

Consent Evaluation Report

Applicant:	Taumata Farming Partnership Limited	File No:	61 69 55A
Address of Site:	16 Earle Rd, RD1, Pukeatua 3880	Project Code:	RC23793
Application Number:	APP138290		

1 Introduction

Taumata Farming Partnership Limited (“the applicant”) has applied for a resource consent under non-complying activity rule 3.11.5.7 of Proposed Plan Change 1 (“PPC1”). The application is recorded as document number 10286952. A further application is made under s127 of the RMA to change existing consent AUTH137693.01.01 a consent which was granted under the same rule, in late December 2016.

The previous application/consent (AUTH137693.01.01).

The previous proposal involved the conversion of land from drystock to dairy use. The applicant owned and operated a 207 ha drystock block. The proposal was to purchase a contiguously neighbouring 61.7 ha dairy farm and to amalgamate this with 63.2 ha of rolling land in the drystock block to form a new 115.6 ha dairy milking platform (within a total property area of 268.7 ha). To meet contaminant and nutrient limitations as required under PPC1, a restructuring of the residual property and farming operations, was proposed. This was set out in a Farm Environmental Plan (WRC document number 9634013) lodged with the application. The application was duly granted on the 20th December 2016 subject to conditions.

The present applications.

A new consent is sought to enable the incorporation of a further adjoining 38.8 ha dairy support block into the overall dairy platform. Land used for dairy support is classified as “drystock” for the purposes of PPC1. Of the 38.8 ha, some 34.4ha of it will be grazed, creating a milking platform totalling 150 hectares (ie 115.6 + 34.4 ha) within a total property area of 307.5 ha ie (268.7 ha + 38.8 ha). The applicant advises various means for achieving an overall reduction in the contaminant loss “footprint” for the total platform going forward. These are set out in a draft Farm Management Plan produced to support the application. It is advised that these are additional to the actions identified as part of the previous consent granted.

A change under s127 of the RMA, is sought to AUTH137693.01.01 in order to ensure that, if granted, the new consent and the existing consent, are consistent. This includes ensuring the nitrogen leaching limit is consistent across the existing consent and the additional block. In this regard, the present application proposes a lower N loss rate for the entire platform as compared with the combined loss from the platform currently authorized by AUTH137693.01.01 and the new block as it was operated at the date of notification of the Plan (October 2016).

The new application is supported by a Farm Environment Plan (WRC doc ref 10727990) and OVERSEER® assessments, all prepared by Rachael Mitchell of Perrin Ag Consultants.

Note that the new authorisation sought does not include the discharge of dairy shed washdown water and effluent, nor does it cover other ancillary aspects of dairy operations such as earthworks, tracking or culvert installation that might be required. Should it be determined in future that these aspects require resource consent, then separate applications for such will need to be made. Accordingly, the scope of this assessment report is confined to the s9 land use for dairy farming purposes and s15 diffuse discharges of contaminants that go hand in hand with that land use.

This report assesses the applications against the statutory criteria in the Resource Management Act 1991 (RMA) and recommends whether consent should be granted for the proposed activity. This assessment relies on the following technical reports:

- (a) "Assessment of contaminant (nitrogen) loss status relating to the proposed land use change for Taumata Farming Partnership LTD in relation to Proposed Waikato Regional Council Plan Change 1- Waikato and Waipa River Catchments" by Reina Tamepo (WRC) document ref 10728971. Attached as Appendix 1.
- (b) "Technical Report for Consent Application (APP138290): Assessment of contaminant (phosphorus, sediment and microbial pathogens) loss status relating to proposed land use change for Taumata Farming Partnership Ltd in relation to Proposed Waikato Regional Council Plan Change 1 – Waikato and Waipa River Catchments" by Sue McConnochie (Semele Consulting Ltd) doc ref 10734019. Attached as Appendix 2.

2 Background and Description of Proposal

The proposal involves the incorporation of a 38.8 ha dairy support block into an existing, adjoining dairy platform, to create a new platform of 150 hectares.

The existing (consented) operation is in the Mangapiko and Puniu at Bartons Corner Road bridge sub-catchments which are Priority 2 sub-catchments (sub-catchments #38 and #40 respectively in the Plan Change 1, Map and Table 3.11.2). A tributary of the Owairaka Stream which feeds into the Puniu River, begins on the applicant's property.

The new 38.8 ha is within the Waipa State Highway 23 bridge Whatawhata sub-catchment, #34, which is also Priority 2 under Plan Change 1. In accordance with Plan Change 1, Glossary of Terms definition of 'property', a "property is considered to be within a sub-catchment if more than 50% of that property is within the sub-catchment". As the existing dairy operation is in Priority 2 (even if in 2 separate catchments) for the purposes of this assessment, the property is considered as Priority 2 where the greater proportion of the property is located which is the Puniu sub-catchment (#40).

To meet contaminant and nutrient limitations as required under PPC1, various actions and mitigations are proposed. These are described in detail in the Farm Environment Plan submitted with the application and are discussed in reports by Reina Tamepo and Sue McConnochie.

3 Status of Activities under the Plans

The proposal triggers rule 3.11.5.7 of proposed Plan Change 1 to the Waikato Regional Plan (WRP). The proposed Plan Change was publicly notified on 22/10/2016 and, in accordance with section 86B(3) of the RMA, rule 3.11.5.7 has effect from that date.

