IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF an application by M and C Adams as Trustees of the MJ Adams Trust for

- a land use consent for new dairy farming that did not exist as of June 2016 by increasing both land area and cow numbers;
- a discharge permit for the discharge of farm dairy effluent from up to 1,150 cows; and
- a water permit for the abstraction of up to 126.5 cubic metres per day of groundwater for stock drinking water and dairy shed washdown

(APP-20181750)

DECISION OF HEARING COMMISSIONERS
EMMA CHRISTMAS AND ROB ENRIGHT
24 June 2019

DECISION

1. Under our delegated authority from the Southland Regional Council to hear and decide these applications we grant resource consents APP-20181750-01, APP-20181750-02 and APP-20181750-03 to use land for dairy farming, discharge dairy effluent onto land, use land for the maintenance and use of agricultural effluent storage facility (including any incidental discharge), and to take groundwater, to M and C Adams, subject to the conditions outlined in this decision, with an expiry date of 10 years.

THE HEARING

2. These applications were heard on 13 May 2019 at the Southland Regional Council offices in Invercargill. The following appearances were recorded:

For the applicant:

Mr Andrew Hitchcock, Legal Counsel
Mr Mike Adams, Applicant
Mrs Cindy Adams, Applicant
Ms Tanya Copeland, Senior Planner
Ms Miranda Hunter, Certified Nutrient Management Advisor
Dr Mike Freeman, Senior Scientist

Submitters:

Ms Stevie-Rae Blair, Iwi Environmental Advisor on behalf of Te Rūnanga o Ōraka Aparima

Section 42A Reporting Officer:

Mr Mike Doesburg, Legal Counsel
Mr Alex Erceg, Consents Officer

3. The hearing was adjourned on the 13th May pending our site visit, some additional modelling information requested from the applicant, details of relevant policies from the iwi management plans, amended consent conditions and the applicant's written right of reply. Final comments on conditions were filed on 30 May 2019, and the hearing was closed on 31 May 2019.

BACKGROUND

4. Mr and Mrs Adams own and operate a 328 ha dairy farm near Otautau on which 900 cows are milked. The property was converted in 2014 and is consented under AUTH-302700-02 to milk up to 1,000 cows. Consent is also held to discharge dairy effluent to land (AUTH-302700-01-V1).

5. The farm is not fully self-contained and some of the young stock and in-milk cows have previously been grazed off-site. In order to move towards being

fully self-contained, in 2017 the Adams' purchased an additional 122 ha of land to the north of the farm. This comprises the 100 ha 'Northern block', which adjoins the farm, and a 22 ha block ('the 22ha block') to the north of State Highway 96. This block is not contiguous with the remainder of the farm. The Northern block has previously been used for intensive winter grazing, including for some of the Adams' stock.

6. The Adams also purchased a 60 ha block known as the 'Eastern block'. This also adjoins the original farm. It was previously run as a sheep breeding and finishing unit.

7. The application is to extend the dairy farm over the Northern and Eastern blocks and increase the number of cows milked to 1,150, 150 more than currently consented. Up to 1,200 cows would be grazed in winter. The stock would be run over 490 ha, reducing the stocking rate from 3.0 to 2.4 across the property. The 22 ha block would not be used for stock, but primarily to grow supplement for the farm ('cut and carry').

8. A critical part of the proposal is that intensive winter grazing each year on the Northern block would be replaced by more extensive winter grazing over the whole property, with the exception of the Eastern block. The Northern block is more sloping than the remainder of the farm. The application explains that this will have benefits in terms of more permanent pasture cover, improved soil structure and improved water quality, as winter grazing can be located in the areas considered most suitable at the time.

9. Mr Adams explained that the increased stock numbers were necessary to manage pasture levels. This was confirmed by Ms Hunter. She advised that too few stock can result in pasture going to seed and reducing in quality. While this has no impact on the environment, it presented a financial risk to the farm. The optimal (easiest to manage) stocking rate on a farm of this size would be 2.8 to 3.0 cows / hectare.[1]

10. As a result of concerns from the Consents Officer about the impact of the dairy operation on the Opio Stream, which runs along the boundary of the Eastern block[2], the applicant proposes a number of mitigation measures in relation to that block, including:
    - No fodder crops grown in the block
    - No stock on the block in June and July annually
    - No effluent solids are applied to the block

[1] But subject of course to relevant effects being avoided, remedied or mitigated, which may require a lower stocking rate.

[2] Referred to by Mr Erceg as 'offsetting' the effects of winter grazing from the Northern block across other parts of the property, including the Eastern block. 'Offsetting' is a misnomer: offsetting (per s104 RMA) relates to consent conditions that may be imposed to offset adverse impacts of the subject proposal

- Reduced nitrogen (urea) inputs to the block

11. A number of additional mitigation measures are also proposed to reduce nutrient loss from the property generally. These are outlined in the application and draft Farm Environmental Management Plan, and include management of critical source areas and additional buffer zones around streams where necessary.

12. The farm has a clay lined effluent pond, constructed in 2014. Mr Adams explained that this pond was over-sized at the time of construction and can hold the additional effluent from the proposal without needing modification. There is also a 'weeping-wall' sludge pond into which solids are deposited. This drains to the effluent pond.

13. Mr and Mrs Adams outlined their commitment to best farming practice and to the local community more generally; and noted their family association with farming in Southland since 1864.

Consents sought

14. The following consents are sought:
    - A land use consent to carry out farming activity over the original farm, Northern and Eastern blocks. Consent was not initially sought for farming over the 22 ha block and this was the subject of some discussion at the hearing, which we detail later.
    - A discharge permit to discharge dairy shed effluent from 1,150 cows on up to 245 ha of land via travelling irrigator, low rate pods and slurry tanker
    - A water permit to abstract up to 126.5m^3 per day of groundwater for stock and dairy shed purposes.

15. It also became apparent through the evidence that consent for operation of the effluent storage pond may be required. This is discussed further below.

NOTIFICATION AND SUBMISSIONS

16. The application was publicly notified on 15 January 2019, and three submissions were received. These are as follows.

17. Te Rūnanga o Ōraka Aparima (Rūnanga) opposed the application. The submission outlines the close association the Rūnanga has with the Aparima catchment and their concern over the decline in water quality and quantity. The Rūnanga believe that further intensification impacts on their responsibilities as kaitiaki.

18. Public Health South (PHS) made a neutral submission. PHS noted the degraded state of the surface water bodies and the Jacobs River Estuary, and

sought that consent not be granted until the limit setting process under the National Policy Statement for Freshwater is completed. The submitter noted that while the stocking rate will decrease, the increase in cow numbers will increase the pathogens entering water. These is an existing high rate of waterborne infection in Southland compared to other parts of New Zealand. The submission also highlighted the increase in antibiotic resistance and that stock can be a contributory factor.

19. PHS sought that if consent is granted, the effluent is treated to remove pathogens, compliance monitoring bores are installed and groundwater quality monitored, and that the Farm Management Plan includes appropriate conditions to ensure good practice.

20. Mr Lawrence Cameron opposed the application on the basis that there are too many cows in Southland already.

21. Neither PHS nor Mr Cameron appeared.

ISSUES

22. Key issues identified by the s42A report, planning evidence for the applicant, and legal submissions for the applicant and Council, were as follows:

- Status of activity (whether discretionary or non-complying on a bundled basis);
- The need for consent for the existing effluent pond;
- Appropriateness of the use of Overseer;
- Effects arising from the change in land use on the Eastern Block;
- Whether effects on water quality are overall positive;
- Displacement of effects off-site.

23. We have outlined our findings on these issues, and other matters arising, below.

APPLICATION STATUS

24. The application comprises various separate activities which are subject to rules in the proposed Water and Land Plan (pSWLP) and Regional Water Plan (RWP).

25. There was no dispute between parties that the taking of groundwater is a discretionary activity under Rule 54(d) of the pSWLP and a restricted discretionary activity under the RWP; and that the use of land for farming is a discretionary activity under Rule 20(e) of the pSWLP.

26. There was a divergence of opinion between Mr Erceg and Ms Copeland over the status of the discharge of dairy effluent to land. The applicant's position was that the discharge is a restricted discretionary activity under Rule 50(d) of

the RWP. This requires that the effluent is discharged only to soil/landscape categories A, B, D and E, as shown in Map 1 of Appendix N of the RWP. That map shows Category C land over part of the applicant's land. This is also reflected in the Council's public GIS map, which shows Category C land over the northern parts of the dairy platform, which forms part of the effluent disposal area. Effluent disposal onto Category C land is a non-complying activity under Rule 50(f).

27. Rule 50(d) enables an applicant to provide farm scale soils mapping by a suitably qualified person as an alternative to reliance on Map 1. The AEE relied upon a prior consent granted by Council as evidence, noting (ambiguously) that:

> "It should be noted that whilst there are areas on the existing dairy platform are classed at Category C,[*sic*] this land has a slope of less than 7 degrees (see s42A report for AP-302700-01-V1). Consequently an amendment to Discharge Permit AUTH 302700-01-V1 was granted in 2016 because it was considered suitable to use the travelling irrigator on this land.." [3]

28. Rule 50(f) is clear that the onus rests with the applicant to displace the presumption in Map 1. Given the importance of the issue to the applicant (as determinative of activity status) we note our expectation that a qualified surveyor or equivalent would undertake a survey to confirm the position. In contrast, Dr Freeman provided an assessment, reliant on Land Information NZ contour data, site photographs, aerial photos and google street view, to conclude that the 'vast majority' of the land has slopes less than 7 degrees and Landcare Research S-map soils mapping to show that a 'significant majority' of the land has artificial and/or impeded drainage. From these data, he concluded that the primary soils / landscape categories are either Category A or Category B. The assessment was undertaken prior to visiting the site.

29. Counsel for the applicant argued that the assessment was not 'farm-scale soil mapping' and the Council would expect a report from a geotechnical specialist or surveyor to demonstrate slope. We agree. It is unclear why an opinion was sought from Dr Freeman on an issue that appears to be outside his expertise. In any event, the applicant did not provide farm-scale soil mapping from a suitably qualified expert to rebut the presumption that the soil/landscape category on Map 1 of Appendix N should apply. Consent is therefore required as a non-complying activity.

30. A bundling approach means that the activity as a whole is non-complying, and s104D applies.

31. Two further issues arose in relation to the consents required: the need for consent for the 22ha block and for the effluent storage facility.

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[3] Landpro, AEE at [3.3.2] p15

22 ha block

32. The original application did not include the 22 ha block located to the north of SH96. Counsel for the applicant considered that the land was not part of the 'landholding' as defined in the pSWLP on the basis that an Environment Southland advice note includes a test that there is a 'transfer of effects' between blocks for a support block to be considered a single landholding[4].

33. The plan definition of landholding refers only to areas of land utilised as a single operating unit. Either way, the block is clearly part of the same landholding, being operated as part of the farming operation, with supplement (and therefore nutrients and effects) transferred from that block to the dairy platform.

34. Both Counsel considered there was no scope issue in including the block within the application, as the effects of its inclusion are not materially different in scale, intensity or character to the application lodged, and there are unlikely to be other parties who would have an interest in the application as a result of its inclusion.

35. We agree and therefore include the block as part of the land use application.

Effluent storage facilities

36. An issue arose as to whether the applicant requires an additional consent for the effluent pond and sludge bed under Rule 32D of the pSLWP. The rule states:

    a. The use of land for the maintenance and use of an existing agricultural effluent storage facility that was authorised prior to Rule 32D taking legal effect, and any incidental discharge directly onto or into land from the storage facility which is within the normal operating parameters of a leak detection system or the pond drop test criteria set out in Appendix P, is a permitted activity provided the following conditions are met:
        i. the construction of the existing agricultural effluent storage facility:
            1. was lawfully carried out without a resource consent; or
            2. was authorised by a resource consent and
        ii. where the construction … was lawfully carried out without resource consent, the landholding owner or their agent must provide information to the Southland Regional Council upon request, demonstrating that the existing agricultural effluent storage facility is either:

[4]Applications made under Rule 20 of the proposed Southland Water and Land Plan. Environment Southland advice note to resource management consultants. 2 August 2018.

1. fully lined with an impermeable synthetic liner, or is of concrete construction, or is above ground level …; or
2. certified by a Suitably qualified person in accordance with Appendix P within the last three years as:
   a) having no visible cracks, holes or defects that would allow effluent to leak from the effluent storage facility; and
   b) meeting the relevant pond drop test criteria in Appendix P.

