharge activity. I would

¹¹ Resource Consent Application received 14 July 2017, page 17.

expect that cumulative effects of this proposal could arise as a result of over-application of effluent to land when soils are at or nearing field capacity as this would cause losses to groundwater through soils with very severe nutrient leaching characteristics. Although the monitoring results show an increase in nitrate concentrations in groundwater, reducing the water quality, and the effects seem to be very localised, it is not known if the effects are caused solely by the discharge of effluent to land or from a combination of activities associated with the dairy operation. Results from modelling of losses was not included in the application, though it outlined that losses would be in the vicinity of 33 kg /N/ha/year.

Based on current information with regard to storage volumes of current aquifers, I do not consider that the proposed groundwater abstraction for the operation will cause adverse cumulative effects on groundwater quantity as the aquifer is not facing allocation issues and the total groundwater abstraction from the Lower Mataura aquifer, including the volume required for this operation, represents approximately 2 % of the land surface recharge of the aquifer (Regional Water Plan figures).

3.3.2.5 *Conclusion*

The application outlined that effects on water quality are expected to be no more than minor. Further information received from the applicant on 12 August 2017 reached the conclusion that the activity will not have any different effect on the environment (compared to the existing adverse effects), and that there will be no adverse effects on other users of groundwater, values of bore users, protection of human health, values of the Mataura River and coastal waters downstream or tangata whenua values associated with water. The applicant also reached the conclusion that the activities would be unlikely to give rise to further adverse effects, or contribute negatively to existing cumulative effects on water quality.

I disagree with this assessment because the proposed activities and mitigation measures represent current practice and do not extend further beyond this. Based on information available to date, I expect that the discharge activity is likely to have cumulative adverse effects on the environment, specifically, groundwater quality. From the previous discussion of “existing environment” I consider the assessment included in the application cannot include cumulative effects as the applicant seems to have considered the adverse effects over and above existing activities.

It is currently not certain whether the high groundwater nitrates are caused, or are being caused, by the discharge of effluent to land, or by both the discharge of effluent and the land use, or none of these scenarios.

I consider that there is a degree of uncertainty as to whether or not the proposed discharge would enhance or improve water quality, or avoid adverse effects in the underlying aquifer. The application is currently contrary to policy, indicating that the activity may be unsuitable or may cause adverse effects which are more than minor. I cannot determine if the results of the groundwater monitoring are representative of adverse effects of the discharge activity or additional land uses. The policies are used to inform and determine the level of adverse effects associated with the proposed activity, as the direction of the policies help establish what effects are acceptable and therefore whether the adverse effects of the proposed activities are less than minor, minor or more than minor.

Due to the above uncertainties I am unable to commit to identifying what the level of adverse effects for the discharge of effluent to land will be.

The groundwater take activity is unlikely to cause adverse effects on the environment as the aquifer is not facing allocation issues. The applicant is taking volumes which are representative of reasonable use for the dairy operation. According to data available, the total abstraction from the Lower Maitara aquifer represents 2% of the land surface recharge of the aquifer. This percentage has not been calculated on a farm-scale.

3.4 Relevant provisions of the relevant regional plan objectives, policies and rules (Section 104(1)(b)(v))

Regional Water Plan 2010

The majority of the Regional Water Plan was adopted in January 2010, with the plan provisions on agricultural effluent ponds being adopted in April 2010. No additional plan provisions have been adopted since then, including after the 2013 and 2017 amendments to the Resource Management Act 1991.

The objectives and policies of the Regional Water Plan that are relevant to this application have been grouped according to topic.

Iwi Management Plans

Policy 1A *Any assessment of an activity covered by this plan must take into any relevant Iwi Management Plan.*

Comment

The provisions of Te Tangi a Taurua, current iwi management plan, have been considered below in Section 3.9 of this report.

Water Quality, Agricultural Effluent, Land Use and Soils

Objective 2 *Manage water quality so that there is no reduction in the quality of the water in any surface water body, beyond the zone of reasonable mixing for discharges, below that of the date this Plan became operative (January 2010).*

Objective 8 *(a) to maintain groundwater quality in aquifers that already meet the 'Drinking Water Standards for New Zealand 2000' ; and
(b) to enhance groundwater quality within aquifers degraded by land use and discharge activities (with the exception of those aquifers where ambient water quality is naturally less than the 'Drinking Water Standards for New Zealand 2000') to ensure general compliance with the 'Drinking Water Standards for New Zealand 2000' by the year 2010.*

Objective 9A *To manage discharges onto or into land so that the quality and structure of soil resources are maintained.*