As a non-complying activity, the new consent sought requires to be assessed and determined in accordance with s104B and D of the Resource Management Act (RMA) 1991. These sections provide that the consent authority:

- may grant or decline the application and if grants, may impose conditions under s108; and
- may grant the application only if either:
 - the adverse effects of the activity on the environment will be minor; or
 - the application is for an activity that will not be contrary to the objectives and policies of both an operative plan and any proposed plan.

The change to existing consent AUTH137693.01.01 is classified as a discretionary activity in accordance with s127(3). For the purposes of making a decision, I consider that given the interdependence of the two applications, “bundling” is appropriate and that, accordingly, the tests relevant to non-complying activities should be applied for the applications viewed as a whole.

4 Process matters

The application was lodged with the WRC on 19/4/2017. The application was accepted under s88 on 2/5/2017.

Notice of receipt of the application was sent to various Iwi entities in accordance with Council’s standard procedures that give effect to statutory and JMA obligations. No follow up enquiries in relation to the application were received and, as I understand it, there has been no consultation between the applicant and affected Iwi.

On 26/4/2017, various information was sought from the applicant under s92(1) of the RMA. The process of fully obtaining all of the information required continued until 30/6/2017 when the finalised, updated Farm Environment Plan to support the application, was received. On the basis that the information request was not brought to finality until that date, the number of working days taken to process this application was well within statutory timeframe for processing a non-notified application.

5 Notification assessment

A decision on notification begins with an assessment of the adequacy of the information provided with the application. In my opinion that the information contained within the application is substantially suitable and reliable for the purpose of making a recommendation and decision on notification. The information within the application is sufficient to understand the characteristics of the proposed activity as it relates to provisions of the Regional Plan, for identifying the scope and extent of any adverse effects on the environment, and to identify persons who may be affected by the activity’s adverse effects.

With regard to the case for public notification (s95A), the structure of s95A is such that, subject to any “special circumstances” (s95A(4)), where the rule itself precludes notification (s95A(3)), this “trumps” earlier subsections s95A(1) and (2). That is the case here although the non-notification provision is a qualified one, as follows:

Consent applications will be considered without notification, and without the need to obtain written approval of affected persons, subject to the Council being satisfied that the loss of contaminants from the proposed land use will be lower than that from the existing land use.

Based on the technical assessment discussed in section 6 of this report, I consider that the qualification noted in this provision is satisfied in this case. However, s95A(3) is subject to s95A(4) which provides that despite s95A(3), the application must be publicly notified if there are “special

circumstances” that exist in relation to the application. I understand the case law on this point urges the decision-maker to consider whether the application raises unusual or exceptional aspects, whether the circumstances are outside the commonly occurring, or whether notification might bring something relevant to the decision-makers attention including, possibly, further information. I have considered these matters and conclude that there are no special circumstances here that would justify public notification. In particular, I do not consider the fact that this application is one of the first to be considered under the proposed Plan Change, is a circumstance which, of itself or in combination with other matters, is exceptional or unusual. Further, I do not consider that public notification would be likely to unearth further information which would assist the decision-maker.

Accordingly, I conclude that there is no case for public notification under s95A.

Turning to the case for limited notification (s95B), I consider that s95B(2) determines the matter. This requires that limited notification must be given to any affected persons unless a rule precludes it. As noted above, this rule does contain such a preclusion subject to a qualification regarding loss of contaminants, which I consider is satisfied in this case. Finally, to the extent that Sections 95B(1), (3) and (4), refer to affected protected customary rights groups and affected customary marine title groups, these matters are not relevant in this case.

Accordingly, I conclude that there is no case for limited notification under s95B and that therefore the application should be processed on a non-notified basis.

6 Assessment of environmental effects – s104(1)(a)

6.1 General

S104(1)(a) requires the WRC to have regard to any actual and potential effects on the environment of allowing the activity.

In doing so, s104(2) enables the Council to disregard an adverse effect on the environment if a plan permits an activity with that effect (“permitted baseline” effects). I have considered whether there are any significant “permitted baseline” effects that could potentially warrant discounting in the s104 assessment. In this regard, it is noted that rule 3.11.5.7 restricts land use change only when it exceeds a total of 4.1 hectares prior to 2026. It can be argued therefore that adverse effects associated with land use change up to 4.1 hectares, are “permitted baseline” effects that can potentially be discounted when considering the effects of this proposal. However, such a consideration would only be potentially relevant if the present proposal resulted in an increase in the loss of contaminants from the land compared with the prior land use. That is not the case here – loss of contaminants is predicted to decrease under the proposal, hence there is no need to consider whether the “permitted baseline” doctrine should be applied here at all.

S104(2A) requires the WRC to have regard to the value of investment when considering an application however this only applies where s124 affects the application which, in this case, it does not.

Sections 104(2B) and (2C) which apply to planning documents under the Marine and Coastal Area (Takutai Moana) Act 2011, are not relevant to this application.

S104(3)(a) requires that the Council not have regard to trade competition or the effects of trade competition when considering an application or any effects on a person who has provided written approval. No such effects arise in this case.

Finally, s104(3)(c)(i) provides that the Council must not grant a consent that is contrary to s107. Refer to section 11 for an assessment against s107.

6.2 Adverse effects

S104(1)(a) requires the Council to have regard to the “actual and potential effects on the environment of allowing then activity”. With regard to determining what “the environment” is for the purposes of this consideration, case law suggests that it includes the environment as it presently exists, overlain with any future modifications from the exercise of any permitted activities, or existing resource consents.