37. A discretionary consent is required if the permitted criteria are not met.

38. The applicant's primary position was that it did not require consent under this rule and that it could rely on s20A RMA (existing use rights) pending the rule becoming operative. But (in the alternative) if consent was required, then it could be addressed through a condition demonstrating that the pond meets the permitted activity criteria. Counsel for the applicant confirmed in opening that it could be treated as a condition subsequent (i.e. the consent holder will obtain consent under Rule 32D, prior to undertaking any activities under the consent). While this was the applicant's formal position, it was clear from the evidence that this would pose practical difficulties (the pond drop test must be conducted when the pond is at least 75% full; and it would be imprudent to allow the pond to reach 75% capacity during winter months).

39. Counsel for the applicant advised that the effluent pond was authorised under resource consent AUTH-302700-04. However, at that time, consent was not required for the weeping wall and sludge bed. Counsel for the Council accepted, during the hearing, that issues of fairness (relating to Rule 32D) arise in the particular circumstances of this proposal. At the time of installation of the effluent pond, and subsequently, Mr Adams was advised by Council that a drop test was not required; Council's advice was reversed at a point where it was too late for the applicant to take remedial steps to demonstrate compliance prior to this hearing.

40. There is insufficient evidential basis for us to make a finding on existing use rights under s20A RMA. Absent a certificate of compliance (under s139A RMA) or Council acknowledgement of existing use rights, the applicant must demonstrate compliance with the permitted standard; or we can approve consent and impose relevant conditions (on the basis that consent is justified under the statutory tests).

41. The permitted activity rule is not met as no pond drop test has been undertaken. A scope issue was raised by both the s42A report and the applicant's own evidence, as the applicant did not expressly apply for consent under Rule 32D. However, that is not the end of the matter: the application relates to the activity as a whole, and can include necessary incidental

consents, even if not applied for.[5] Rule 32D requires discretionary consent (where permitted standards are not met). Because the overall status is non-complying we are able to consider approval under Rule 32D, on the basis that the application forms part of the activity as a whole and is incidental to the proposed activity.

42. The effects of the activity are discussed below.

THE EXISTING ENVIRONMENT

43. The existing environment, particularly the subject site, was not generally in dispute. The subject land is an existing dairy farm, operational at the time that the proposed Water and Land Plan was notified (June 2016). Because it is non-contentious, we adopt the summary of the current farm system, existing effluent and irrigation systems described in the s42A report without further repetition.

44. The applicant's AEE identifies relevant land use and waterways as follows[6]:

3.1 Land Use, Topography & Climate

The property, located at approximately 160 m above mean sea level, is an existing farm and conventional farming practices are undertaken. Surrounding land use comprises other dairy farms, sheep and beef farms, with the rural town of Nightcaps located approximately 1km north west of the existing farm boundary

3.2.1 Surface waterways

A tributary of the Waicolo Stream runs through the property and the Opio Stream is to the east of the farm. The Wairio Stream is to the west of the farm. There are several smaller, and sometimes ephemeral tributaries that run through the property. All waterways have been fenced from stock and there is extensive planting across the entire proposed dairy platform. The Waicolo Stream, Opio Stream and Wairio Stream are all tributaries of the Otautau Stream, which is a tributary of the Aparima River. The property is wholly contained within the Aparima Surface Water Management Zone.

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[5] Refer discussion in Body Corporate 97010 v Auckland City Council [2000] 3 NZLR 513 (CA) at [50]: [50]…The exact form of an application is not determinative although it must suffice to put before the consent authority the matters which it is required to consider and decisions must be made on them. An application can include incidental matters which may technically require separate consents. The consents given will be valid notwithstanding deficiencies in the form of the application, provided that appropriate procedures are followed, including notification where necessary, and the substance of the matter is properly considered. It is undesirable that the law relating to resource consent applications should descend unnecessarily into procedural technicalities. Substance is to be preferred to form (*Sutton v Moule* (1992) 2 NZRMA 41, 47)."

[6] p10-11, AEE

45. The receiving catchments are identified in slightly different terms by the s42A report, which states that the site spans three catchments (Wairio, Waicolo and Opio stream catchments); but it is agreed that these are part of the wider Aparima River catchment.

46. The Aparima River flows into the Jacobs River estuary at Riverton. Eutrophication and sedimentation have been a major issue within the estuary since at least 2007, with the overall condition described as "very poor".

47. Dr Freeman's evidence was that the data indicate that the water quality in the Otautau Stream at the Otautau-Tuatapere road Stream is degraded and does not meet all the relevant numerical standards or guidelines[7]. Water quality at the site is in the lowest 25% of all lowland rural sites for every indicator except Total Oxidised N. Relevant NOF Band indicators for *E. coli*, Total Oxidised N and Ammoniacal N are identified at Table 3 of the AEE. The generally poor quality of surface water reflects land use impacts on water quality from bacteria, sediment and phosphorus transported directly to waterbodies by overland flow or sub-surface drainage.

48. The AEE identifies (with some understatement) that "… water quality for all parameters measured on the mainstem of the Otautau Stream at Waikouro is not good when compared [*with*] other lowland sites..." but notes an increase in river nutrient concentrations moving downstream is "normally found in lowland New Zealand rivers".

49. By contrast, groundwater quality is generally good. The property sits within the Upper Aparima Groundwater Management Zone. The groundwater quality in this zone is generally good, although there are some hotspots which have elevated levels of nitrates. Soil and physiographic zones are identified in the AEE.

Site visit

50. We visited the site on 14 May, observing each of the main blocks, the effluent pond and sludge bed, surface water bodies and associated fencing and planting.

Significance of the area to Te Rūnanga o Ngāi Tahu

51. The importance of the Aparima River is recognised in the Ngāi Tahu Claim Settlement Act (1998) as a Statutory Acknowledgement area. The Statutory Acknowledgement states that the mouth of the river was a permanent settlement, with associated urupā. The river was an important source of mahinga kai. The mouth of the river was a tauranga waka, from which sea

[7] These being the National Objective Framework Band annual median, and the pSLWP water quality standard for Lowland hard bed rivers, and ANZECCC trigger values.

voyages were launched, including to Rakiura, Foveaux Strait and the tītī islands.

52. The river was also part of the network of trails used to link mahinga kai areas and camping grounds and ensure the safest journey. Knowledge of the trails is still held by whānau and hapū and is regarded as a taonga.

53. The mauri of the Aparima is a critical element of the spiritual relationship of the Ngāi Tahu whānui with the river.

SECTION 104 ASSESSMENT

54. Section 104(1) requires that, subject to Part II of the Act, regard must be had to:

(a) any actual or potential effects on the environment of allowing the activity; and
(b) any relevant provisions of
(i) a national policy statement
(ii) a New Zealand Coastal Policy Statement;
(iii) a regional policy statement or proposed regional policy statement;
(iv) a plan or proposed plan; and
(c) any other matter the consent authority considers relevant or reasonably necessary to determine the application.

Section s104(1)(a) - Potential effects on the environment

Effects on surface and groundwater quantity

55. Both the applicant and the Consents Officer considered that the effects on water quantity will be minor. The take is from Upper Aparima Groundwater Management Zone, which is currently only 10% allocated. The small scale of the application (less than 2 l/s) means there are likely to be no or negligible stream depletion effects on surface water flow. The take replaces an existing permit for the same volume, so there will no change in effects or allocation.

56. The proposed take is equivalent to 120 L/cow/day, which is consistent with the Council's recommendations, and can be considered an efficient use of water.

57. We agree that these effects are minor.

Effects of the effluent discharge

58. The effluent field is significantly larger than required to meet best practice guidelines for the number of stock to be milked (19 ha per 100 cows compared to 8 ha best practice). Mitigation measures such as the rate, depth

and return period of effluent application, application only when there is a soil moisture deficit, and provision of buffer areas around dwellings are proposed. These should ensure that leaching, ponding and overland flow of effluent are avoided as far as practicable. Effects on soil health and on neighbours from odour and spray drift should be minor.

59. The effects of effluent discharge on water quality are considered cumulatively with the effects of diffuse discharge from the farming operation, below.

Effects of the effluent storage facility

60. The applicant's evidence was that the pond was properly engineered and constructed and is not leaking. There was no competing evidence.

61. In our view, conditions should be imposed requiring demonstration of compliance with the drop test within a reasonable timeframe of commencement of the consent. We consider that we can impose this as a consent condition as it reasonably relates to the proposal (even though the drop test forms part of a permitted standard).

62. Given the issues of fairness discussed earlier, and logistical issues required to ensure the pond is 75% full for the purposes of the drop test, we consider a reasonable timeframe (of two years from date of commencement of consent) is appropriate. If Council remains concerned that the pond is at risk of leaking within the two year timeframe, then s128 RMA enables this condition to be revisited; and in any event does not prevent enforcement monitoring.

Effects on ground and surface water quality

63. The effects of most potential significance are those on groundwater and surface water quality, arising primarily from the diffuse discharge of contaminants from the cows, together with the application of dairy effluent. The impact of agricultural land use on water quality has been a developing issue in Southland, and the pSWLP introduces a number of provisions to manage it. The clear policy direction in the pSLWP is to avoid any further degradation of water quality from discharges and farming activities.

64. The applicant used Overseer to model the change in nutrient loss between current farming practice (for the Northern and Eastern blocks the practice prior to the applicant's purchase of them), and the nutrient loss from the proposed farming system. Mr Erceg outlined a number of concerns with the use of Overseer and its inherent inaccuracy and simplification of the real world situation. These included that Overseer:
    a. is inherently uncertain, as the inputs are based on assumptions;
    b. assumes average and constant management and site characteristics;
    c. does not account for climatic variation between years;
    d. calculates losses at a block (or farm) scale and does not account for site-specific variations in soil, topography; and

e. cannot accurately model situations when farm management or land use is changing.

65. He noted that a recent PCE Report[8] identified that on average, nutrient losses can be 30% greater than predicted by Overseer. In response to questions, he categorised the applicant's assessment of nutrient losses as 'guesswork'.

66. We note that the pSLWP requires that Overseer (or an alternative model approved by the Council) is used to prepare a nutrient budget for the Farm Environmental Management Plan and so the Council must accept that in some circumstances at least, it is a useful tool.

67. The usefulness and accuracy of Overseer were addressed by Ms Hunter and Dr Freeman. Neither appeared to disagree with the shortcomings outlined by Mr Erceg, but stressed that the way Overseer was used and the results interpreted was critical in ensuring these issues were managed appropriately. Both noted that the study that showed that losses could be underestimated up to 30% was based on an older version of Overseer (5.0 compared to the current version 6.3) and the study had not been repeated.[9] Ms Hunter noted that Overseer is designed as a decision support tool, and allows comparisons between farm management scenarios. She acknowledged that it relies on several assumptions, which she outlined, and has limitations in terms of things it cannot calculate or assess. Both these lead to inherent inaccuracies, which are minimised by following a strict protocol in terms of data inputs, the expertise of the user and review of outputs against expected results.

68. She noted that the uncertainty is reduced when modelling is used in situations where there is most data. Most of the calibration data for Overseer have been obtained from dairy farming on flat, pastoral farms within Southland, Canterbury, Waikato and Manawatu, with free draining soils and moderate rainfall. The subject proposal fits these criteria. Dr Freeman made a similar point, citing a research article that found for nitrogen loss in a Southland winter forage crop situation, "the agreement between measured and modelled values indicates that the Overseer model is performing well for this combination of soil-climate-management factors"[10].

69. Ms Hunter also noted that the uncertainty can be equalised between scenarios when the same input data is used to compare two scenarios. In her words, when comparing apples with apples. That is, all inputs between the scenarios should be same except the factor(s) that are to be changed

[8] Parliamentary Commissioner for the Environment, December 2018. Overseer and regulatory oversight: Models, uncertainty and cleaning up our waterways.
[9] The 30% inaccuracy figure therefore remained relevant but there is no more recent data to calibrate the model's accuracy.
[10] Smith C. and Monaghan, R., 2013. Comparing OVERSEER estimates of N leaching from grazed winter forage crops with results from Southland trial sites. Report for Environment Southland, RE500/2013/123.

between the two scenarios. In that case, the same or similar level of uncertainty or inaccuracy should be present in both outputs. This is the way Overseer has been used in this proposal.

70. Dr Freeman considered it critical that Overseer is not being used to determine compliance with a nutrient loss limit, but is being used in this application to compare two scenarios.