- Objective 9B* *To manage discharges onto or into land so that adverse effects on human health are avoided.*
- Policy A4*
1. *When considering any application for a discharge the consent authority must have regard to the following matters:*
 - (a) *the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water; and*
 - (b) *the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.*
 2. *When considering any application for a discharge the consent authority must have regard to the following matters:*
 - (a) *the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their secondary contact with fresh water; and*
 - (b) *the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their secondary contact with fresh water resulting from the discharge would be avoided.*
- Policy 6*
- (a) *Use non-regulatory methods, in addition to rules, to maintain and enhance surface water and groundwater quality, and to avoid, remedy or mitigate adverse effects on soil quality.*
 - (b) *Assess on an ongoing basis whether the adoption of non-regulatory methods has resulted in improvements to water or soil quality, and consider the introduction of other inventions id improvements have not resulted.*
- Policy 7* *Prefer discharges to land over discharges to water where this is practicable and effects are less than adverse.*
- Policy 13* *Avoid the point source discharge of raw sewage, foul water and untreated agricultural effluent to water.*
- Policy 25* *To avoid, remedy or mitigate the adverse effects arising from point source and non-point source discharges so that there is no deterioration in groundwater quality after reasonable mixing.*
- Policy 31A*
- Match the level of management that is required for discharges of contaminants onto or into land to the level of environmental risk posed by the following risk factors:*
- (a) *Nature and quantity of contaminants in the discharge*
 - (b) *Sloping land*
 - (c) *Soils with artificial drainage or coarse structures*
 - (d) *Soils with impeded drainage or low infiltration rates*

- (e) *Well drained soils*
- (f) *Climate*
- (g) *Proximity to groundwater*
- (h) *Proximity to surface water*
- (i) *Soil's current physical, chemical and biological characteristics and its potential to leach nutrients*
- (j) *Natural hazards (for example, flooding and erosion)*

Policy 31C Manage discharges of contaminants onto or into land to avoid, remedy or mitigate adverse effects, including on:

- (a) *soil quality;*
- (b) *amenity values;*
- (c) *habitats, ecosystems and indigenous biological diversity;*
- (d) *historic heritage, cultural and traditional values;*
- (e) *natural character;*
- (f) *outstanding natural features*

Policy 31D Encourage the beneficial reuse of materials where this is appropriate and promote discharges of these materials onto or into land to maximise the potential reuse of the nutrients and water contained in the discharge.

Policy 42 Avoid adverse effects on water quality and other adverse environmental effects associated with the application of farm dairy effluent to land by matching farm dairy effluent management to receiving environment risk

Comment

The application may not be consistent with, and may be contrary to, Objective 8(b) and Objective 9, depending on the adverse effects of the proposed activities. The discharge area is over a groundwater zone which already exceeds the Drinking Water Standards for New Zealand. I am currently unable to determine if the adverse effects on groundwater quality with regard to high nitrate concentrations that has been caused by the discharge activity or not, nor whether a future discharge would or would not cause further contamination of groundwater. Groundwater monitoring data shows that Objective 8(b) is not currently being achieved.

The proposal is generally consistent with Policy A4, as when considering the application for the discharge the consent authority has had regard to the matters in this policy when making a decision on the application. At this stage I am unable to determine whether or not the discharge activity will be consistent with, or contrary to, part 1 of Policy A4 as the actual effects of the discharge on groundwater are not well understood for this application. Provided the discharge activity does not cause ongoing adverse effects on the groundwater resource, and good management practices are followed, the discharge activity will be consistent with part 1 of Policy A4.

With regard to part 2 of Policy A4, the design, set up and management of the effluent system (by using low rate effluent discharge and having the ability to defer effluent application) seeks to avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and on the health of people and communities as affected by their secondary contact (defined as contact with limbs) with fresh water. Any more than minor adverse effects on fresh water and on the health of people and communities as affected by their secondary contact with fresh water will be avoided, as it is unlikely that discharge will contaminate surface water bodies where people come into secondary contact with water. This

determination has been based on the soil characteristics, topography of the land, lack of artificial drainage in the discharge area and rate and depth of effluent discharge.

Policy 6 refers to the use of non-regulatory methods to maintain and enhance water quality. The applicant has included an effluent management plan which outlines good management practices.

I consider the application is consistent with Policy 13, however, the discharge activity may be inconsistent and may be contrary to Policy 7. Policy 7 prefers discharges to land over discharges to water where this is practicable and the effects are less adverse. The applicant will discharge effluent to land, however, it is unknown whether this activity will cause adverse effects which are less adverse. Policy 13 seeks to avoid the point source discharge of raw sewage, foul water and untreated agricultural effluent to water. The use of a low rate system and the ability to defer effluent seeks to avoid the discharge of effluent to water.

Policy 25 seeks to avoid, remedy or mitigate the adverse effects arising from point source and non-point source discharges so that there is no deterioration in groundwater quality after reasonable mixing. I consider the discharge activity may be inconsistent with, or contrary to, this policy as the actual effects of the discharge activity on the groundwater resource are unknown. Monitoring results indicate that groundwater quality has deteriorated, however, there is limited information available to determine if it continues to deteriorate.