The consideration of effects in this case focuses mainly on the matters of primary concern under proposed Plan Change 1, namely the diffuse discharge of four contaminants – nitrogen, phosphorus, sediment and microbial pathogens – onto and into land as a result of farming activities. What is of particular relevance in this case, is how the losses of these contaminants that are predicted to occur under the proposed, ongoing land use, compared with that from the land use that previously occurred (ie at the date of notification of the Plan).

Staff from the Waikato Regional Council have provided to me, technical assessments of these matters and these reports are appended to this s42A report.

Nitrogen

Ms Reina Tamepo’s report assesses the leaching losses of nitrogen, as estimated using OVERSEER® (utilising the protocols set out in proposed Plan Change 1) that arise from the previous (existing) land use and the intended, new proposal. I do not repeat the detail of that report (found in Appendix 1) but reproduce below the essential OVERSEER® modelling conclusions as they relate to nitrogen:

- a. For the existing (consented) dairy platform – estimated nitrogen leaching loss of 29.5 kg N/ha;
- b. For the 38.8 ha grazing block (at Oct 2016) - estimated nitrogen leaching loss of 29.1 kg N/ha;

For the combined, average N loss of (a) + (b) - estimated nitrogen leaching loss of 29.4 kg N/ha

For the proposed new milking platform - estimated nitrogen leaching loss of 29.3 kg N/ha.

Overall decrease of 0.1 kgN/ha/yr (38 kg N).

Overall, based on Ms Tamepo’s conclusions, I am satisfied that there will be an overall reduction in N losses from the proposal (albeit small - 38 kg N) compared with the “baseline” nitrogen footprint.

Phosphorus, sediment and microbial pathogens

Ms S McConnochie has provided a report that assesses the likely losses of phosphorus, sediment and microbial pathogens. Ms McConnochie undertook a comparison of the likely losses under the proposal going forward, and compares them to losses likely to occur from the land uses at the notification date. Her assessment is a qualitative one, based on her experience and expertise. She

has considered the proposal following an inspection of the properties, discussion with the applicants and their agents and by reference to the Farm Environment Plan and the farming methods and proposed actions/timeframes identified to address specific risks. I do not repeat the detail of that report (found in Appendix 2) except to note her conclusion that “contaminant loss with respect to phosphorus, sediment and microbial pathogens will be less than that of the combined losses from the existing dairy platform and the new 38.8 ha block as it was operated prior to the date of notification of the Plan Change 1 (October 2016). The timeframes for actions contained in the FEP and appendices are achievable, measureable and realistic with clear identification of the person(s) responsible for each action.”

Overall, based on Ms McConnochie’s conclusions, I am satisfied that there will be an overall reduction in phosphorus, sediment and microbial pathogen losses from the proposal compared with the land uses as at the date of notification of the proposed Plan Change.

Overall assessment of effects

Overall, based on the technical advice received, there is a decrease in the estimated or expected losses across all four contaminants regulated under rule 3.11.5.7. It is reasonable to conclude therefore that the granting of this consent will not give rise to any adverse effects, in fact, there will be positive effects.

7 Assessment against policies and objectives

7.1 General

Section 104(1)(b) requires the consent authority, when considering an application for a resource consent, to have regard to any relevant provisions of:

- (i) An NES
- (ii) Other regulations
- (iii) An NPS
- (iv) The NZCPS
- (v) The RPS; and
- (vi) A regional plan or proposed regional plan

With regard to (i), (ii) and iv) above, there are no statutory instruments that are relevant to this application. An assessment against the relevant instruments follows.

Note that the Vision and Strategy for the Waikato River is addressed under 7.3 (Waikato RPS) below given that it is deemed to be part of the RPS. Notwithstanding that, the Vision and Strategy is acknowledged as the primary direction-setting policy document for the Waikato River, superseding any NPS or local authority policy documents that may be inconsistent with it.

7.2 NPS for Freshwater Management

The NPS for Freshwater Management 2014 (NPSFM) is relevant. This requires Councils to formulate freshwater objectives and set limits or targets to be achieved. The objectives, policies and methods contained in proposed Plan Change 1 have been designed to meet the requirements of the NPSFM and Tables 3.11.1 sets out the targets to be achieved. It can be assumed that with regard to water

quality matters, an application that is consistent with the objectives and policies of proposed PC 1, is consistent with the NPSFM.

7.3 Waikato RPS

The Waikato Regional Policy Statement is relevant. The health and wellbeing of the Waikato and Waipa River catchments is one of 6 key issues addressed by the RPS. Objective 3.4 is to restore and protect the health and wellbeing of the River as set out in the Vision and Strategy (deemed part of the RPS), and Policy 8.5 is to:

Recognise Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River – as the primary direction-setting document for the Waikato River and develop an integrated, holistic and co-ordinated approach to implementation.

Proposed Plan Change 1 is the direct result of this Policy. With regard to water quality matters, activities which are consistent with the proposed Plan Change can also be regarded as consistent with, and giving effect to, the above policies and objectives of the RPS.

7.4 Waikato Regional Plan

7.4.1 Operative plan

The key, relevant provisions of the operative Waikato Regional Plan are the water resource management objectives, policies and methods in Chapter 3.2 of the Plan. These establish water management classes for all waters of the Waikato Region (these indicated in maps attached to the Plan). Each class is supported by specific standards designed to give effect to the policy purpose behind the classification.