71. We agree that Overseer is a useful tool when used this way. The focus should not be on the calculated quantity of nutrient loss in each scenario (kg/year), but the relative change – whether there is an increase, decrease or no change. This appears to be the purpose for which Overseer was designed to be used.

72. Overseer is being used here in this way – to assess the relative effect of a change in management from the current farming practice to the proposed one. While we do not disagree with any of the points made by Mr Erceg, we accept the use of Overseer in this situation. The relative accuracy or inaccuracy is not the most important thing – what is important is the predicted change from one scenario to the other. In making this finding, we note that there was no competing expert evidence in relation to the modelling/calculations undertaken, in reliance on Overseer, other than the general comments made by Mr Erceg, addressed above.

73. Ms Hunter also specifically addressed Mr Erceg's comments in relation to land use change. She noted that generally when there is a change from sheep to dairy farming, phosphorus (Olsen P) levels are low and capital inputs are required. In this case, phosphorus concentrations had been tested at the paddock level and found to be high, so no additional inputs would be required. This reduced the uncertainty around modelling the effects of the land use change.

Modelling approach taken

74. To assess current nutrient losses, Ms Hunter modelled the losses from the existing farm and the Northern and Eastern blocks separately. Various assumptions were made in regards to previous farming practices, particularly in relation to the Eastern block, where good records were not available. As a result, Ms Hunter took a conservative approach. She also modelled nutrient loss on the basis of the actual stock numbers on the existing farm (900) rather than the consented 1,000. This is also a conservative approach, as any increase in nutrient loss associated with the new farming system will be relatively greater.

75. For the proposed scenario, the modelling was initially undertaken of all blocks together. In response to concerns from Mr Erceg regarding potential effects on the Opio Stream, which runs along the boundary of this block, Ms Hunter then re-calculated losses for the Eastern block separately.

76. Two issues arose in relation to the modelling: the need (or not) to include the nutrient loss impacts from (a) the winter grazing of young stock[11] off farm; and (b) the stock that previously grazed the land but are now 'displaced' by the proposal.

77. While both parties agreed on the appropriateness of including the nutrient loss from the young stock, there was dispute about the relevance of the impacts of the displaced stock. Mr Hitchcock for the applicant and Mr Doesburg for the Council both outlined relevant case law on the matter of whether effects beyond those directly resulting from an application can be considered. Both noted *Auckland City Council v Auckland Regional Council*[12], where it was held that under s104 the scope of effects to be considered is not restricted and the effects from allowing an activity may include those effects which inevitably follow, including where these activities / effects may be the subject of other resource consent applications.

78. More recently, *P&E Ltd v CRC*[13]considered the issue of whether to consider 'remoter' effects in a case concerning the taking of water and whether the downstream effects of the irrigation of that water could be considered. Following earlier decisions, the Court concluded that 'downstream' effects could be considered, with limits of remoteness and nexus[14]. Both Counsel quoted para 59 of that decision, which is:

> "*We conclude that the decision whether to consider alleged remoter effects, especially where other intervening activities (which require resource consents) may be more direct causes of those effects, is a matter of discretion in all the circumstances. The cases contain rather limited discussion of what factors might be relevant, perhaps because it is seen as largely a contextual issue. Having reflected on this we hold that, in addition to consideration of the particular circumstances of the application – including the relevant rules governing the applications and other necessary consents, considerations of fairness and procedural efficiency in the particular circumstances of the case, and the remoteness and indirectness of the effects – the exercise of that discretion may also be influenced by a range of more general factors, including:*
> *(1) a presumption derived from the West Coast ENT decision that remoter effects could be assessed more clearly when considering an application for an intervening activity but weighing this against the following factors:*
> *(2) the risk that relevant benefits and (particularly) costs may be omitted when considering the efficient use and development of the resources involved;*

[11] S42A report at p15; young stock are defined as Rising 1 and Rising 2 year olds
[12] *Auckland City Council v Auckland Regional Council* EnvC Auckland A101/97, 25 August 1997.
[13] *P&E Ltd v Canterbury Regional Council* [2015] NZEnv 106.
[14] *Causal nexus* is an established link between cause and effect

(3) the nature of the resource consents sought: if allocation of a resource is involved (as in this case), the effects of the end use and any general conditions imposed on that 'use' at the allocation (take) stage may be relevant considerations. We received no submissions on this factor, so we place no weight on it. However it may be relevant in future cases."

79. A legal opinion prepared by Wynn Williams for the Council, based on an analysis of these cases, was provided to us. This addressed the situation where cows that were part of a farming activity for a landholding were wintered off-site, and concluded that the effects of this activity could be assessed as part of the consent for farming activity on the primary landholding.

80. In relation to the young stock, we agree with both parties that consideration of the nutrient loss of these stock is appropriate. The stock are part of the farming operation, and while the grazing will be undertaken on a different landholding, it is a relevant part of the proposal for which consent is sought. The proposal could not operate as described (and modelled) without this transfer of yearlings, and the associated nutrient loss, away from the farm. Including this loss in the overall calculations is relevant to understand the complete extent of nutrient loss. These effects were not assessed by the applicant, prior to issue of the s42A report. This was remedied by the applicant in evidence at the hearing, and the effects were included as part of the applicant's Overseer calculations. We agree that the effects are causally related and not too remote. This situation is analogous to that described in the legal opinion, where a part of the farming activity is transferred off-site.

81. We note that the assessment of the nutrient loss from farming the young stock off-site relies on a greater number of assumptions, as the location of the grazing is not certain. Consequently, Ms Hunter modelled a worst-case scenario and assumed that the stock would be intensively grazed on fodder beet, rather than the more extensive grazing that has been the practice in recent years. The assessment is therefore conservative.

82. In the second situation, the appropriateness of considering nutrient loss from 'displaced' stock that had been grazed on the Northern and Eastern blocks under the existing scenario, is less clear. The Northern block was used to intensively winter up to 1,470 cows. This includes 940 cows from the applicant's operation. If consent is granted, then the s42A report asserts that 530 cows not owned or controlled by the applicant will be displaced (or exported) elsewhere. Those cows may require winter grazing, meaning that the total effects to the environment from winter grazing will or may be increased. The proposal also presumably displaces the sheep from the Eastern block, although this was not discussed in the evidence.

83. Mr Doesburg submitted that the displacement of the cows is not too remote to be considered as part of the effects arising from the subject proposal. This is particularly so since the wintering of these cows may not require resource

consent, and so the effects may not be assessed. Consideration of the effects of displacing the cows will enable a balanced and complete assessment of effects.

84. Mr Hitchcock, on the other hand, submitted that there were significant nexus and remoteness issues. The cows were not farmed by the applicant, and assuming they still exist, the 'activities' they may be involved in do not inevitably follow from the granting of this consent. Where the cows are, or what nutrient loss they may be causing, can only be speculated. There is no *causal nexus* and any impact of the displacement is too remote to be considered. Ms Copeland expressed a similar view.

85. It appears to us that the starting point is *causal nexus*. If the effect in question is not caused by the activity (whether directly or indirectly), then remoteness is not relevant.

86. In this case, we agree with the applicant that there is no *causal nexus*. The stock are not part of the Adams' farming operation and never have been. Mr Adams confirmed that the stock are no longer on the property. Their displacement is a result of the property sale, not this consent application. If this consent is refused, farming could continue to operate on the existing farm as well as, presumably, replacing the displaced stock with the same number of stock on each of the Northern and Eastern blocks as previously occurred, under existing use rights. The effects of farming the displaced stock in a new location will either be assessed under a separate resource consent application or, if the farming falls under the permitted activity rules, it would be deemed appropriate within the Southland environment.

87. As stated by Mr Hitchcock, if the Council's approach was taken to its logical conclusion, treating the new farming proposal and the removal of existing stock as inevitably linked would mean that any sale of land that ultimately required consent for farming would be unlikely to be able to achieve this, as the assessment of effects would have to consider the nutrient loss from the displaced stock <u>plus</u> the new replacement stock. There would always be an assessed increase in nutrient loss.

88. We therefore agree with the applicant that it is not relevant, in this case at least, to consider the effects of the displaced stock. The position might be different where, for example, the applicant transferred stock under its control elsewhere within the relevant catchment or region. Each situation must be assessed on its merits.

Phosphorus loss calculations outside Overseer

89. Having estimated nutrient losses in Overseer, Ms Hunter then explained that phosphorus losses from the proposed scenario will be over-estimated due to assumptions built-in to Overseer that are not true for the proposal, and

proposed good management practices that cannot be incorporated into the model and are therefore not 'rewarded'. These include:

a. the assumption that 30% of phosphorus deposited on lanes will be lost to water; and
b. management of critical source areas on the Northern and Eastern blocks.

90. The applicant proposes to decommission an existing lane on the Northern block which runs adjacent to a waterway. Other lanes are not located by waterways. Any new lanes on the Eastern block will likewise not be constructed close to waterways. Lanes will be managed to minimise effluent run-off, with vegetation buffer zones where necessary. Ms Hunter assessed, based on an MFE report[15] into the effectiveness of various mitigation measures, that phosphorus losses associated with the lanes would be reduced by 38% from those predicted by Overseer.

91. Management of critical source areas were also assumed, based on the same report, to reduce phosphorus losses to water by 38%.

92. Both Ms Hunter and Dr Freeman, in response to questions, confirmed that this approach was standard practice, at least in the last 9 months or so, and in Dr Freeman's words, was essential, as Overseer does not effectively model mitigation strategies that address phosphorus loss. He noted that Overseer was originally set up for modelling nitrogen losses, and is not as advanced in relation to phosphorus loss modelling. There is no option but to model the additional mitigation outside Overseer. Ms Hunter noted that there are programmes in development with the aim of modelling mitigations outside Overseer.

93. Mr Erceg did not question this aspect of the assessment.

94. Clearly, adjusting the proposed scenario output is only valid if similar mitigation is not occurring in the current scenario on that land, and Overseer does not assume that the mitigation is occurring. Ms Hunter explained that the adjustments have only been made to the Northern and Eastern blocks, not the existing farm (where mitigation is presumably already occurring).

95. In the absence of any competing expert evidence, we accept that the approach is reasonable and appropriate for this proposal.

Results of modelling

96. The modelling described above resulted in an estimated 24,684 kg/year of nitrogen lost under the current farming scenario, and 22,870 kg/year of nitrogen under the proposed scenario, a reduction of approximately 7%.

[15] McDowell R., Wilcock, B, Hamilton, D, 2013. Assessment of strategies to mitigate the impact or loss of contaminants from agricultural land for fresh waters. Report for MfE.

Phosphorus loss was estimated to be 560 kg/year in the existing scenario and 528 kg/year in the proposed scenario, a 5% reduction.

97. Modelling of losses from the Eastern block showed a slight decrease in nitrogen loss from the changed farming regime (1395 kg/year nitrogen loss under the current scenario and 1361 kg/year under the proposed scenario); and a slight increase in phosphorus loss (36 kg/year phosphorus loss under the current scenario and 37 kg/year loss under the proposed scenario).

Effects on surface water quality

98. The critical question is what effect will the change in farming have on ground and surface water quality? It was agreed by both parties that the surface waterways in the catchment are degraded. Considering the farm as a whole, there will be a small decrease in both nitrogen and phosphorus loss from the land. Dr Freeman attempted to assess the impact this may have on water quality on the Opio Stream, as a result of nutrient loss from the Eastern block; and on the Otautau Stream, as a result of nutrient loss from the whole property. Dr Freeman's calculations assumed that all phosphorus lost finds its way to surface water and is not attenuated or altered. The methodology used was crude, but unchallenged, and probably reasonable in the circumstances. We note that phosphorus loss estimates were also used as a proxy for loss of sediment and faecal coliforms into surface water bodies.

99. For the Eastern block, Dr Freeman assessed that an estimated increase in phosphorus loss of 3 kg/year (three times the loss predicted by Overseer) would increase the phosphorus concentration by a very small amount (0.018 g/m^2) for a six hour period for up to 12 times per year. While we have no faith that this quantum is correct (and do not expect that it is possible to accurately predict the effect) we agree with Dr Freeman that the biological effects are likely to be insignificant and immeasurable.

100. A reduction in nitrogen loss is predicted from the Eastern block, and a reduction in both phosphorus and nitrogen loss is predicted from the property as a whole. Unsurprisingly Dr Freeman assessed that this will result in a very small decrease in the concentration of these nutrients in surface water. Dr Freeman's conclusion was that while the reduction in nutrients lost from this property alone is unlikely to have any measurable difference in biological communities, if replicated on other properties, the cumulative reduction may ultimately improve water quality and instream biological indicators.