Policy 31A seeks to match the level of management that is required for the discharge of contaminants to land to the level of environmental risk. Policy 31C seeks to manage the discharge of contaminants to land to avoid, remedy to mitigate adverse effects on a list of parameters. As the level of environmental risk and effect is currently unknown, I cannot determine if the application is consistent or inconsistent with these policies. Decision-makers should take into account these policies and when considering consent conditions, should the application be granted.

Policy 31D encourages the reuse of materials where this is appropriate. The application is consistent with this policy as the applicant proposes to use primarily the low rate system to discharge effluent to land. Effluent is able to be used as a plant growth resource when applied at appropriate rates and depths for the soil resource.

Policy 42 sets out criteria for minimum management of the application of effluent to land taking into account the property specific risks as set out in this policy. The proposed discharge activity is inconsistent with, and may be contrary to, this policy. The effluent discharge will not be in line with minimum management for the Category E land, as outlined in this policy. This is because the effluent will be discharged at a depth of 15 mm rather than the suggested 10 mm depth. I consider that the effluent management is not matched to the receiving environment risk. Category A land is also found in the discharge area. Effluent application depth is not considered essential criteria, however, the rate of discharge should be less than soil water deficit and effluent should only be applied if a soil water deficit exists. The use of an umbilical system discharging at 5 mm depth is consistent with this policy. I cannot determine if the application is contrary to this policy with regard to avoiding effects on water quality, as the actual effects of the discharge activity on water quality are not clear.

Water Quantity

Objective 7 *To maximise the efficiency of water use.*

Objective 9 *To ensure that the total volume and rate of groundwater abstraction is sustainable.*

- Policy B7* *When considering any application the consent authority must have regard to the following matters:*
- (a) the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem; and*
 - (b) the extent to which it is feasible and dependable that any adverse effect on the life-supporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.*
- Policy 21* *To ensure that the rate of abstraction and abstraction volumes specified on water permits to take and use water are no more than reasonable for the intended end use.*
- Policy 22* *Require, where appropriate, the installation of water measuring devices on all new permits to take and use water.*
- Policy 23* *Impose a condition enabling the review of consent conditions in accordance with Sections 128 and 129 of the Resource Management Act 1991 on all new permits to take and use water.*
- Policy 28* *To manage groundwater abstraction to avoid significant adverse effects on:*
- long-term aquifer storage volumes*
 - existing water users*
 - surface water flows and aquatic ecosystems and habitats*
 - groundwater quality*
- Policy 29* *(a) Manage the stream depletion effect of any groundwater abstraction with a rate of take exceeding 2 litres per second [Policy abbreviated]*
- (b) Minimise the cumulative stream depletion effect of groundwater... [Policy abbreviated].*
- Policy 30* *(a) ... [not applicable]*
- (b) ...*
- (c) ...*
- (d) Provide for:*
- i. a level of permitted groundwater abstraction where this is a minimal risk of adverse effects;*
 - ii. a primary allocation for consented water abstraction and use; and*
 - iii. ...*
- (e) Require resource consent application for groundwater abstractions to be supported by a level of information that corresponds to the level of risk of adverse effects. [Policy abbreviated]*
- (f) ...*
- (g) ...*
- (h) ...*
- (i) ...*

Policy 31 Limit the interference effects [policy abbreviated].

Comment

The groundwater abstraction and use is a medium scale activity, in an aquifer that is well within allocation limits and at a rate that is reasonable for the intended use. Therefore it is consistent with Policies B7, 21, 28, 29, 30 and 31. Conditions will be imposed in accordance with Policies 22 and 23. The groundwater abstraction and use activity is consistent with all of the above listed policies.

Term and granting of Consent

Policy 14A To determine the term of a water permit consideration will be given, but not limited, to:

- (a) the degree of certainty regarding the nature, scale, duration and frequency of adverse effects from the activity;*
- (b) the level of knowledge of the resource;*
- (c) relevant tangata whenua values*
- (d) the allocation sought, particularly the proportion of the resource sought;*
- (e) the duration sought by the applicant, plus material to support the duration sought;*
- (f) the permanence and economic life of the activity;*
- (g) capital investment in the activity;*
- (h) monitoring and review requirement in permit conditions;*
- (i) the desirability of applying a common expiry date for water permits that allocate water from the same resource; and*
- (j) the applicant's compliance with the conditions of the previous permit (where a new water permit is sought for a previously authorised activity).*

Policy 43 Match consent duration and inspection and audit requirements on resource consents to apply farm dairy effluent to land to the level of risk of adverse environmental effects.

Comment

Term of consent and inspection and audit requirements are discussed below in Section 4.1 if the application is granted.

Proposed Southland Water and Land Plan 2016

The objectives and policies of the proposed Southland Water and Land Plan that are relevant to this application have been grouped according to topic.