The water management class which is relevant in this case is “Waikato Region surface water” (a “base” set of standards that apply everywhere). Method 3.2.4.1 states that the Council will “have regard to” the policy of each class when assessing activities requiring resource consent that affect water bodies. The policy relevant here (Policy 4) is to:

Enable the use of all surface water bodies in the Region, provided that:

- a) Any significant adverse effects on existing aquatic ecosystems are avoided, remedied or mitigated.*
- b) Intake structures are designed to minimise fish entrapment.*
- c) Any conspicuous change in visual colour or clarity is avoided, remedied or mitigated.*
- d) The water body is not tainted or contaminated to the extent that it is unpalatable or unsuitable for consumption by humans after treatment (equivalent to coagulation, filtration and disinfection).*
- e) The water body is not tainted or contaminated to the extent that it is unsuitable for irrigation or stock watering.*

In my opinion, because there is likely to be a decrease in the key contaminants arising from the land, there are no aspects of the subject proposal that will be inconsistent with this policy and there are no other objectives or policies in the Plan that require consideration.

7.4.2 Proposed Plan Change 1

Under proposed Plan Change 1 this land use change proposal is a non-complying activity under rule 3.11.5.7 of Chapter 3.11. The proposed plan change addresses the adverse effects of four contaminants (nitrogen, phosphorus, sediment and faecal pathogens) in the Waikato and Waipa River Catchments. The provisions of chapter 3.11 are designed as a first step (Objective 3) towards an 80 year target (Objective 1) of restoring and protecting the catchment's water quality to the extent that enables it to be swum in, and for food to be taken from it. There are various policies that support these objectives including the need for farm plans, reduction of contaminants from farming activities and fencing of streams. The policy which is particularly relevant to this application, is Policy 6 which is a key part of a policy framework that seeks to essentially prevent land use change during the period of the Plan, which results in increases in the loss of any of the four contaminants. Policy 6 provides that:

Policy 6: Restricting land use change

Except as provided for in Policy 16¹, land use change applications that demonstrate an increase in the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens will generally not be granted. Land use change applications that demonstrate clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens will generally be granted.

Policy 6 is clear in its language and strongly directive in its intent. As I understand current case law, where the relevant policy framework is unambiguous and strongly directive, then that is as far as the decision-maker needs to go. In these circumstances, there is no need to resort to Part 2 of the RMA because Part 2 is already given effect to in the fabric of the policy framework. This recent case law essentially overturns the previously accepted "overall broad judgement" approach under Part 2.

Notwithstanding this, it is necessary to consider the weight that should be given to this policy in light of the fact that the Schedule 1 plan process is at an early stage.

7.4.3 Weight to be given to Policy 6

Given that proposed Plan Change 1 has only recently been notified, it is appropriate to consider the weight that should be given to Policy 6 when determining this application. As I understand RMA case law, the weight to be given generally depends upon the stage of the Schedule 1 process the policy has reached, the weight generally being greater as a proposed plan moves through the process. However, that is only one consideration. Case law also suggests that weight to be given is dependent upon other factors including the extent to which the measure has been subject to independent decision-making, possible injustice to the applicant or others, and the extent to which the new measure may implement the objectives and policies of the plan. In considering these matters I note as follows:

- (a) The plan and rule are at early stages in the Schedule 1 process and at this stage it is not clear to what extent submissions may support or oppose the proposed restrictions on land use change. On the other hand, Policy 6 was developed through an extensive, lengthy, collaborative stakeholder process which was independent of the Council itself. In this regard, I consider that both the level of scrutiny to which Policy 6 and its alternatives were subject, and the collaborative and independent nature of the policy development process overall, are relevant to the weight that should be given Policy 6;
- (b) Policy 6 is a fundamental plank of the overall policy approach. It cannot be considered ancillary or of secondary importance. It is clear from the s32 analysis of options that

¹ Relating to land returned under Treaty of Waitangi settlements and multiple-owned Maori land.

restricting land use change where that results in intensification, was considered an essential component of, and prerequisite for, success of Plan Change 1 to achieve the interim water quality targets;

- (c) There are no other rules in the WRP that regulate the use of land for farming per se in the Waikato/Waipā Catchment (although various rules regulate activities that are ancillary to farming). Thus, there are no policies in other parts of the WRP that overlap or conflict with Policy 6;
- (d) With regard to potential injustice to the applicant or others, while the policy documentation (eg the s32 analysis) clearly indicates that there will be adverse economic impacts arising out of the collective measures proposed, this is not the same as injustice. In this regard, I would simply note that land use change restriction was publicly signalled some months prior to the plan change being notified and that the framework itself does provide a pathway for land use change subject to specified environmental outcomes being achieved.

Finally, it is worth noting that the option was available under s86B(1) to delay the rule's effective date. The decision to introduce rule 3.11.5.7 in such a way as to have immediate effect upon notification, was a deliberate choice made in the development of the policy framework having regard to its likely impacts and the potential consequences of the alternatives. To give little weight to the critical policy that guides decision-making under the rule, would be to potentially undermine the integrity of the proposed Plan Change.

Having regard to all of these factors together, I consider that considerable weight should be given to Policy 6 in the determination of this application.

7.4.4 Assessment

The non-complying activity rule status along with the provisions of Policy 6, provide clear and strong direction for decision-making when determining applications under rule 3.11.5.7. Based on the technical appraisals undertaken and referred to in Section 6 of this report, I consider that granting the proposal would be consistent with Policy 6, in that it is likely to result in decreases in the loss of contaminants compared with that which would occur under the existing land uses.