101. Our conclusion is that effects on surface water will be minor. Overall, a small positive effect on surface water quality is likely to result, but, as stated by Dr Freeman, unless there is a corresponding decrease in nutrient loss on other properties, the effect is unlikely to be measurable. Conditions require nutrient loss to be assessed, with a commensurate ability for Council to

review conditions (including stock numbers) if effects are not as modelled by the applicant.

Effects on groundwater quality

102. Dr Freeman concluded that based on the predicted reduction in nitrogen loss, coupled with the proposed good management practices, there would be a small reduction in nitrogen loading to groundwater. However, given the complexities of groundwater systems and groundwater travel times, it may be many years before any reduction is noted in monitoring bores. In practice, a reduction in nitrogen loss across a larger number of properties would be required to see any measurable difference in groundwater concentrations.

103. Mr Erceg was also less concerned about impacts on groundwater quality. The Gleyed and Lignite-Marine Terrace physiographic zones on which the property is partly located have denitrifying potential and contaminant pathways are via overland flow and artificial drainage. The Bedrock / hill Country physiographic zone provides minimal risk to groundwater. He noted the applicant's proposed good management practices which will also reduce risk to groundwater.

104. We agree that effects on groundwater quality are likely to be minor.

105. In response to Public Health South's request for groundwater monitoring, we also accept Dr Freeman's rationale that to provide useful data, groundwater monitoring needs to take place in a number of up- and downstream locations. Such a large number of bores is not justified by this particular proposal, which will have a small positive effect on groundwater quality.

Cultural effects

106. The Rūnanga identified potential adverse cultural effects if the proposal is granted. Ms Blair's evidence was that each waterway has its own mauri, guarded by separate spiritual guardians, its own mana, and its own set of associated values and uses. Wai is fundamental to health and wellbeing of Māori. The proposal results in potential adverse impacts to the mauri and wairua of the Aparima catchment and does not recognise Ngāi Tahu ki Murihiku's role as kaitiakitanga, and its relationship with ancestral lands, waters and taonga.

107. The submitter identified relevant Ngā Kaupapa/Policy embedded in the RPS, operative and proposed water and land plans and the relevant iwi management plans (Te Tangi a Tauira and the Ngāi Tahu Freshwater Policy Statement). These are discussed elsewhere. Ms Blair's evidence was general and did not identify specific characteristics and values adversely affected by the proposal. On behalf of the Rūnanga, Ms Blair sought that consent be declined; she did not identify any recommended consent conditions that could be imposed to recognise the relationship of Ngāi Tahu ki Murihiku with

ancestral waters if consent was granted. Ms Blair reasonably accepted that Rūnanga monitoring of the subject site was unlikely to be reasonable or warranted, being more appropriate for public works projects such as Council wastewater treatment plants.

108. In light of the limited evidence presented on specific characteristics and values of the Aparima catchment affected by this proposal, and the positive effects of reduced nutrient discharge, we conclude that the proposal will result in minor adverse cultural effects. A s128 RMA review condition is included to enable review of conditions should any adverse cultural effects arise, identified by future monitoring. This provides for Ngāi Tahu ki Murihiku's ability to exercise kaitiakitanga, and maintain its relationship with ancestral lands, waters and taonga.

Positive effects

109. Reducing overall stocking rates through acquisition of additional land available for effluent disposal was a key element of this proposal.

110. As discussed above, the unchallenged expert evidence was that this proposal will have a small effect on improving water quality in the catchment. It will also allow better management of the applicant's property, with a reduced need to manage stock off-site. If positive effects on nutrient loss do not arise, then Council will have the ability to revisit (reduce) stock numbers (subject to the relevant preconditions stated in s128 RMA).

111. Finally we note that granting the proposal provides for the applicant's wellbeing; this factor does not merit undue weight (in light of policy imperatives relating to, *inter alia*, water quality) but is recognised as a positive effect of granting consent.

Section 104(1)(b) - Policy Statements and Plans

112. Relevant planning instruments are identified in the s42A report, and appear to be common ground. These include:
    - National Policy Statement for Freshwater Management 2014 (NPSFM)
    - Regional Policy Statement
    - Operative Regional Water Plan
    - Proposed Water and Land Plan
    - Iwi Management Plans

National Policy Statement for Freshwater Management

113. The NPSFM promotes improved freshwater management by directing councils to manage water in a sustainable and integrated way, while providing for growth within set water quantity and quality limits. Freshwater quality within a freshwater management unit must be maintained, where community values are currently supported, and improved where they are not.

Councils must establish objectives and set limits for freshwater management units in their plans to avoid over-allocation.

114. The pSLWP explains that freshwater management units have identified, but the necessary freshwater objectives and limits have not yet been set. Until this process is completed, Policy A4 of the NPSFM applies. This requires that when considering applications for discharges (including diffuse discharges from stock), regard must be had to the extent to which the discharge avoids contamination that will have an adverse effect on the life-supporting capacity of fresh water and the health of people and communities.

115. Both Ms Copeland and Mr Erceg considered that the application was not inconsistent with the policies relating to water quality, quantity and tangata whenua roles and interests, including Policy A4. Given our finding that the effects of the proposal will have a positive effect on water quality and a negligible effect on water quantity, we agree.

Southland Regional Policy Statement (RPS)

116. Ms Copeland assessed the application against the RPS and noted that the water quality and quantity provisions closely follow the principles of the NPSFM. She highlighted the relevance of the Rural policies, which promote sustainable use of the rural land resource.

117. The RPS is implemented through the pSWLP, which we discuss in more detail below. The application is consistent with the provisions of the RPS.

Proposed Southland Water and Land Plan

118. Non-point source discharges are identified as an issue in relation to water quality in the pSLWP. A number of interrelated objectives touch on this issue, including that land, water and associated ecosystems are sustainably managed as integrated natural resources (Objective 1), that the mauri of the waterbodies provide for the health and mauri of people, the environment and the waterbody (Objective 3), that there is no reduction in the overall quality of fresh and coastal water (Objective 6), that any further over-allocation of freshwater (quality as well as quantity) is avoided and over-allocation is phased out (Objective 7), that discharges of contaminants with significant or cumulative adverse effects on human health are avoided (Objective 13B), that the range and diversity of ecosystem types and habitats are maintained or enhanced (Objective 14), and that activities use good management practices to, amongst other things, maintain or improve water quality (Objective 18).

119. The objectives also recognise the productive and economic potential of the land. Objective 2 is that water and land is recognised as an enabler of primary production and the economic, social and cultural wellbeing of the region. Objective 13 is to enable the use and development of land and soils to support these wellbeings.

120. The most relevant policies in terms of the effects of diffuse contamination from farming activities on water quality are 15B and 16.

121. Policy 15B is:
Where existing water quality does not meet the Appendix E Water Quality Standards or bed sediments do not meet the Appendix C ANZECC sediment guidelines, improve water quality including by:

a. Avoiding where practicable and otherwise remedying or mitigating any adverse effects of new discharges on water quality or sediment quality that would exacerbate the exceedance of those standards or sediment guidelines beyond the zone of reasonable mixing; and

b. Requiring any application for replacement of an expiring discharge permit to demonstrate how and by when adverse effects will be avoided where practicable and otherwise remedied or mitigated, so that beyond the zone of reasonable mixing water quality will be improved to assist with meeting those standards or sediment guidelines.

122. Although this policy refers specifically to 'discharges', Policy 13(2) is to "manage land use activities and discharges (point source and non-point source) to enable the achievement of" Policy 15B (and others). We therefore read 'discharges' in Policy 15B to include diffuse discharges from dairy farming. The policy aims to improve water quality and this is achieved through the reduction in nutrient discharge from the site.

123. The critical part of Policy 16 for the purposes of this application is 1(b):

1. Minimising the adverse environmental effects (including on the quality of water in lakes, rivers, artificial watercourses, modified watercourses, wetlands, tidal estuaries and salt marshes, and groundwater) from farming activities by:

a. …

b. ensuring that, in the interim period prior to the development of freshwater objectives under Freshwater Management Unit processes, applications to establish new, or further intensify existing dairy farming of cows or intensive winter grazing activities will generally not be granted where:

i. the adverse effects, including cumulatively, on the quality of groundwater, to water in lakes, rivers, artificial watercourses, modified watercourses, wetlands, tidal estuaries and salt marshes cannot be avoided or mitigated; or

ii. existing water quality is already degraded to the point of being over-allocated; or

iii. water quality does not meet the Appendix E water quality standards or bed sediments do not meet the Appendix C ANZECC sediment guidelines; and

c.…

124. The policy identifies a number of situations where consent should generally not be granted. The adverse effects of the proposal are less than the current and consented land use, so clause (b)(i) is not relevant. Allocation limits for water quality have not yet been set, so it is arguably unclear how over-allocation in clause (ii) can be determined[16]; however it is common ground that water quality in the catchment is degraded. Water quality standards are, in Dr Freeman's words, 'not fully met', meaning clause (iii) is relevant. We cannot, however, see how refusing this consent on the grounds that water quality standards in the catchment are not met will achieve the aim of the pSWLP and higher documents to maintain or improve water quality, when there will be a reduction in nutrient discharge as a result. The use of "generally" in the policy provides for exceptions, which are likely to be narrow. The proposal is inconsistent with Policy 16(1)(b)(iii) but (on its particular circumstances) falls within the exception.

125. Counsel for the applicant contended that the proposal did not involve "intensification" because of the reduced stocking rate. We do not accept this argument. "Further intensify" in the policy refers to the envelope of effects, including matters such as total number of cows, which will increase.

126. Policy 17 is to manage agricultural effluent systems to avoid significant effects on water quality.

127. Policy 13 recognises that use and development of the region's land and water resources enables communities to provide for their wellbeing.

128. Other relevant policies are listed in the s42A report include those requiring appropriate consideration of iwi values, management of effects on water quantity and of agricultural effluent systems. The application is consistent with these policies.

129. Considering the suite of objectives and water quality policies together, we consider that the application is generally consistent with the planning framework and direction of the pSWLP. It is inconsistent with Policy 16(1)(b)(iii), but not contrary to the policy as a whole, because (on its merits) it qualifies as an exception to the policy intent (to generally avoid intensification). We do not need to resolve, on the circumstances of this proposal, the issue of competing weight as between relevant policies in the pSWLP.

Operative Regional Water Plan

[16] Some guidance as to whether it is over-allocated can be gained by reference to the thresholds in the NPSFM, but the interpretive issue does not need to be resolved because (b)(iii) was triggered by the proposal.

130. The Regional Water Plan contains a similar suite of provisions to the pSWLP, with the aim of maintaining or enhancing water quality, although with somewhat less directive policies. The plan does not directly implement the NPSFM, except to the extent that it includes the NPSFM Policy A4, or explicitly manage farming activities.

131. As the proposal will have a small, but positive impact on water quality, it is consistent with the provisions of the plan.

Weight given to the regional plans

132. As the proposal is generally consistent with both plans, the question of weight is not at issue. For completeness, we record that planning witnesses for both Council and the applicant agreed the operative RWP merited lesser weight because it predates, and therefore does not give effect to, the NPSFM 2014. In contrast, while it is still at the appeals stage, additional weight is given to the pSWLP as it better reflects Part 2 RMA imperatives, and relevant provisions in the NPSFM 2014 that relate to tangata whenua and water quality.

Section 104 (1)(c) - any other matters

133. There are two relevant iwi management plans, Te Tangi a Tauira and the Ngāi Tahu Freshwater Policy Statement.

134. Ms Blair identified the relevant issues and policies in Te Tangi a Tauira. These focus on providing for Ngāi Tahu ki Murihiki's kaitiaki role, consideration of the cultural values of water, avoiding the discharge of contaminants to water, striving for the highest appropriate water quality, protection of the life supporting capacity of land and water, restoration of habitat and monitoring of resource consents.

135. The Ngāi Tahu Freshwater Policy Statement focuses on restoring and protecting the mauri of freshwater resources, maintaining healthy mahinga kai populations and habitats and enabling kaitiakitanga.

136. The proposal is consistent with many of these policies, as it avoids discharge to water and will have an overall positive effect on water quality. As discussed earlier, Ms Blair did not seek cultural monitoring for this application.

Section 105 Matters relevant to certain applications

137. Section 105 requires that for an application for a discharge permit, in addition to the matters in s104(1), we must have regard must to:

(a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
(b) the applicant's reasons for the proposed choice; and

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.