Ngai Tahu

Objective 3 The mauri (inherent health) of waterbodies provide te hauora o te tangata (health of the people), te hauora o te taio (health of the environment and te hauora o te wai (the health of the waterbody).

Objective 4 Tangata whenua values and interests are identified and reflected in the management of freshwater and associated ecosystems.

Policy 1 Enable papatipu rūnanga to effectively undertake their kaitiaki responsibilities in freshwater and land management through Environment Southland:

- 1. providing copies of all applications that may affect a Statutory Acknowledgement area, tōpuni, nohoanga, mātaimai or taiāpure to Te Rūnanga o Ngāi Tahu and the relevant papatipu rūnanga;*
- 2. identifying Ngāi Tahu interests in freshwater and associated ecosystems in Southland/Murihiku;*
- 3. reflect Ngāi Tahu values and interests in the management of and decision-making on freshwater and freshwater ecosystems in Southland/Murihiku, consistent with the Charter of Understanding.*

Policy 2 Any assessment of an activity covered by this plan must:

- 1. take into account any relevant iwi management plan; and*
- 2. assess water quality and quantity based on Ngāi Tahu indicators of health.*

Comment

Te Tangi a Taurira and the views of Te Runanga o Ngai Tahu and Te Ao Marama Inc. (representatives of the four rūnanga) have been taken into account in assessing the application. Te Ao Marama Inc. and Te Runanga o Ngai Tahu were both served copies of the application during the notification process of the application. Neither of these parties submitted on the application. Papatipu rūnanga have had the opportunity to effectively undertake their kaitiaki responsibilities in freshwater and land management.

In terms of Policy 2, the provisions of Te Tangi a Taurira will be discussed below. Regarding the indicators of health, based on the list on page 150 of Te Tangi a Taurira, the main ones of relevance to the application are water quality and whether water is safe to drink. Therefore, provided that the effluent system, discharge and land use are managed to avoid adverse effects on water quality, the proposal will not conflict with the policy.

Physiographic Zones

Policy 8 In the Lignite-Marine Terraces physiographic zone, avoid, remedy or mitigate adverse effects on water quality from contaminants, by:

- 1. requiring implementation of good management practices to manage adverse effects on water quality from contaminants transported via overland flow and artificial drainage where relevant;*
- 2. having particular regard to adverse effects on water quality from contaminants transported via overland flow and artificial drainage where relevant when assessing resource consent application and preparing or considering management plans.*

Comment

The physiographic zones relate to the classification of land and risks to water quality based on factors including soil types, landscape classification, climate, topography and water chemistry. These have been developed to better understand Southland's water and why it is better quality in some areas than others.

The physiographic zones are particularly relevant to the discharge activity. In assessing the actual and potential effects of the activities, which may affect water quality the applicant has addressed the

factors listed in the above policy, the factors which contribute to the classification of the land into certain zones and have tailored their good management practices and mitigation measures accordingly. Therefore if the above policy was considered with full weight that the activities would be consistent with these provisions.

Effluent Management

- Objective 13* *Enable the use and development of land and soils, provided:*
- (a) The quality, quality and structure of soil resources are not irreversibly degraded though land use activities and discharges to land;*
 - (b) The discharge of contaminants to land or water that have significant or cumulative effects on human health are avoided; and*
 - (c) ... [not applicable to this application]*
- Objective 18* *All activities operate at “good (environmental) management practice” or better to optimise efficient resource use and protect the region’s land, soils, and water from quality and quantity degradation.*
- Policy 14* *Prefer discharges to land, rather than direct discharges to water.*
- Policy 17*
- 1. Avoid adverse effects on water quality, and avoid as far as possible other adverse environmental effects from the use of effluent management systems.*
 - 2. Manage effluent systems and discharges from them by:*
 - (a) designing, constructing and locating systems appropriately;*
 - (b) maintaining and operating agricultural effluent systems in accordance with best practice guidelines;*
 - (c) avoiding any surface run-off/overland flow, ponding or contamination of water resulting from the application of agricultural effluent to pasture;*
 - (d) avoiding the discharge of raw sewage and untreated agricultural effluent to water.*

Comment

Objective 13 seeks to ensure the discharge of contaminants do not have a significant or cumulative effect on human health. Provided that the discharge of effluent does not cause further degradation and contamination of the groundwater resource, the effects on human health should not be significant.

Policy 17 refers to avoiding adverse effects from the use of effluent management systems and managing these systems and discharges from them by designing, constructing and locating systems appropriately and in accordance with best practices guidelines, the effluent system proposed is consistent with the policy.