With regard to nitrogen, it is noted that the modelled decrease in N loss is 38 kg N over the entire dairy platform. Viewed as a per hectare loss (comparing the combined consented N load for the existing operation plus the estimated N load from the 38.8 ha at October 2016, with the total combined N load going forward) the decrease is from 29.4 to 29.3 kgN/ha/yr. Whilst this is arguably very small, it is nonetheless a decrease as estimated by the model and methodology upon which quantitation of, and compliance with, nitrogen losses under PPC1 are based. In my view, the decrease shown is consistent with Policy 6. It is also noted that the applicant has disadvantaged itself by essentially undertaking a two step process to obtaining consent for two separate blocks. The first step involved a far more significant reduction in N. Had the two been processed as a single consent application, the demonstrated decrease in N would have been more substantial. Taking a wider view of both applications, it is clear that the overall N footprint is clearly smaller, going forward. This is consistent with the objectives and policies of proposed Plan Change 1.

8 Gateway test – s104D

8.1 S104D

S104D provides that the consent authority may grant the application only if either:

- the adverse effects of the activity on the environment will be minor; or

- the application is for an activity that will not be contrary to the objectives and policies of both an operative plan and any proposed plan.

Case law has addressed the meaning of “contrary to” in this context. My understanding is that it is not to be interpreted as mere non-compliance with the plan, but rather as something which is “opposed in its nature” or “repugnant” to the plan.

8.2 Assessment

The “gateway” test is satisfied if either of the tests specified above, is satisfied. In Section 6 of this report, I conclude that there will be no adverse effects in relation to losses of contaminants. In Section 7 of this report, I conclude that the proposal is consistent with the policies and objectives of the national and regional planning instruments, to the extent that they are relevant to this proposal. In my view, both the effects and policy tests are satisfied. Accordingly, the “gateway” test is met and the Council has jurisdiction to grant this application.

9 Section 104(1)(c) – Other matters

9.1 Iwi Management Plans

The applicant’s property appears to be located in an area of overlap between the Raukawa and Maniapoto Environmental Management Plans. Each of these is discussed below.

Section 2.1 of the Raukawa Environmental Management Plan 2015 addresses water. The Plan identifies a wide range of water-related issues including the intensification of agriculture and land use change resulting in an increase in the discharge of nitrogen, phosphorus, sediment and bacteria to water bodies. In Section 2.1.5 Raukawa advocates for water policy, essentially to give effect to the Vision and Strategy for the River, and to develop the policy framework for doing so, in a way that provides for Raukawa values and interests in decision-making. Proposed Plan Change 1 is the result of a co-governance approach to policy development, including decision-making representation from all of the Waikato River iwi (including Raukawa). The policy is designed to give effect to the Vision and Strategy.

Part 14 of the Maniapoto Environmental Management Plan addresses Fresh Water. Objective 14.3.1 refers to Maniapoto waters being healthy and enhanced to protect the relationship between Maniapoto and water bodies. Objective 14.3.2 refers to restoring and enhancing the mauri of Nga Wai o Maniapoto and protect Te mana o te Wai. There is a raft of policies and actions that support each objective. In my view, proposed Plan Change 1 is consistent with the achievement of these objectives and policies, to the extent that proposed Plan Change 1 is relevant to them.

With regard to both the above Management Plans, I consider that the consent sought is clearly consistent with them.

10 Section 105

This section relates to discharge permits only and requires the consent authority, having regard to the nature of the discharge and the sensitivity of the receiving environment to adverse effects, to consider whether there are viable alternatives (ie method of discharge, receiving environment) to that proposed. Given the nature of discharge in this case, and its inextricable connection to the land use itself, questions of alternatives are not relevant. In any event, the case for consideration of alternatives arguably only arises where there are identifiable adverse effects arising from the

proposal. Given that the granting of this consent would result in an overall decrease in contaminant loss, that is not the case here.

11 Section 107

Section 107 is a jurisdictional section that prohibits a consent authority from granting a permit to discharge a contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water, where that is likely to give rise to specified effects in the receiving waters. Most of the specified standards are relevant to surface waters only, not ground water (eg visual clarity, effects on aquatic life). Only one standard is relevant to ground water namely (f) the “rendering of fresh water unsuitable for consumption by farm animals”. In this case, I do not consider that s107 is a barrier to granting consent. It is highly unlikely that any of the specified effects will arise due to the diffuse nature of the discharge noting also that the proposal will result in less contaminants being discharged onto or into land than is presently the case.

12 Part 2 matters

Part 2 of the RMA sets out the matters that must be considered when determining whether a proposal is consistent with the purpose of the Act (section 5), the sustainable management of natural and physical resources. The assessment against this purpose, must be informed by consideration of the relevant matters in sections 6, 7 and 8 being, respectively, matters of national importance, other matters, and the Treaty of Waitangi.

I have already concluded that, with regard to s104(1)(a), the proposal is likely to have only positive effects on the environment and, with regard to s104(1)(b), the proposal is consistent with the objectives and policies of the relevant policy instruments. Furthermore, as expressed in s7.4.2, there is no need to resort to Part 2 where the policy is clear and strongly directive, as it is in this case. For these reasons, it is unnecessary to record here a detailed assessment against Part 2 of the Act and I note that, in any event, I am satisfied that the granting of this application is consistent with the Act’s s5 purpose.

13 Consent duration

13.1 Statutory/plan provisions

Section 124 of the RMA contains the following provisions which are relevant to consent duration:

- A land use consent will be granted for an unlimited term, unless otherwise specified in the consent;
- A discharge permit will be granted for the period specified in the consent, not exceeding 35 years.

Given that the consent sought is hybrid land use/discharge permit, the more limiting restrictions applicable to a discharge permit apply ie duration must not exceed 35 years.

The proposed Plan itself includes no guidance as to duration.