138. The nature of the discharge and sensitivity of the environment is described above. The existing environment is degraded and while likely to be insensitive to further degradation, it is appropriate that water quality is not further degraded. The application will result in a small improvement in water quality.

139. The applicant's reasons for the changes to the farming operation are valid, particularly the desire to reduce the environmental impact of the farming operation.

140. There are no reasonable alternatives to the dairy effluent discharge. Covered winter feedlots are an alternative, but this was not discussed. The effects of the wintering of stock under the proposed farming regime will be significantly less than under the current scenario.

Section 107

141. Section 107 restricts the granting of discharge permits to discharge contaminants to water or to land where it may enter water, if after reasonable mixing, the contaminant may give rise a range of effects in the receiving waters.

142. Loss of contaminants from the site will be diffuse, and the effects of concern are unlikely to occur. We are satisfied that nothing in s107 prevents the granting of these consents.

Section 104D

143. Section 104D requires that a non-complying activity must pass one of the two gateway tests: that adverse effects are minor, or that the application is not contrary to the objectives and policies of the relevant plans.

144. As outlined earlier, in our view adverse effects are no more than minor, and the proposal is generally consistent with the relevant objectives and policies of both the pSLWP and RWP. Both gateway tests are therefore met and there is no barrier under s104D to granting the consent.

PART II OF THE RESOURCE MANAGEMENT ACT 1991

145. Consideration of an application under s 104 is "subject to Part 2" RMA. The senior Courts have revisited the meaning of "subject to Part 2" in the context of resource consent applications, in light of *King Salmon*.[17]

[17] E*nvironmental Defence Society Inc v The New Zealand King Salmon Company Ltd* [2014] NZSC 38

146. In *Davidson*[18] the Court of Appeal determined that:

(a) In contrast to plan change processes, RMA decision-makers should usually consider Part 2 when making decisions on resource consents (that is the implication of the words "subject to Part 2" in s 104);

(b) where the relevant plan provisions have clearly given effect to Part 2, there may be no need to do so as it "would not add anything to the evaluative exercise". It would be inconsistent with the scheme of the RMA to override those plan provisions through recourse to Part 2. In other words, "genuine consideration and application of relevant plan considerations may leave little room for Part 2 to influence the outcome";

(c) use of conditional language ("may") suggests a residual discretion to consider Pt 2 RMA, but the point does not need to be resolved for this proposal.

147. No party contested that Pt 2 RMA was generally relevant. There has been a change in planning framework and the pSWLP is subject to appeal, and not yet operative, with a range of appeal points relating to the policy and rule framework. Accordingly, Pt 2 RMA is relevant to the proposal.

Section 6, 7 and 8

148. Sections 6 and 7 identify matters that must be recognised and provided for, and matters to which particular regard should be had. Section 8 requires that the principles of the Treaty of Waitangi are taken into account. Of relevance are Section 6(e) - the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga, Section 7(a) kaitiakitanga, 7(b) the efficient use and development of natural and physical resources, 7(d) the intrinsic values of ecosystems, 7(f) maintenance and enhancement of the quality of the environment, and Section 8.

149. The effect on water quality, which affects the values of ecosystems, the quality of the environment and the relationship of Ngāi Tahu with its ancestral lands, waters and taonga within the catchment, has been discussed earlier. As noted, adverse cultural effects are minor; and there is a small positive effect on water quality. The proposal provides for the efficient use of the land resource.

150. The purpose of the Act is to promote the sustainable management of natural and physical resources. Sustainable management involves managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety.

[18] *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316

151. However, the Act promotes the use and development of natural resources only while (s5):

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
(c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

152. In light of our findings on effects, we consider that the activity meets the purpose of the Act.

CONDITIONS

153. The Reporting Officer did not initially provide proposed consent conditions, resulting in the applicant providing the first version of proposed conditions in evidence. In response to a request from us, Mr Erceg provided draft consent conditions prior to the hearing, and we later sought a response from the applicant on those conditions. The applicant's changes were wide ranging, including the proposed removal of a number of them.

154. We have also borne in mind the principles of drafting consent conditions, as outlined by Mr Erceg. A primary function of the conditions is to limit the scope of the application to that applied for to ensure that adverse effects are acceptable (if further controls are necessary).

155. We also note that consent conditions are primarily a planning matter and therefore for the applicant, the views of Ms Copeland, the applicant's planning expert are most relevant. We did not find Dr Freeman's commentary on planning issues of great assistance. This is in contrast to Dr Freeman's expert evidence on water quality issues, which was of assistance for reasons identified above. We have therefore disregarded any comments attributed to Dr Freeman that were not explicitly agreed to by Ms Copeland, apart from any directly related to water quality or use of Overseer.

156. The major areas of disagreement between the applicant and Mr Erceg are discussed below.

Land use consent

157. We agree with Mr Erceg that controls in relation to the 22ha cut and carry block are appropriate to ensure that nutrient loss from this block is as assessed. Ms Copeland objected to controls on the land use on this block, arguing that the nutrient loss conditions manage the effects but allow flexibility in the use of land.

158. Land use controls on the 22ha block were raised during the hearing. It was our impression that the applicant accepted these controls as appropriate (noting *inter alia* the descriptor of the 22ha block as the "cut and carry" block). We consider that it is important that there be a consent condition preventing stock grazing for the block. Failure to include such a condition would prompt re-consideration of the overall merits and our decision to grant consent.

159. We note that the baseline nutrient restrictions applying to this block appear to be missing from the draft conditions. The baseline figures in the draft conditions are derived from Table 12 of Ms Hunter's evidence-in-chief and only include the main dairy unit. We have therefore added an additional condition limiting nutrient loss to that assessed by Ms Hunter on 15th May 2019 for this block.

160. A second area of disagreement between the parties relates to the inclusion of either a fixed annual limit for nutrient discharge, or a rolling average over four years. Dr Freeman and Ms Copeland relied on the recommendations in the report 'Using Overseer in regulation'[19], of which Dr Freeman was a co-author. This recommends that conditions that specify thresholds that require an Overseer estimate to determine compliance contain "a defined period of time over which the Overseer modelling must be undertaken – generally a minimum of three to five years". The report explains that averaging is recommended to avoid a 'mis-match' between the long term climate data which is used in Overseer model. Annual differences in management on the farm respond to the actual climate parameters in that year (for example, more or less rain than average). In this situation the nutrient loss estimates are highly uncertain and unlikely to represent the actual nutrient losses in that year. Averaging the outputs over several years can endeavour to address this inaccuracy.

161. Mr Erceg's concern was that averaging Overseer outputs over several years would potentially allow nutrient limits to be exceeded in one year. Given the degraded state of the downstream catchment, this would be unacceptable. He preferred the use of annual outputs, together with a requirement to report on any exceedance. The draft conditions do not specify the action to be taken in response to such a report.

162. Having considered the technical report and recommendations within in, we prefer the approach of the applicant, which is consistent with those recommendations. Averaging nutrient outputs over several years reduces the uncertainty described above and will still ensure that the applicant manages

[19] Freeman, M., Robson, M., Lilburne L., McCallum-Clark, M., Cooke, a. & McNae, D., 2016. Using Overseer in regulation – technical resources and guidance for the appropriate and consistent use of Overseer by Regional Councils. Report prepared by Freeman Environmental Ltd for the Overseer Guidance Project Board.

the property appropriately to maintain the baseline loss rates. Poor nutrient management on the property on an ongoing basis will soon be apparent.

163. A third area of disagreement was the proposed condition by Mr Erceg to limit intensive winter grazing on the Northern block on slopes above 7^{o} when soils are at or near field capacity. His view was that this reflected the proposed good management practice 'avoid grazing of steeper slopes especially when wet'[20]. He considered this to be hard to enforce and interpret as worded, and so included more certain wording in the consent conditions.

164. Ms Copeland's response was that the condition would effectively prohibit intensive winter grazing on the Northern block, and this was not intended. She considered that compliance with the relevant permitted activity conditions in Rule 20 of the pSWLP would ensure effects were not significant. We note that the requirements of Rule 20 (iii)(2) and (3) are included within the conditions of consent.

165. We agree with the applicant that inclusion of the permitted activity conditions as conditions of consent are an appropriate way to manage intensive winter grazing. We also note that under condition 31 of the draft conditions, the consent holder is obliged to operate in accordance with the FEMP at all times. However, the FEMP provided with the application is not final and we have no control over the final version. We therefore agree with Mr Erceg that this matter, which is a critical method for managing nutrient loss, is also included as a condition within the consent.

166. A fourth area of disagreement was in relation to the run off of nutrients from the dairy lanes. Mr Erceg's view was that no run-off of effluent should occur from dairy lanes. Ms Copeland considered that this was not possible. Her preference was the condition ensured that any run-off occurred onto pasture rather than directly to a surface water body.

167. We agree that is unlikely that all run-off from dairy lanes could be avoided, and that 'minimised' is a more appropriate term, with the added proviso of discharge only onto vegetated areas. We understand from Ms Hunter's evidence that the Overseer modelling includes nutrient loss from dairy lanes.

Discharge consent

168. The main issue raised by the parties in relation to the discharge consent was authorisation for the effluent storage facilities. Mr Erceg's draft conditions specify that this consent authorises the discharge of dairy shed effluent to land via an irrigator etc, and that incidental leakage from the effluent storage facilities is in accordance with Rule 32D. Ms Copeland's view was that any

[20] Included In the draft Farm Environmental Management Plan provided with the application as 'No grazing on steeper slopes when soils are near saturation'.

incidental discharge from the storage facilities is *de minimus* and/or be covered by the permitted activity provisions under Rule 32D, and so did not require separate authorisation.

169. Rule 32D requires consent for the incidental discharge from the storage facility, if the permitted activity criteria are not met (which is the case here). As previously noted, we have granted consent for that activity. We have treated this as a separate consent (AUTH-20181750-04) and transferred the relevant conditions, which were formerly proposed to be included in the discharge consent, to this consent. As discussed earlier, the primary requirement is for a pond drop test to be undertaken. We have allowed two years for that to occur. As we have granted consent for this activity, there is no need to restrict cow numbers to 1,000 until the pond drop test is complete, as proposed in the draft conditions.

170. Ms Copeland considered that the sludge bed and weeping wall be exempt from the pond drop test, as it is difficult to carry out this test on the weeping wall. Rule 32D does not distinguish between types of storage facilities. We have therefore retained this requirement; the consent holder will have two years to demonstrate compliance.

171. In response to Public Health South's request that effluent be treated with ozone prior to discharge, we accept Dr Freeman's evidence that this would be technically challenging and is not common practice. Public Health South did not provide any evidence to support its position.

Other matters

172. One matter of concern to the applicant was the linking of the land use, discharge and water permits; that is, that the land use permit shall be exercised in conjunction with the discharge and water permits and vice versa. In addition, a condition on the land use permit states that it shall not be exercised until both its predecessor land use permit and discharge permit have expired.

173. Mr Erceg's response was that the farming activity proposal includes the new discharge permit. The activity authorised by the previous discharge permit was not considered as part of the new proposal and should be surrendered. The previous land use permit should also be surrendered as it applies to the same piece of land but with different conditions, and only one or other permit should be exercised.

174. We agree with Mr Erceg that the two sets of consents cannot be exercised contemporaneously. The subject proposal was a fresh proposal and not a variation under s127 RMA. The applicant has the right of election whether to commence the new consents. Once that election is made, the old consents

should be treated as surrendered. To avoid doubt, this is the subject of a consent condition as recommended by Mr Erceg.

175. A second matter was the need for the (presumably) standard condition requiring that the activity is carried out in accordance with the application details and subsequent information. While we agree with the applicant that it is not necessarily helpful where a proposed activity has evolved through the application process and a consent document should be self-contained, we are reluctant to remove a condition that Environment Southland presumably find useful in terms of monitoring a consent. Background documents may limit the scope of a consented activity in any event. We find that it is better to include the condition than delete it.

176. There were no substantive matters of disagreement in relation to the groundwater consent.

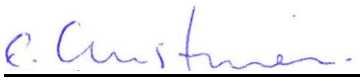
DURATION

177. The duration of any consent reflects a balance between risks such as changes to the environment or policy that means the assessed effects are no longer acceptable, and recognition of the investment in the activity, particularly, as in this case, where the activity is established. We believe that 10 years is an appropriate balance between these factors. We note that any adverse effects that become apparent in the future beyond those we have considered can be addressed by way of review of conditions.