Effluent storage on the property is existing and was installed in 2010, along with a sump and stone trap. The effluent pond has been tested and is not leaking and is fit for the purpose of storing effluent for deferral. Maintenance of the effluent system has been described in the Management Plan included in the application. Good management practices include the low rate discharge of effluent to land with the provision of storage to be able to defer effluent application when soil moisture conditions are not suitable. This is in line with best practice and will avoid any overland flow, ponding, contamination of water or direct discharges to water.

Water Quality

- Objective 1* Land and water and associated ecosystems are managed as integrated natural resources recognising the connectivity between surface water and groundwater, and between freshwater, land and the coast.
- Objective 8*
- (a)* The quality of water in aquifers that meet both the Drinking Water Standards for New Zealand 2005 (revised 2008) and any freshwater objectives, including for connected surface water bodies, established under the Freshwater Management Unit process is maintained; and
 - (b)* The quality of water in aquifers that have been degraded by land use and discharge activities (with the exception of those aquifers where ambient water quality is naturally less than the Drinking Water Standards for New Zealand 2005 (revised 2008) is improved.
- Policy A4*
1. When considering any application for a discharge the consent authority must have regard to the following matters:
 - (a)* the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water; and
 - (b)* the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.
 2. When considering any application for a discharge the consent authority must have regard to the following matters:
 - (a)* the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their secondary contact with fresh water; and
 - (b)* the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their secondary contact with fresh water resulting from the discharge would be avoided.
- Policy 13* Manage land use activities and discharges to land and water so that water quality and the health of humans, domestic animals and aquatic life, is protected.
- Policy 15* Maintain and improve water quality by:
1. ... [not applicable]
 2. avoiding point source and non-point source discharges to land that will reduce surface or groundwater quality, unless the adverse effects of the discharge can be avoided, remedied or mitigated;
 3. avoiding land use activities that will reduce surface or groundwater quality, unless the adverse effects can be avoided, remedied or mitigated; and
 4. ...

so that:

1. *water quality is maintained where it is better than the water quality standards specified in Appendix E “Water Quality Standards”; or*
2. *water quality is improved where it does not meet the water quality standards specified in Appendix E “Water Quality Standards”; and*
3. *water quality meets the Drinking-Water Standards for New Zealand 2005 (revised 2008); and*
4. *ANZECC sediment guidelines (as shown in Appendix C of this Plan) are met.*

Policy 16

1. *Minimising the environmental effects (including on the quality of water in rivers, coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands, and groundwater) from farming activities by:*
 - (a) *strongly discouraging the establishment of new dairy farming or new intensive winter grazing activities in close proximity to sensitive waterbodies identified in Appendix Q;*
 - (b) *strongly discouraging applications to establish new, or further intensify existing dairy farming of cows or intensive winter grazing activities where the effects on the quality of water, including cumulatively, of groundwater, waterbodies, coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands cannot be avoided or fully mitigated or in areas where water quality is already degraded to the point of being over-allocated.*
2. *Requiring all farming activities, including existing activities, to:*
 - (a) *either implement a Management Plan, as set out in Appendix N, or be listed on the Environment Southland Register of Independently Audited Self-Management Participants;*
 - (b) *actively manage sediment run-off risk from farming and hill country development by requiring setbacks from waterbodies, riparian planting, limits on areas or duration of exposed soils and the prevention of stock entering surface waterbodies;*
 - (c) *manage collected and diffuse run-off and leaching of nutrients, microbial contaminants and sediment through the identification and management of higher risk physiographic zones on a regional scale, and critical source areas within individual properties.*

Comment

The proposal is generally consistent with Policy A4, as when considering the application for the discharge the consent authority has had regard to the matters in this policy when making a decision on the application. At this stage I am unable to determine whether or not the discharge activity will be consistent with, or contrary to, part 1 of Policy A4 as the actual effects of the discharge on groundwater is not well understood for this application. Provided the discharge activity does not cause ongoing adverse effects on the groundwater resource, and good management practice are followed, the discharge activity will be consistent with part 1 of Policy A4.

With regard to part 2 of Policy A4, the design, set up and management of the effluent system (by using low rate effluent discharge and having the ability to defer effluent application) seeks avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and the health of people and communities as

5. *the desirability of applying a common expiry date for water permits that allocate water from the same resource or land use and discharges that may affect the quality of the same resource;*
6. *the applicant's compliance with the conditions of any previous resource consent; and*
7. *the timing of development of FMU sections of this Plan, and whether granting a shorter or longer duration will better enable implementation of the any revised frameworks established in those sections.*

Policy 41 Consider the magnitude of environmental effects and risk when determining requirements for auditing and supply of monitoring information on resource consents.