13.2 Assessment

I have considered the matter having regard to the following:

- (a) The effects of the proposal are (net) positive;
- (b) The proposal is fully consistent with the objectives and policies of Proposed Plan Change 1;
- (c) The applicant has requested a duration until 2030. This would align with the duration for the existing consent AUTH137693.01.01 granted in December 2016.

As a preliminary issue, I note that rule 3.11.5.7 only has effect until 1 July 2026. (The intended purpose behind this was to reflect an intent that this restrictive rule be for a temporary period only, pending the adoption of contaminant allocation mechanisms for all land users at the next plan review). The expiry of this rule does not prevent the grant of a consent under it, for a longer period. However, there is a logic to aligning this land use consent to the time at which the next Plan review is likely to come into force. In this regard, s79(1) of the RMA requires that local authorities must commence a review of any provision of an operative plan, if the provision has not been the subject of a review during the previous 10 years. If the current plan becomes operative in 2020, then a review of its provisions must be commenced by 2030 or earlier. It is possible that the WRC may commence such a review earlier for the reason noted above, however this is by no means certain. Having regard to all of these matters, and the uncertainty around the time at which new Plan provisions may be promulgated, 2030 (as requested by the applicant) appears to be an appropriate duration. Furthermore, it is appropriate that this consent align (as it relates to duration) with the existing consent. This is reflected in the recommendation that follows.

14 Changes to consent AUTH137693.01.01

The following changes are recommended to existing consent AUTH137693.01.01 to ensure consistency with the new consent sought, assuming it is granted.

- (a) Condition 2 – change the docs reference for the FEP (as the FEP has been updated to reflect the additional land, and further mitigations);
- (b) Condition 3 – change the allowed nitrogen leaching loss to 29.3 kgN/ha/yr (which represents a 0.1 kgN/ha/yr reduction compared with the modelled, combined footprints of the existing consent and the new block as at Oct 2016);
- (c) Add a condition enabling a review of condition 3 during the period July to September 2019, and at 3 yearly intervals thereafter, for the purpose of reducing the nitrogen leaching loss if it exceeds the 75th percentile of Nitrogen Reference Points (as defined in Proposed Plan Change 1 to the Waikato Regional Plan).

15 Recommendations

I recommend that:

- These applications be processed on a non-notified basis; and
- in accordance with 104B and 104D, resource consent application APP137693 and necessary changes to AUTH137693.01.01 be granted in accordance with the duration and conditions prescribed in the attached Resource Consent Certificate.

The reasons for the recommendation to grant the applications are set out in this report and can summarised as follows:

- The actual and potential adverse effects of the proposed activities on the environment will be less than minor;
- The proposal is consistent with Regional Council policies and objectives and in particular Policy 6 of proposed Plan Change 1 to the Regional Plan;
- The proposal is consistent the purpose and principles of the RMA;
- There are no statutory matters that preclude the granting of consent (including s105 or s107).



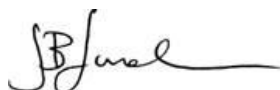
Date: 4/7/2017

Senior Advisor

Resource Use Directorate

16 Decision

- (a) That resource consent application APP137693 is granted in accordance with the above recommendation subject the terms and conditions set out in the certificate below.
- (b) That consent AUTH137693.01.01 be changed in accordance with the above recommendation and the Schedule following.



Date: 5 July 2017

Manager

Industry and Infrastructure Section

RESOURCE CONSENT CERTIFICATE

Resource Consent: AUTH138290.01.01

File Number: 61 69 55A

Pursuant to the Resource Management Act 1991, the Regional Council hereby grants consent to:

Taumata Farming Partnership Limited
124 Earle Road
RD1
Pukeatua 3880

(hereinafter referred to as the Consent Holder)

Consent Type: Land Use Consent

Consent Subtype: Land - other

Activity authorised:

1. The use of land for dairy farming on land which was, at 22/10/2016, used for drystock farming; and
2. The associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water.

Location: 16 Earle Road, Pukeatua

Legal description: 16 Earle Road:
Lot 1 Deposited Plan South Auckland 11727
Maungatautari No 3C Section 1 Block
Maungatautari No 3C Section 4A No 1
Part Maungatautari 3C 2 Block

Map reference: NZTM 2731986E 6343667N

Consent duration: This consent will commence on the date of decision notification and expire on 30 June 2030.

Conditions:

1. The consent holder shall pay to the Waikato Regional Council any administrative charge fixed in accordance with section 36 of the Resource Management Act 1991, or any charge prescribed in accordance with regulations made under section 360 of the Resource Management Act.
2. The consent holder shall undertake the actions within the timeframes specified in, and shall exercise the consent in general accordance with, the Farm Environment Plan (WRC document number 10727990) lodged in support of the consent application or, if there are approved changes to that Plan in accordance with condition 7, the current approved version of the Plan.
3. The allowed nitrogen leaching loss for the property to which this resource consent pertains, is the loss estimated by the OVERSEER® reference file data run through the latest version of OVERSEER®, which, at the time of the issue of this consent, is 29.3 kgN/ha/yr and which, in combination with AUTH137963.01.01, shall not exceed a total allowable nitrogen discharge of 9011 kgN/year.
4. The farming activities shall be undertaken in such a way as to ensure that, when they are modelled in OVERSEER® (or a model approved by the Waikato Regional Council), they do not exceed the allowed nitrogen leaching loss as specified in condition 3.
5. Where there are changes to the farming operation that are likely to increase the risk of loss of nitrogen, phosphorus, sediment or microbial pathogens (“the contaminants”), the consent holder shall provide an updated Farm Environment Plan that demonstrates how it intends to mitigate those risks.
6. The consent holder may propose changes to the Farm Environment Plan at any time.
7. Any changes or updates proposed or required under conditions 5 or 6, shall be submitted to the

Waikato Regional Council for its approval. Approval will be dependent upon whether the change is consistent with the objectives and policies of Plan Change 1.