DECISION

178. For the reasons given above we grant consents to use land for dairy farming, discharge dairy effluent onto land, use land for the maintenance and use of agricultural effluent storage facility (including any incidental discharge), and to take groundwater, with an expiry date of 10 years, subject to the conditions in Annexure A.

DATED the 18th day of June 2019

Signed: 

E Christmas, Chair

Signed: 

R Enright, Commissioner

ANNEXURE 1 CONDITIONS OF CONSENT

Discharge Consent AUTH-20181750-01

1. This resource consent shall not be exercised until Discharge Permit AUTH-302700-01-V1 is surrendered or has expired.

2. Except as modified by the conditions of resource consent, the activities authorised by this resource consent shall be carried out in accordance with the application for resource consent (APP- 20181750) dated 5 October 2018 and all subsequent information provided during the application. In the event of any inconsistency the conditions of this consent shall prevail.

3. The discharge authorised by this consent shall only be to the land described in the table below and as shown on the Plan attached as Appendix 1 to this consent. Where there is inconsistency between the plan attached as Appendix 1 and the Conditions of this consent, the Conditions of this consent shall prevail.

Legal descriptions of Discharge Area	Part Section 21 Wairio SD, Section 132 Wairio SD and Section 131 Wairio SD
Map reference of dairy shed (NZTM 2000)	1216312E 4895217N
Property address	1570 Otautau Nightcaps Road, Otautau

4. The discharge permit authorises:
   a. The discharge of dairy shed effluent, vat stand effluent, tanker stand effluent and the effluent from other concreted areas associated with the dairy shed ("agricultural effluent") onto land, via a land disposal system consisting of a clay lined weeping wall and sludge bed and clay lined effluent storage pond to low rate pods, travelling irrigator and slurry wagon; and
   b. the incidental discharge of agricultural effluent directly onto or into land from the clay lined weeping wall and sludge bed and clay lined effluent storage pond which is within the normal operating parameters of a leak detection system or the Pond Drop Test criteria set out in Appendix P of the proposed Southland Water and Land Plan (Decisions Version 2018) or any subsequent replacement versions.

5. The activity authorised by Conditions 2 and 4 shall be limited to:
   a. The discharge to land of agricultural effluent generated from milking of up to 1,150 cows up to twice per day;
   b. The discharge to land of agricultural effluent via a:
      i. low rate k line pod system (or equivalent low rate system);
      ii. high rate travelling irrigator; and
      iii. high rate slurry tanker;

c. The discharge of agricultural effluent to an area of 245 hectares as per the plan attached as Appendix 1; and
d. The discharge of effluent from a vat stand, tanker stand and other concrete areas associated with the dairy shed with an impervious catchment area of 200m^2.

Advice Note
Routine monitoring inspections of this consent may occur up to two times a year. This number does not include any other required inspections and these inspections may be combined with the monitoring inspections required by Land Use Consent AUTH-20181750-03.

6. This consent shall be exercised in conjunction with Land Use Consent AUTH-20181750-03.

Agricultural Effluent Application

7. The discharge shall not exceed:
(a) For the low rate k line pod system (or equivalent low rate system), a depth of application of 15 millimetres for each individual application, and an instantaneous rate of 10 millimetres per hour;
(b) For the high rate travelling irrigator, a depth of application of 10 millimetres for each individual application, and an instantaneous rate of 10 millimetres per hour;
(c) For the slurry tanker, a depth of application of 5 millimetres for each individual application.

8. The minimum return period for the discharge of agricultural effluent to land shall be 28 days.

9. The discharge shall not occur when the moisture content of the soils is at or above field capacity.

10. Nitrogen loading onto any land area as a result of the exercise of this consent shall not exceed 150 kilograms of nitrogen per hectare per year (1 July to 30 June).

Exclusions

11. The discharge must not include:
(a) dairy shed effluent collected during 20 June to 20 July;
(b) effluent collected by a feed pad, calving pad, wintering pad or underpass;
(c) silage pad leachate;
(d) agricultural effluent to land from the clay lined weeping wall and sludge bed and clay lined effluent storage pond beyond the incidental discharge described in Condition 4(b), both during the construction

and operation of the clay lined weeping wall and sludge bed and clay lined effluent storage pond.

12. No discharge shall occur within:
    (a) 20 metres of any water body including natural wetlands;
    (b) 100 metres of any water abstraction point;
    (c) 200 metres of any place of assembly or dwelling not on the subject property; and
    (d) 20 metres of any property boundaries.

13. The stored or discharged agricultural effluent shall not enter any surface watercourse in any way, including:
    (a) directly;
    (b) indirectly;
    (c) by overland flow;
    (d) via entrainment by stormwater or run-off; or
    (e) via a pipe.

14. The stored or discharged agricultural effluent shall not:
    (a) form ponds or flow on the land surface, or
    (b) cause contamination of water.

15. The stored or discharged agricultural effluent shall not cause any offensive or objectionable odour beyond the boundary of the site as shown in Appendix 1.

16. Spray drift beyond the boundary of the site shall not occur.

Agricultural Effluent System Management

17. The discharge shall occur via an agricultural effluent storage facility of between 4,572 cubic metres and 8,511 cubic metres capacity.

18. The Consent Holder shall install and maintain:
    (a) an operational alarm that alerts the Person in Charge to any system failure that could cause the over-application, overflow or spilling of agricultural effluent (e.g. sudden pressure drop, irrigator stoppage); and / or
    (b) an operational automatic switch-off system that prevents any over-application or spilling of agricultural effluent.

19. Where the agricultural effluent reticulation system is installed in such a way that effluent can be siphoned when pumping ceases, the Consent Holder shall install and maintain an anti-siphon device in the agricultural effluent pipeline.

20. If the Consent Holder changes from a low rate pod system to an equivalent low rate system, the Consent Holder shall:
    (a) notify the Consent Authority in writing prior to the first use of the equivalent low rate system;
    (b) measure the depth and instantaneous rate of application of the irrigator as installed during the initial use of the equivalent system; and
    (c) supply the measurements to the Consent Authority within 20 working days of the test required by Condition 20(b) being undertaken.

Monitoring and Reporting

21. The Consent Holder shall notify the Consent Authority of the identity of the Person in Charge of the agricultural effluent pond and disposal system:
    (a) prior to the first exercise of this consent, and
    (b) no more than five working days following the appointment of any new Person in Charge.

22. In the event of the failure or mismanagement of the agricultural effluent disposal system, or any other event that may result in a discharge of agricultural effluent that may have significant adverse effect on water quality, particularly in the region of the abstraction point of a registered drinking-water supply, the Consent Holder shall notify, as soon as reasonably practicable, the following:
    (a) the Consent Authority (ph 03 211 5115 or 03 211 5225 after hours); and
    (b) Southland District Council (ph 0800 732 732)

Effluent Management Plan

23. Within three months of the first exercise of this consent, the Consent Holder shall prepare and submit to the Consent Authority a Collected Agricultural Effluent Management Plan. The Collected Agricultural Effluent Management Plan shall:
    (a) Detail the operating procedures and management relating to the clay lined weeping wall and sludge bed and clay lined effluent storage pond including any monitoring devices;
    (b) Describe how each component of the agricultural effluent system is maintained and have regard to the information provided in the pond storage calculations provided in the application;
    (c) Provide concise and clear direction to the Person in Charge and other staff on the operation of the agricultural effluent system;
    (d) Identify environmental risks of agricultural effluent discharges specific to the farm including, but not limited to, locations of drains, surface waterways, sub-surface drainage and critical source areas in the agricultural effluent disposal area;
    (e) Identify how the above environmental risks are avoided;
    (f) Identify the response to be undertaken in an emergency situation;
    (g) Describe how agricultural effluent is managed when soils are at or above field capacity and/or during adverse weather conditions;

(h) Describe how the stormwater diversion on the system is set up and managed;
(i) Include a schedule for undertaking any Pond Drop Tests and any monitoring required by this consent; and
(j) Provide the record and reporting requirements of any repair, maintenance or monitoring undertaken.

24. The Collected Agricultural Effluent Management Plan required by Condition 23 shall be reviewed at least once each milking season and an updated version shall be provided to the Consent Authority by 30 June each year.

25. The Collected Agricultural Effluent Management Plan may be amended at any time, provided it continues to adhere to the matters listed in Condition 23 of this discharge permit. The Consent Holder shall provide the amended version to the Consent Authority within one month of the amendment.

26. Effluent shall be managed in accordance with the Collected Agricultural Effluent Management Plan. Where there is inconsistency between the Collected Agricultural Effluent Management Plan and the Conditions of this consent, the Conditions of this consent shall prevail.

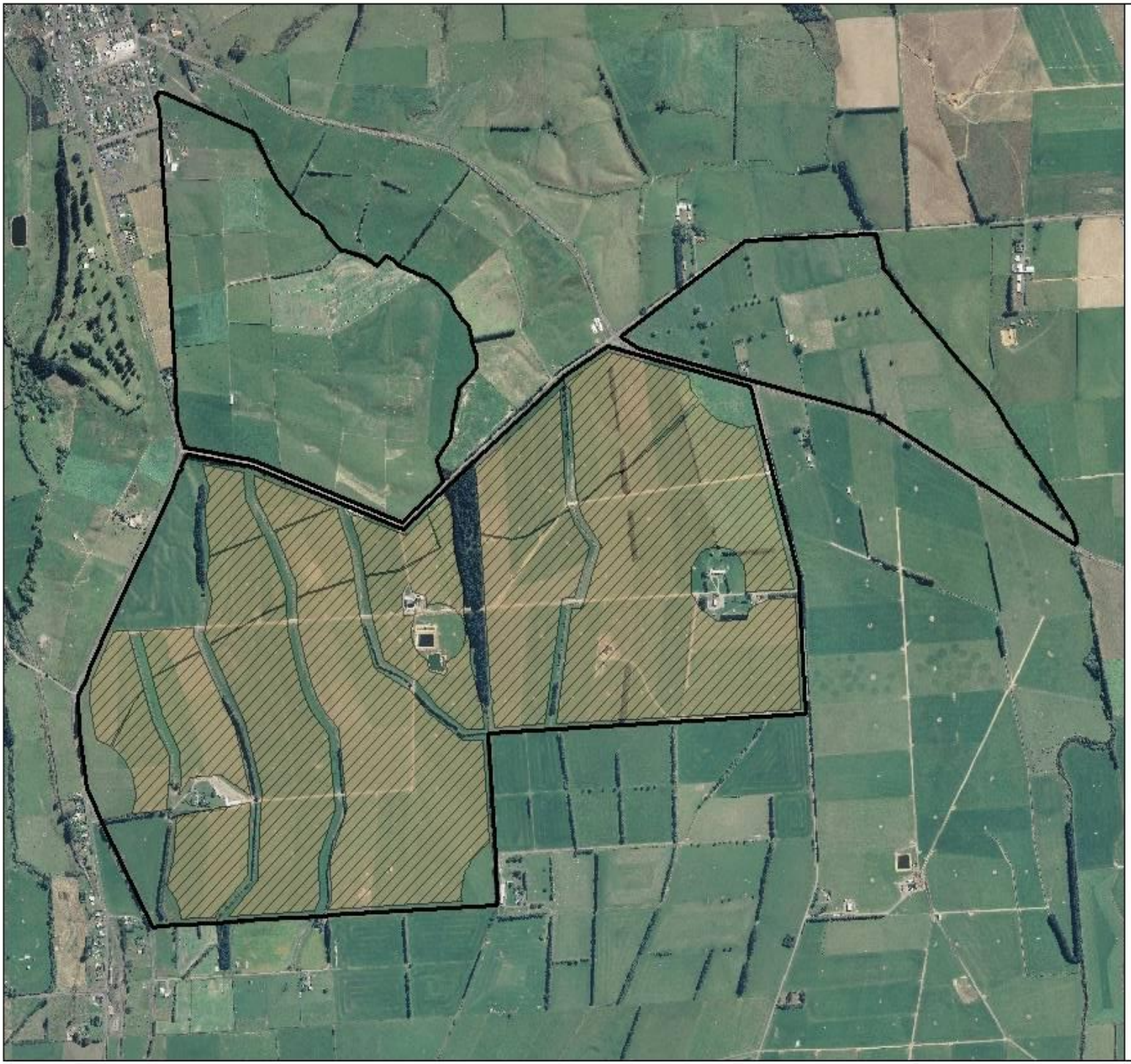
27. The Collected Agricultural Effluent Management Plan may be combined with the Farm Environmental Management Plan required by Land Use Consent AUTH-20181750-03.