Policy 42 When considering resource consent application for water permits:

1. *... [not applicable]*
2. *...*
3. *installation of water measuring devices will be required on all new permits to take and use water, and existing permits in accordance with the Resource Management (Measurement and Reporting of Water Takes) regulations 2010;*
4. *...*
5. *...*

Comment

The proposal generally achieves the purpose of Policies 39 to 42. With specific reference to matching monitoring to risk, the applicant has set out within the Farm Environmental Management Plan details of ongoing monitoring and maintenance, which is proposed to be undertaken to help to allow these methods to be improved over time. In terms of the permitted baseline, the assessment of effects and risks of the proposal has not disregarded any effects on the basis of whether they are permitted by the plan. The proposed conditions of consent and Farm Environmental Management Plan are the primary methods for ensuring that good environmental management practices and mitigation measures are documented and implemented by the applicant.

There are significant interactions between freshwater, land and associated ecosystems as part of this application. However, integrated management is difficult to achieve through the consent process.

Term of consent is discussed below in Section 4.1.

The magnitude of environmental effects and risks of the proposal have been considered by the applicant who has found the adverse effects to be no more than minor.

Consideration has been given to the factors listed in Policy 42, the factors to be considered have already been assessed in previous sections of this report and will be used to make a decision on the application and water abstraction and use activity. The activity proposed is consistent with this policy.

Weighting section if proposed and operative plans

Council is currently operating under three regional plans, two of which are relevant for this application –the Regional Water Plan (RWP) and the proposed Southland Water and Land Plan

(pSWLP). The proposed Southland Water and Land Plan was notified by the Consent Authority on 3 June 2017. Whilst not given the same weight as the provisions within the Regional Water Plan when making a determination on the application under Section 104(1) (b) regard must, subject to Part 2 of the Act, be had to the provisions of any proposed plan. The relevant provisions of all relevant plans are detailed below and are considered in turn.

The activities have been considered against all relevant provisions of the RWP and the pSWLP. The key policies from the RWP related to avoiding adverse effects on water quality, and soil health and water quantity. It is considered that the activities are generally consistent with these provisions, however, the discharge activity is contrary to some of these provisions. The key policies in the pSWLP related to the physiographic zones, which the site is located in and directions around maintain and improving water quality. It is considered that the activities are generally consistent with these provisions.

In this policy assessment greater weight has been given to the provisions of the Regional Water Plan for the discharge of effluent to land and the abstraction of water. This is because the water take is a permitted activity under the proposed Southland Water and Land Plan (PSWLP) and the pSWLP has only been notified and has just completed going through the hearing process. The pSWLP has not been through the formal plan consideration process to complete independent testing or review under the RMA Schedule 1 process.

The pSWLP was notified on 3 June 2016, with the application in question being lodged after this date. Consequently the applicant was fully aware of the requirement for this consent when applying and the provisions of the pSWLP. The plan introduces more coherent policies and objectives, with the plan setting out a clear direction for the activities proposed. This plan also gives effect to higher level documents, this being the National Policy Statement for Freshwater Management (NPS-FM) as the Regional Water Plan was completed and made operative before this NPS was made operative.

The placing of too much weight on the provisions in the pSWLP may lead to circumstances of injustice on the applicant and in regard to the proposed activities there has not been a significant shift in Council policy within the plan. As such, it is considered appropriate that greater weight is placed on the provisions of the operative plan.

3.5 Section 105 matters relevant to discharge or coastal permits

Section 105 matters need to be considered as the application is for a discharge that would contravene Section 15. Under Section 105, the consent authority must have regard to:

- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects;
- (b) the applicant's reasons for the proposed choice; and
- (c) any possible alternative methods of discharge, including discharge into any other receiving environment.

The nature of the discharge is farm dairy effluent from the washdown of a dairy shed. In 2000, a literature review¹² established the mean chemical concentration in farm dairy effluent of: nitrogen (400 mg l⁻¹), phosphorus (70 mg l⁻¹), and potassium (370 mg l⁻¹). The effluent also contains other nutrients, such as phosphorus, and gut organisms.

¹² Longhurst, R. D., A. H. C. Roberts, and M. B. O'Connor. "Farm dairy effluent: a review of published data on chemical and physical characteristics in New Zealand." *New Zealand Journal of Agricultural Research* 43.1 (2000): 7-14.

When applied to soils in an appropriate manner effluent can act as a nutrient. The proposed storage capacity could allow for the scheduling of effluent irrigation based on soil moisture deficits, decreasing the potential for nutrient loss to water¹³. The application states that the sensitivity of the receiving environment was considered when deciding on the application method, rate and scale. The application did not identify the receiving environment as being sensitive. The further information did identify the receiving environment as sensitive (groundwater resource), however, the adverse effects of the application remained the same after identifying the sensitive receiving environment.

The applicant's reasons for the choice are detailed in the application and assessment of environmental effects. In summary, the type of discharge has been chosen as it is best practice, is suitable for the farm, is reliable, and has minimal effects on the environment. Discharging farm dairy effluent to an alternative receiving environment (i.e. surface water or off-site) is considered unsustainable.