8. The consent holder shall, between 1/9/2018 and 31/3/2019, register the information required under Schedule A of Proposed Waikato Regional Plan Change 1 – Waikato and Waipa River Catchments in the manner specified in Schedule A.
9. The consent holder shall, upon reasonable request by the Council, provide such information as may be required to demonstrate compliance with the requirements of the Farm Environment Plan, referred to in condition 2.
10. The consent holder shall, as a minimum, retain the following annual accounts and farm management records (which may be required to verify actual farm practices undertaken are in accordance with the approved Farm Environment Plan):
 - a. Fertiliser purchase records. Details shall be kept and provided in respect of:
 - (i) purchase date
 - (ii) fertiliser type
 - (iii) application methods
 - (iv) application rates
 - (v) areas fertilised
 - (vi) date(s) of application
 - (vii) spreader contractor details.
 - b. Stock details:
 - i. Transactions. These include purchases, sales and any grazing leases and invoices (formal or informal). Details shall be kept and provided in respect of:
 - details of the vendor and purchaser
 - stock numbers
 - stock class
 - stock breed
 - stock sex
 - date of purchase and arrival, or beginning of grazing, of stock on farm
 - date of sale and removal, or end of grazing, of stock on farm
 - stock transporter details;
 - ii. Natural increases and decreases in stock. Details shall be kept and provided in respect of:
 - number of births
 - dates of birth
 - weaning dates
 - dates of death;
 - c. Dairy production Records of annual milk production;
 - d. Imported, exported, and harvested supplements (for use on farm). Details shall be kept and provided in respect of:
 - Supplement type
 - Dry matter content

- Date of purchase or sale and vendor details
 - Invoices pertaining to the sale or purchase of supplements
 - Date and location (in or out of catchment) of use
 - Type of stock that supplement is fed to;
- e. Crop information. Details shall be kept and provided in respect of:
- Crop type
 - Location and area of crop (including in/out of catchment)
 - Cultivation date
 - Previous land use of cropped area
 - Dates of sowing, harvest and or grazing (start and end dates)
 - Date of sowing crop or pasture following main crop harvest
 - Contractor details;
- f. Cultivation or drilling invoices in cases where an area was cultivated or drilled for reasons other than establishing a crop - such as re-grassing;
- g. Irrigation records including:
- Area irrigated (including area depicted on a farm map)
 - Amount (mm) applied per month)
 - Proof of total water used for irrigation from telemetry or water meter records;
- h. Any invoices for details for contracted effluent spreading or pond solids, including map of area applied to;
- i. To scale maps identifying any changes in land use (e.g. converting grazed trees to fenced off ungrazed trees, ungrazed trees to grazed trees, farmed pastoral areas to tree plantations/ retired areas).
11. The Council may, within 3 months following the events noted in (a) and (b) below, serve notice on the consent holder of its intention to undertake a review of the conditions of this consent in accordance with the provisions of s128 – 132 of the Resource Management Act, for the purpose of amending or adding to the conditions of this consent to ensure they are consistent with the requirements of Plan Change 1. The events are:
- a. The notification of a decision on proposed Plan Change 1 under clause 10(4)(b) of Schedule 1 of the RMA 1991; and
 - b. When proposed Plan Change 1 becomes an operative plan in accordance with clause 20 of Schedule 1 of the RMA 1991.
12. The Council may serve notice on the consent holder of its intention to undertake a review of condition 3 during the period July to September 2019, and at 3 yearly intervals thereafter, for the purpose of reducing the nitrogen leaching loss if it exceeds the 75th percentile of Nitrogen Reference Points (as defined in Proposed Plan Change 1 to the Waikato Regional Plan).

Advisory Notes:

1. “Diffuse discharges” under the Activity Authorised in this certificate, refers to the discharge from animals of droppings and urine onto land, and includes such discharge in circumstances

which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water. For the avoidance of doubt, it includes seepage of contaminants into the ground from effluent storage facilities but does not include any discharge of effluent from a dairy shed effluent treatment system as permitted by the Regional Plan or authorised by a resource consent.

2. This resource consent is transferable to another owner of the land concerned, upon notice being given to the Waikato Regional Council, on the same conditions and for the same use.
3. Section 332 of the RMA authorises the Waikato Regional Council and its authorised contractors and agents access to the farm at all reasonable times to inspect farming activities for the purposes of determining compliance with the consent.]
4. The consent holder may apply, at any time, to change the conditions of this consent under s127 of the Resource Management Act.
5. In accordance with section 125 of the RMA, this consent shall lapse five (5) years after the date on which it was granted unless it has been given effect to before the end of that period. The consent holder may, prior to the lapse date, also apply for an extension to the lapse date under s125 (1)(b) of the RMA.
6. This resource consent does not give the consent holder any right of access over private or public property. Arrangements for access must be made between the consent holder and the relevant property owner.
7. The consent holder should note that under s35 of the RMA, the Council has statutory obligations to monitor compliance with resource consents that have effect in the Region. Council policy is to recover the actual and reasonable costs of such monitoring.