Review of consent

28. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the Conditions of this consent during the period 1 February to 30 September each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, for the purposes of:
(a) Determining whether the Conditions of this permit are adequate to deal with any adverse effect on the environment, including cultural effects on Te Rūnanga o Ōraka Aparima and/or cumulative effects, which may arise from the exercise of the permit, and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the permit;
(b) Ensuring the Conditions of this consent are consistent with any National Environmental Standards Regulations, relevant plans and/or the Environment Southland Regional Policy Statement;
(c) Amending the monitoring programme to be undertaken;
(d) Adding or adjusting compliance limits;
(e) Ensuring the Aparima Freshwater Management Unit meets the freshwater objectives and freshwater quality limits set in an operative regional plan; and

(f) Requiring the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment arising as a result of the exercise of this permit.

AUTH-20181750-01 Appendix 1 – Agricultural Effluent Discharge Area



Appendix 1
FDE Discharge Area
Date: 8/05/2019

Dairyshed Effluent

Farm Boundaries

N

1:17,752

environment SOUTHLAND REGIONAL COUNCIL
Te Taiao Tāngata

While every effort has been made to ensure the content is correct, Environment Southland cannot guarantee the accuracy of the data. This information should not be reused in any manner without consultation.

DATA SOURCE: ES GIS 2019

Land use consent for dairy farming AUTH-20181750-03

1. This consent shall not be exercised until Land Use Consent AUTH-302700-02 and Discharge Permit AUTH-302700-01-V1 have been surrendered or expire.

2. Except as modified by conditions of resource consent, the activities authorised by this resource consent shall be carried out in accordance with the application for resource consent (APP-20181750) dated 5 October 2018, and all subsequent information provided during the application and the Farm Environmental Management Plan required by Condition 34.

3. For the avoidance of doubt, in the event that any inconsistency between the conditions of resource consent and the information and plans submitted as part of the application, the conditions of resource consent shall prevail.

4. This consent shall be exercised in conjunction with Discharge Permit AUTH-20181750-01, Water Permit AUTH-20181750-02, Land Use Permit AUTH-20181750-04 or any subsequent variation permits.

Advice Note:
Routine monitoring inspections of this property may occur up to three times a year. This number does not include any other required inspections and may be combined with the inspections required for Discharge Permit AUTH-20181750-01.

5. The use of land for farming shall occur on the landholding at 1570 Otautau Nightcaps Road, Otautau, as shown on the map attached as Appendix 1 and consisting of:

   (a) a block of land referred to as the "Northern Block";

Legal Descriptions	Part Section 17 Wairio SD
Map Reference (NZTM 2000)	1215879E 4896140N
Property Address	49 Dryfe Street, Nightcaps

   (b) a block of land referred to as the "Existing Block";

Legal Descriptions	Part Section 21 Wairio SD, Section 132 Wairio SD and Section 131 Wairio SD
Map Reference (NZTM 2000)	1216312E 4895217
Property Address	1570 Otautau Nightcaps Road, Otautau

   (c) a block of land referred to as the "Eastern Block";

Legal Descriptions	Part Section 124 Wairio SD and Lot 1 DP 13608
Map Reference (NZTM 2000)	1217942E 4896072N
Property Address	418 Wreys Bush Nightcaps Highway,

	Otautau

(d) a block of land referred to as the "Cut/Carry Block";

Legal Descriptions	Section 336 Wairio SD and Part Section 122 Wairio SD
Map Reference (NZTM 2000)	1216026E 4896026N
Property Address	49 Dryfe Street, Nightcaps

6. The farming activities shall be limited as follows:
   (a) the Northern Block, the Existing Block and the Eastern Block shall be limited to grazing by:
      (i) a peak milking herd of no more than 1,150 cows;
      (ii) a maximum of 1,200 milking age cows; and
      (iii) a maximum of a further 350 mixed age and mixed sex cattle;
   (b) the Northern Block and the Existing Block may be used for intensive winter grazing;
      (i) from 1 May to 30 September (inclusive); and
      (ii) by a maximum of 1,200 milking age cows; and
   (c) the Cut/Carry block is used for the production of silage and supplementary feed.

Advice Notes

For the purposes of this consent, the following definitions apply:

- *Peak Milking Herd – the maximum of number milking cows that make up a herd*
- *Milking Age Cows – cows that are 2 years of age and older including dry cows and cull cows*
- *Intensive Winter Grazing - Grazing of stock between May and September (inclusive) on forage crops (including brassica, beet and root vegetable crops), excluding pasture and cereal crops*

Should the activities listed under Conditions 6 need to be changed the Consent Holder shall apply to the Consent Authority to amend their consent under Section 127 of the Resource Management Act 1991 or apply to the Consent Authority for a new permit.

Exclusions

7. The Eastern Block shall not:
   (a) be subject to intensive winter grazing;
   (b) be subject to cultivation or rotation of fodder crops;
   (c) have effluent solids applied; and
   (d) have any animals on pasture from 1 June to 31 July inclusive.

8. The Cut/Carry Block shall not:
   (a) be incorporated and/or used as part of the dairy platform; or
   (b) be used for the dairy farming of cows; or

(c) be used for the grazing of animals.

9. The grazing of young stock shall not occur on the landholding as described in Condition 5.

Advice Notes

For the purposes of this consent, the following definitions apply;

- *Young Stock – Cattle aged from weaning/rising 1 year olds to rising 2 year olds*
- *Dairy Platform - An area of a landholding where dairy cows being milked on a daily basis are kept during the milking season*
- *Dairy Farming of Cows - the farming, including grazing, of milking cows on land during the milking season*

Nutrient Management

10. The Consent Holder shall implement a soil testing regime to determine the soil fertility status over the landholding and fertiliser recommendations developed in line with the soil testing results.

11. The Consent Holder shall maintain a record of their soil testing regime, soil testing results and fertiliser recommendations and provide this record to the Consent Authority upon request.

12. The Consent Holder shall:
    (a) manage the application of fertiliser in accordance with;
        i. 'The Code of Practice for Nutrient Management (With Emphasis of Fertiliser Use)' Fertiliser Association, 2013, ISBN 978-0-47328345-2';
        ii. or any subsequent updates.
    (b) not apply fertiliser;
        i. to land during the period 1 June – 31 July inclusive;
        ii. within 10 metres of a surface water body (where there is no riparian strip/margin);
        iii. within 10m of any wetland boundary;
        iv. within 10m of any significant indigenous biodiversity site;
        v. within 20m of any bore;
        vi. when soil moisture capacity is exceeded; and
        vii. directly to land within a riparian strip/margin.

13. The Consent Holder shall ensure that Olsen P levels in the soils are maintained within the range of 30 – 32.

Nutrient Modelling

14. The Consent Holder must ensure that nitrogen and phosphorus losses to water from farming activities undertaken on the landholding as described in

Condition 5, are maintained at, or below the baseline contaminant loss rates of:

(a) 45kg/ha/yr nitrogen; and

(b) 1.2kg/ha/yr phosphorus

as estimated by the four-year rolling average loss rates using Overseer Nutrient Budgets (Overseer) version 6.3.1/OverseerFM, undertaken in accordance with the generally accepted best practice modelling including the applicable Best Practice Data Input Standards/OverseerFM User Guide. The four-year rolling average is defined as the average of the most recent four consecutive years' results starting from 1 July 2019.

Advice Note:

The baseline loss rate for nitrogen and phosphorus is the discharge below the root zone as modelled with OVERSEER® version 6.3.1, the farm system inputs described in the application, and in accordance with the OVERSEER® Best Practice Input Standards as of 8 May 2019. The baseline loss rate for nitrogen and phosphorus is also the discharge modelled by a subsequent version of OVERSEER® in accordance with Condition 15.

The determination of whether the contaminant loss rates have been met will be made using the contaminant loss from the most recent year, modelling using the latest version of OVERSEER®/OverseerFM.

15. If OVERSEER® version 6.3.1 is superseded the Consent Holder shall, within 12 months, remodel the baseline nitrogen and phosphorus loss rate described in Condition 14 using the current version of OVERSEER®, the application inputs and the current version of the Best Practice Data Input Standards.

16. The remodelled baseline nitrogen and phosphorus losses modelled in accordance with Condition 15 shall replace previous versions of the baseline contaminant loss rates under Condition 14.

17. Each and every year for the duration of this consent, using the current version of Overseer®/OverseerFM and in accordance with the generally accepted best practice modelling and the current Best Practice Data Input Standards, the Consent Holder must model:
    (a) the four-year rolling average of nitrogen and phosphorus loss rates;
    (b) the nitrogen and phosphorus loss rates for the previous year from 1 July to 30 June; and
    (c) the predicted nitrogen and phosphorus loss rates for the upcoming year from 1 July to 30 June.

18. A report must be provided to the Consent Authority by 30 September each year summarising the results of Overseer nitrogen and phosphorus loss modelling required by Condition 17. The report must include:

(a) a review of the Overseer input data to ensure that the annual nutrient budget reflects the farming system;
(b) an explanation of any differences between that nutrient budget and the annual nutrient budget of all previous years of farming undertaken under this consent;
(c) a comparison of the nitrogen and phosphorus losses in that budget with the baseline contaminant loss rate in Condition 14; and
(d) the names and summaries of the relevant qualifications and experience of the person(s) who prepared and (if relevant) reviewed the nutrient budget.

19. If any estimated four year rolling average nitrogen or phosphorus loss rate as modelled in accordance with Condition 17 exceeds the baseline loss rate set under Condition 14, the Consent Holder must, by 30 November of that year, prepare a report for the Consent Authority that details the measures that will be taken to ensure that nutrient losses are reduced to ensure compliance with the baseline contaminant loss rates.

20. The report required by Condition 19 must include:
(a) a detailed description of the measures to be taken; and
(b) for any mitigations proposed a detailed mitigation plan (taking into account contaminant loss pathways) that identifies:
i. the mitigations to be undertaken;
ii. the physical works required to complete the mitigations;
iii. the proposed implementation timeframes for each mitigation;
iv. the operation of the mitigation; and
v. the mitigations' potential effectiveness.

21. All Overseer modelling required by this consent must be undertaken by:
(a) a person who is a Certified Nutrient Management Advisor (CNMA) under the Nutrient Management Adviser Certification Programme (NMACP); or
(b) a Suitably Qualified Person who has demonstrated an equivalent level of expertise and whose modelling is reviewed by a CNMA.

22. The Consent Holder may use an alternative model that has been demonstrated to be equivalent to Overseer provided;
(a) the evidence to demonstrate equivalence is provided to the Consent Authority at least six months prior to submitting the relevant annual report as required by Condition 18; and
(b) the use of the alternative model is approved by the Chief Executive of the Consent Authority.

Mitigation

23. The consent holder must:
(a) identify critical source areas across the entirety of the landholding described in Condition 5 excluding the Cut/Carry Block;
(b) provide an aerial image showing those critical source areas;

(c) identify and provide a description of the measures that will be implemented to mitigate contaminant losses to water from those critical source areas.

Advice Note

For the purposes of this consent, critical source areas is defined as;

a. a landscape feature like a gully, swale or a depression that accumulates runoff (sediment and nutrients) from adjacent flats and slopes, and delivers it to surface water bodies (including lakes, rivers, artificial watercourses and modified watercourses) or subsurface drainage systems; and
b. areas which arise through land use activities and management approaches (including cultivation and winter grazing) which result in contaminants being discharged from the activity and being delivered to surface water bodies.

24. The measures identified in Condition 23(c) must, at a minimum, be in accordance with recognised dairy industry good management practice.

25. The information required by Condition 23 must be supplied to the Consent Authority within 12 months of the exercise of this consent.

26. Implementation of the measures identified in Condition 23(c) to mitigate contaminant losses to water from the critical source areas within the:
(a) Eastern Block must be completed, and confirmation including photographs (date and time stamped) supplied to the Consent Authority, by 30 September 2020;
(b) Northern Block and the Existing Block must be completed, and confirmation including photographs (date and time stamped) supplied to the Consent Authority, by 30 September 2021.

27. The Consent Holder must implement, undertake and/or maintain the following mitigation measures on the entire landholding as described in Condition 5:
(a) ensure water troughs are not situated in water flow paths;
(b) ensure gateways are not situated in water flow paths;
(c) fence all riparian margins to prevent stock access; and
(d) fence all surface waterbodies to prevent stock access.