3.6 Section 107 restriction on grant of certain discharge permits

The potential for the effects listed under Section 107(1) of the Resource Management Act are discussed in the application. Section 107(1) states that a discharge permit should not be approved if, after reasonable mixing, the contaminant is likely to give rise to adverse effects. The application is not for a discharge to water permit. Provided the adverse effects of the discharge do not cause contamination of groundwater resources and if good management practices are adhered to, contaminants should not be directly discharged to water.

3.7 Part 2 of the Resource Management Act 1991

All considerations are subject to Part 2 of the RMA, which sets out the purpose and principles that guide this legislation. This means that the matters in Part 2 prevail over other provisions of the RMA or provisions in planning instruments in the event of a conflict. Section 5 states the purpose of the RMA and Sections 6, 7 and 8 are principles intended to provide additional guidance as to the way in which the purpose is to be achieved.

The application of Section 5 involves an overall broad judgement of whether a proposal will promote the sustainable management of natural and physical resources. The enabling and managing functions found in s5(2) should be considered of equal importance and taken as a whole. Section s6, 7 and 8 provide further context and guidance to the constraints found in s5(2) (a) (b) and (c). The commencing words to these sections differ, thereby establishing the relative weight to be given to each section.

In relation to the matters outlined in Section 5 it is considered that this application is generally consistent with the purpose and the principles of the Act, as set out in Section 5. This is the promotion of the sustainable management of natural and physical resources. The adverse effects of the proposed water abstraction activity will be no more than minor, and therefore it is consistent with Section 5. The actual adverse effects of the discharge activity on the sensitive receiving environment are not fully understood. I cannot make a determination on whether the proposed discharge meets the definition of "sustainable management" and is consistent with Section 5(1). This is because it is unknown at this stage whether or not the effects of the proposed discharge will avoid,

¹³ Houlbrooke, D. J., et al. "A review of literature on the land treatment of farm-dairy effluent in New Zealand and its impact on water quality." *New Zealand Journal of Agricultural Research* 47.4 (2004): 499-511.

remedy or mitigate any adverse effects on the environment, as outlined in Section 5(2)(c) of the RMA.

All of the Part 6 matters have been covered within the various Council planning instruments, of which the application is generally consistent with. There is only one matter of national importance, as outlined in Section 6 of the Act that needs to be recognised and provided for in the context of this application. This is the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga. However, the area is not part of Statutory Acknowledgment Area under the Ngai Tahu Claims Settlement Act 1996 and there are no known areas of cultural importance within the site. Consideration has also been given, as per Section 104(1) to the relevant Iwi Management Plan for Southland. The following parts of Section 6 have been recognised and provided for, but do not have a direct relationship to the application because:

- the natural character of the costal environment, wetland, rivers and lakes and their margins will not be developed, used or subdivided as part of this application;
- there are no identified Outstanding Natural Feature (ONFs) and/or Outstanding Natural Landscapes (ONLs) within the site;
- there are no known areas of significant indigenous vegetation and significant habitats of indigenous fauna;
- the application does not relate to public access to and along the coastal marines area, lake and/or rivers;
- there are no known sites of historic heritage within the farm area and as such they will not be affected by inappropriate use, subdivision or development;
- the site is not within a Statutory Acknowledgment Area and is not part of any customary rights.

In relation to the considerations under Section 7, these matters have been considered. It is considered that, as with the various Council planning documents, the application is generally consistent with the aforementioned Section 7 matters. At this stage, it is difficult to determine if the proposed discharge activity will maintain or enhance the quality of the environment because a lack of knowledge of the actual effects on groundwater quality.

With regard to Section 8 of the Act, the principles of the Treaty of Waitangi have been taken into account. This is through the consideration of Te Tangi (Iwi Management Plan) and the relevant policies in other planning documents.

The water abstraction activity is considered to meet the relevant provisions of Part 2 of the RMA as the proposal achieves the purpose of the RMA which is the sustainable management of natural and physical resources.

With the current knowledge I have, I am unable to determine if the discharge activity meets all of the relevant provisions of Part 2 of the RMA, as discussed above. I can therefore not determine if the discharge activity achieves the purpose of the RMA. If the discharge activity is found to not adversely affect the groundwater resource I would consider the application to meet the provisions of Part 2 and therefore achieve the purpose of the RMA.

4. Recommendations

4.1 Whether to grant

The activities applied for have been considered together, and as such the highest consent test applies. The application is therefore considered as a **non-complying activity**. Under Section 104D the Council may grant consent if it is satisfied that either the adverse effects will be minor or the application will not be contrary to the objectives and policies of the relevant proposed and operative plans. If it grants the application, it may impose conditions under Section 108 of the RMA. The level of adverse effects from the proposed discharge activity has not been identified as policy directs adverse effect on water quality to be avoided or mitigated and the effects on the sensitive receiving environment are not well understood at this stage. The adverse effects of the water take activity are likely to be less than minor.

I am unable to determine if the application passes either “pathway” test under Section 104D because adverse effects of the discharge cannot be identified as being no more than minor at this stage, and as a result of this, the application is potentially contrary to relevant objectives and policies.

I hold no concerns about the granting of the water permit. A discussion on whether or not it is appropriate to grant the discharge permit is provided below.

The effects of the discharge of farm dairy effluent to land needs to be considered carefully. This is because the application is one where the effects are not fully understood and, on face value, are concerning, especially within such as sensitive receiving environment. The sensitivity of this receiving environment is not in dispute. Therefore, my recommendation on the application is finely balanced. This is because despite the work that the applicant has put into preparing their application and the offered mitigation measures, much of the ability to control the effects of the activity relate to the ability to offer suitable conditions as per Section 108 of the RMA. Further, the suitability of the activity in such a sensitive receiving environment is one which is not encouraged or discouraged by the relevant policies and objectives.

It is recognised that the site is vulnerable to potential contamination to groundwater due to the soil characteristics. The site is also susceptible to contamination of surface water due to overland flow, however this risk is minimised because of the flat topography and no waterways flowing through the discharge area. Groundwater sampling was being undertaken on a regular basis and the results have been used in this report. It is recommended that groundwater sampling is continued, should the application be granted, for the following reasons:

- the existing monitoring has shown to be an effective tool in detecting and tracking nitrate contamination;
- there is a localised risk of nitrate contamination of groundwater in the Lignite Marine Terraces Physiographic Zone (no variant) which incorporates Gore soils, despite the broader capacity of this physiographic unit to reduce nitrate through filtration and sorption through the soil;
- the receiving environment is sensitive and is about double the maximum allowable value(MAV) under the Drinking Water Standards for New Zealand.

Groundwater monitoring is able to continue to be undertaken from the existing bore, Bore E45/0465. Sampling may also still be undertaken if there is an incident on the property.

Council plans outline policies which are used to inform and determine the level of adverse effects associated with the proposed activity, as the direction of the policies help establish what effects are acceptable and therefore whether the adverse effects of the proposed activities are less than minor, minor or more than minor. The water abstraction activity is consistent and not contrary to objectives and policies in the relevant plans. The effluent discharge activity is potentially inconsistent and contrary to some policies, as previously discussed, in relevant plans and policy statements. If effluent discharge depth was reduced to match the risk for the land category and soil types, and if the adverse effects of the discharge were shown to be sufficiently mitigated to avoid adverse effects on groundwater quality, it is likely the application would then be consistent and not contrary to relevant objectives and policies.

Due to the discharge activity being potentially inconsistent with, and contrary to, policies in regional plans, policy statements and national policy statements, I am currently unable to determine if the discharge activity meets all of the relevant provisions of Part 2 of the RMA. I can therefore not determine if the discharge activity achieves the purpose of the RMA. I recommend the discharge permit be declined.

The water abstraction activity is considered to meet the relevant provisions of Part 2 of the RMA as the proposal achieves the purpose of the RMA. While the water permit could be granted separately, I recommend this is declined also as it has been bundled in with the discharge permit and the consent is only required to be able to washdown the dairy shed. The applicant is able to take stock drinking water as a permitted activity under the RMA and pSWLP.

Subject to new or contrary evidence being presented at the hearing I recommend that under Sections 104, 104D of the RMA that consent is refused. The reasons for this recommendation are:

- in regards to Section 104(1)(a) of the RMA the actual adverse effects of the discharge activity are onto fully known or understood. Further evidence is required to determine if monitoring results showing high groundwater nitrate concentrations is caused by the effluent discharge. Potential adverse effects, based on this monitoring data, suggests the discharge activity will not improve, and may not maintain, groundwater quality;
- I cannot yet determine if adverse effects of the discharge will be adequately avoided, remedied or mitigated;
- in regards to Section 104(1) (b) the effluent discharge activity, currently the activity is contrary to, or is potentially contrary to, policies in the regional plans, regional policy statements and national policy statement;
- the adverse effects of the water abstraction will be mitigated by restricting the rate of take and adhering to good management practices for the volume of water required for the operation;
- in regards to Section 104(1)(b) the water abstraction activity is consistent with the relevant provisions of Council's regional plans and regional policy statements;
- the application is not considered to meet the relevant provisions of Part 2 of the RMA. The water abstraction activity in the application is considered to meet the relevant provisions of Part 2;
- as the application is a non-complying activity the activity must pass one of the "pathway" tests set out in Section 104D before the application can be granted, that being, that the adverse effects will be minor or that the application is not contrary to policies and objectives of

relevant plans. Currently, I am unable to determine if the application will pass either of these pathways.



Courtney Guise
Consents Officer



Michael Durand
Consents Manager

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