28. On the Northern Block as described in Condition 5(a), the Consent Holder must:
(a) not graze stock on slopes above 7° when soils are at or near field capacity;
(b) cultivate along the contour of sloping land; and
(c) graze from the top to the bottom of the slope, leaving a 20 metre vegetated “last bite” strip to be grazed last.

29. The consent holder shall undertake maintenance of the existing and new dairy lanes as required to ensure they are contoured to minimise run-off of nutrients and ensure that any run-off occurs onto vegetated areas where it will not enter any surface water body.

30. The Consent Holder must cultivate:
    (a) with the contour of the land being used for cultivation and shall not cultivate up and down the slope; and
    (b) in accordance with Rule 25(a) of the Proposed Southland Water and Land Plan (Decisions Version), or any subsequent replacement versions.

31. When stock are being break-fed and/or intensively winter grazed on the landholding as described in Condition 5, the Consent Holder must:
    (a) back fence the stock to prevent stock entering previously grazed areas;
    (b) use portable feeders when supplementary feed is used;
    (c) ensure critical source areas and swales within the area being grazed are grazed last; and
    (d) maintain a vegetated strip and exclude stock from the outer edge of the bed of any surface waterbody (excluding ephemeral rivers) and any wetland for a distance of at least 5 metres.

Records and Reporting

32. The Consent Holder shall maintain records of the following practices undertaken on-farm for each year between 1 July and 30 June:

    (a) Fertiliser application, including rates;
    (b) Types of crops and total area of cropping, including winter feed/forage crops;
    (c) Cultivation methods;
    (d) Stock units with references to type, age and breed;
    (e) Effluent application areas;
    (f) All other inputs to the OVERSEER® nutrient budgeting model.

33. The records required by Condition 32 shall be supplied to the Consent Authority upon request.

Farm Environmental Management Plan

34. The Consent Holder shall have and maintain a Farm Environmental Management Plan (FEMP). The FEMP shall, in accordance with Appendix N of (Decisions Version) the Southland Water and Land Plan (or any updated version of the plan), demonstrate how the following outcomes are to be achieved:
    (a) nutrients are used efficiently and nutrient loss to water is minimised;
    (b) contaminant losses from critical source areas are reduced;

(c) cultivation is undertaken in a manner that minimises the movement of sediment and phosphorus to waterways;
(d) intensive winter grazing occurs in a way that minimises the loss of sediment, phosphorus and microbiological contaminants to waterways; and
(e) agricultural effluent and other discharges are managed in a way that avoids or minimises the loss of contaminants to water. Irrigation water is applied to meet plant demands and minimises the risk of leaching and run-off.

35. The FEMP required by Condition 34 shall also include but not be limited to:
(a) a site map showing the location of critical source areas; physiographic zones; permanent or intermittent rivers, streams, lake, drains, ponds or wetlands; where known the location and depth of any subsurface drainage systems including outlets, riparian vegetation and fences adjacent to waterways and stock access points across waterways;
(b) details of the implementation and maintenance of mitigation measures required by the conditions of this consent;
(c) details of the implementation and maintenance of Good Management Practices, including adoption of changing industry good management practices. This includes where the implementation of these is to avoid, remedy or mitigate any farm specific environmental risks to water quality shown through any monitoring undertaken on the property voluntarily or as required by the conditions of this consent;
(d) a property specific environmental risk assessment, including:
    i. a description of the risks to water quality, prepared by a suitably qualified person; and
    ii. identification of any farm specific environmental risks, along with measures to mitigate the identified risks; and
(e) a review of the data obtained from the monitoring undertaken in accordance with the Farm Environmental Management Plan and any changes made, or to be made, as a consequence of that monitoring.

36. The Farm Environmental Management Plan must be reviewed once every twelve months and can be modified at any time by the Consent Holder.

37. The results of the review and any modification to the FEMP shall be supplied to the Consent Authority by 30 June each year or within one month of any modification to the FEMP being made.

Advice Note

The results from the review of the FEMP will be assessed by the Consent Authority to ensure that the FEMP will still achieve the objectives specified in the FEMP and the FEMP has been prepared in accordance with Appendix N of the Southland Water and Land Plan (Decisions Version) (or any updated version of the plan).

38. The Consent Holder must operate in accordance with the FEMP at all times. Where there is inconsistency between the FEMP and the conditions of the consent, the conditions of this consent shall prevail.

Auditing

39. The Consent Authority may request the Consent Holder to have the farm independently audited by a person who is a CNMA or a Suitably Qualified Person who has demonstrated an equivalent level of expertise.

40. The audit required by Condition 39 shall;
    (a) assess the performance of the farming activity occurring on the property against:
        i. the objectives and good management practices specified in the FEMP;
        ii. any additional mitigation measures implemented on the property either voluntarily or as required by the conditions of this consent; and
        iii. the baseline contaminant losses specified in Condition 14.

41. The audit required by Condition 39 must determine the level of confidence of achieving each objective set out in the FEMP. This level of confidence shall be categorised into the following:

    High = the objective is probably being achieved
    Medium = the objective is possibly being achieved
    Low = it is unlikely that the objective is being achieved.

42. The audit shall record the justification for each level of confidence assessment, including noting the evidence, or lack of, used to make the determination.

43. Where an objective has received a Medium or Low level of confidence, the audit shall include the actions required for the farm to meet the objective.

44. Where an objective has received a Medium level of confidence (and the farm has received no Lows), the audit shall also determine whether or not the farm is on-track to achieve the objectives.

45. The audit report shall be provided to the Consent Authority within three months of the date of the Consent Authority issuing a requirement to undertake the audit.

46. The frequency of audit requirements may be annually except where, for two consecutive years, an audit report has concluded that all objectives are probably being achieved (received a high level of confidence). In that situation no further audit will be required for at least three years.

Lapse and Review

47. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent during the period 1 February to 30 September each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purposes of:

    (a) determining whether the conditions of this permit are adequate to deal with any adverse effect on the environment, including cultural effects on Te Rūnanga o Ōraka Aparima and/or cumulative effects, which may arise from the exercise of the permit, and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the permit; or
    (b) ensuring the conditions of this consent are consistent with any National Environmental Standards Regulations, relevant plans and/or the Environment Southland Regional Policy Statement.

AUTH-20181750-03 Appendix 1 – Map of Landholding

Appendix 1
Landholding Boundary
Date: 8/05/2019

Landholding Boundaries

N

1:18,067

environment SOUTHLAND REGIONAL COUNCIL
Te Taiao Tonga

While every effort has been made to ensure the content is correct, Environment Southland cannot guarantee the accuracy of the data. This information should not be reused in any manner without consultation.

DATA SOURCE: ES GIS 2019

iii. Each verification shall be undertaken by a Consent Authority approved operator and a Water Measuring Device Verification Form shall be completed and supplied to the Consent Authority with receipts of service. These shall be supplied within five working days of the verification, and at any time upon request.

5. The Consent Holder shall provide maintain a record of the total volume of water abstracted each month. The Consent Holder shall provide this record to the Consent Authority by 31 May each year and at any other time on request.

6. Prior to the exercise of this consent, the Consent Holder shall notify the Consent Authority of the person who is in charge of the operation of this consent. If the person in charge changes during the term of this consent, the Consent Holder shall notify the Consent Authority of the new operator no later than five working days after that person takes responsibility.

7. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period 1 February to 30 September each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purposes of:
   (a) adjusting the consented rate or volume of water under Condition 2, should monitoring under Condition 5 or future changes in water use indicate that the consented rate or volume is not able to be fully utilised;
   (b) determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage;
   (c) ensuring the conditions of this consent are consistent with any National Environmental Standards Regulations, National Policy Statement, Water Conservation Order, relevant plans and/or any relevant Regional Policy Statement; or
   (d) adjusting or altering the method of water take data recording and transmission.

Land use consent AUTH-20181750-04

1. This consent authorises the use of land for the use and maintenance of:
   a) an existing clay lined effluent storage pond with the capacity to store between 4,572 cubic metres and 8,511 cubic metres of agricultural effluent; and
   b) an existing clay lined sludge bed and weeping wall facility.

Advice Note

The clay lined sludge bed and weeping wall facility consists of two clay lined sludge beds and a weeping wall that sits in between the two sludge beds

2. The structures authorised by this consent must be located as described in the tables below:

   a) The clay lined effluent storage pond as per Condition 1(a) shall be located at:

Legal descriptions	Part Section 21 Wairio SD
Map reference of structures (NZTM 2000)	1216365E 4895083N
Property address	1570 Otautau Nightcaps Road

   b) The clay lined sludge bed and weeping wall facility as per Condition 1(b) shall be located at:

Legal descriptions	Part Section 21 Wairio SD
Map reference of structures (NZTM 2000)	1216363E 4895125N
Property address	1570 Otautau Nightcaps Road

3. This consent shall be exercised in conjunction with Discharge Permit AUTH-20181750-01

4. Within 24 months of this consent being granted, and every three years thereafter, the Consent Holder must obtain and submit to the Consent Authority;
   a) written confirmation from a Suitably Qualified Person in accordance with Appendix P of the proposed Southland Water and Land Plan (Decisions Version 2018) or any subsequent replacement versions that the clay lined weeping wall and sludge bed and clay lined effluent storage pond meet the relevant pond drop test criteria of Appendix P; and
   b) written confirmation from a Suitably Qualified Person that the clay lined weeping wall and sludge bed and clay lined effluent storage pond have no visible cracks, holes or defects that would allow effluent to leak from the facility.

5. The confirmation required by Condition 4 must be accompanied by photographs (date and time stamped) of the clay lined weeping wall and sludge bed and clay lined effluent storage pond taken during the testing and visual assessment.

6. The assessments required by Conditions 4(b) must be undertaken when the interior embankments and floor of clay lined weeping wall and sludge bed and clay lined effluent storage pond is visible to the Suitably Qualified Person undertaking the assessments.

Advice Note

The clay lined weeping wall and sludge bed and clay lined effluent storage pond should be as empty and free from sludge as practicably possible during the visual assessments required by Condition 4(b), *to ensure all interior features of the structures can be adequately assessed.*

7. If the Pond Drop Test or visual inspections required by Condition 4(a) identifies that:
   (a) the incidental discharge is not within the drop test criteria of Appendix P of the proposed Southland Water and Land Plan Decisions Version 2018 (or any subsequent replacement versions); or
   (b) there is any leakage outside of the normal operating parameters of the leak detection system; or
   (c) there are visible cracks, holes or defects that would allow effluent to leak from the facility,

   the Consent Holder shall notify the consent authority as soon as reasonably practicable.

8. Within five working days of notifying the Consent Authority under Condition 7, the Consent Holder shall advise the Consent Authority in writing of the steps that will be taken to ensure that the structure is made suitable for ongoing use, including:
   (a) any additional testing to be undertaken;
   (b) an outline of the proposed works to be undertaken to remediate the structure;
   (c) the timeframe for completion, which shall be no longer than three months;
   (d) where the timeframe is expected to exceed three months;
      i. the Consent Holder shall notify the Consent Authority that they will exceed the timeframe set out in Condition 8(c) and provide an expected date of completion;
      ii. a Chartered Professional Engineer shall undertake an assessment of the pond and submit a report to the Consent Authority, outlining the defects in the pond and the remedial works to be undertaken, a detailed completion timeframe and the suitability of the pond for use during the remediation works;
      iii. The Consent Holder shall submit a plan for their temporary operating procedures to the Consent Authority including what is required under Condition 8(f) and how they will manage their effluent;
      iv. If the pond is deemed not suitable for use under Condition 8(d)(ii), the Consent Holder shall empty the pond and not use it until the pond has been certified to be within the normal operating parameters of a leak detection system or the pond drop test criteria set out in Appendix P of the proposed Southland Water and Land Plan (Decisions Version 2018) or any subsequent replacement versions and this certification has been received by the Consent Authority;
   (e) identification of whether the works will require consent for reconstruction of the clay lined weeping wall and sludge bed and clay lined effluent storage pond (rather than the maintenance authorised by this consent);

(f) the additional mitigation measures that will be employed to minimise the adverse effects of the leaking structure prior to remediation being undertaken; and
(g) testing, certification, or inspections to be completed following the works to demonstrate that the structure is able to comply with the Conditions of this consent.

9. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period 1 February to 30 September each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purposes of:
   (a) determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
   (b) ensuring the conditions of this consent are consistent with any National Environmental Standards Regulations, National Policy Statement, Water Conservation Order, relevant plans and/or any relevant Regional Policy Statement.