SCHEDULE

Changes to consent AUTH137693.01.01

(1) Condition 2 - change reference to “WRC document number 9634013” to refer instead to “WRC document number 10727990”.

(2) Condition 3 – delete and replace with the following:

“The allowed nitrogen leaching loss for the property to which this resource consent pertains, is the loss estimated by the OVERSEER® reference file data run through the latest version of OVERSEER® , which, at the time of the issue of this consent, is 29.3 kgN/ha/yr and which, in combination with AUTH138290.01.01, shall not exceed a total allowable nitrogen discharge of 9011 kgN/year.”

(3) Add new condition 12 as follows:

“(12) The Council may serve notice on the consent holder of its intention to undertake a review of condition 3 during the period July to September 2019, and at 3 yearly intervals thereafter, for the purpose of reducing the nitrogen leaching loss if it exceeds the 75th percentile of Nitrogen Reference Points (as defined in Proposed Plan Change 1 to the Waikato Regional Plan).”

APPENDIX 1

Technical Report for Consent Application:

Assessment of contaminant (nitrogen) loss status relating to
the proposed land use change for Taumata Farming
Partnership LTD in relation to Proposed Waikato Regional
Council Plan Change 1- Waikato and Waipa River Catchments

Prepared by: Reina Tamepo

Introduction:

In December 2016 Doug and Kathy Wallace applied for, and were granted a land use change consent (AUTH137693.01.01). They are now applying for an additional non-complying land use change consent to add 38.8ha currently run and owned by Hugh Wallace, to their existing dairy platform. This land use change consent is referred to as the 'Taumata TS2 block'.

The current dairy farm is 268.7ha, with the additional 38.8ha the total land area would be 307.5ha.

Proposed Plan Change 1 ("Healthy Rivers") rule 3.11.5.7 outlines that drystock to dairy conversions after the 22 October 2016 within a property or enterprise located in the Waikato and Waipa Catchment, where prior to July 2026 the change exceeds 4.1ha, requires a non-complying consent.

Policy 6 of the PPC1 states that land use change consent applications that demonstrate clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens will generally be granted. This report addresses the nitrogen aspect of the consent application.

The current 38.8ha is made up of 23.0ha of flat, 11.5ha of strong rolling, 0.5ha of easy hill knobs and 2.7ha of steep banks which have been earmarked for retirement from stock over the next three years. Non-effective area consists of sheds, house and tracks which account for 0.6ha with a further 0.5ha currently retired for riparian management.

Modelling of the Nutrient Budgets in OVERSEER® was completed by Rachel Mitchell of Perrin Ag, Rotorua. Rachael Mitchell is a Certified Nutrient Management Advisor.

The data required to produce a Nutrient Budget in OVERSEER® has been inputted as per the following:

- OVERSEER® Best Practice Data Input Standards
- Proposed Plan Change 1, Schedule B, Table 1 pg. 47.

When a conflict between OVERSEER® Best Practice Data Input Standards and requirements as outlined in PPC1, Schedule B, PPC1 will take precedent.

All evidence needed to produce the Nutrient Budgets has been checked and audited, an affidavit has also been provided in relation to stock numbers.

The following issues are not discussed in this report, each will need to be considered separately. This report focusses solely on Nitrogen under Healthy Rivers Plan Change One.

- Permitted activity rules for Farm Dairy Effluent under the Waikato Regional Plan
- Additional consents maybe required for:
 - Dairy shed wash down and cooling water consent
 - New track
 - Constructed Wetland

Nitrogen (N)

Nitrogen is a highly soluble nutrient and losses tend to be associated with drainage and leaching through the soil profile. Losses of the other contaminants i.e. phosphorus, sediment and E.coli, tend to be associated with physical processes, and so in general terms are lost via above ground surface run-off.

Modelling work completed by Perrin Ag Consultants (Rachael Mitchell) show (a slight decrease in N loss under the proposed system). The focus of mitigations are tailored to land management practices which better address contaminant loss via surface run-off processes (phosphorus, sediment and bacterial pathogens). However, nitrogen removal can also be enhanced by fertiliser management, stock management (no pugging and erosion), fenced and constructed wetlands/sediment traps which are also proposed by the applicant and outlined in more detail under 'Proposed Mitigations' below.

Proposed Enterprise:

Resource Consent granted in December (AUTH137693.01.01) outlined mitigations and timeframes under that FEP and resource consent, these will still be actioned in the agreed time. Management of the additional TS2 (38.8ha) block and combined blocks (TS2 and AUTH137693.01.01) are identified in the 'Farm Environment Plan – Taumata Stage 2'.

On approval of this proposed consent, Doug and Kathy will extend their dairy platform into the additional 38.8ha block. Some of the current races will be used but a main new race will be created as outlined and identified in the FEP.

The 'proposed system' is outlined in the FEP, the key points to note are:

- Milk Solids per cow are increasing to around 400kg
- Imported feed will be limited to 150 kg DM PKE, 65t DM Maize Grain, 50t DM Grass silage.
- Bring Olsen P levels up on the dairy platform to within optimal range (30-35). On some of TS2 blocks bring Olsen P down to within optimal range. The protocol used is identified in the FEP pg. 21
- 16 ha crop of chicory will be planted, this will be direct drilled.

Land Use Change Farm Nutrient Budgets

The section below outlines the Nutrient Budgets for the following blocks:

- Resource Consent Granted (AUTH137693.01.01)
- Taumata (TS2 38.8ha)
- Combined block – proposed system

Resource Consent (AUTH137693.01.01) Nutrient Budget

The OVR file for this consent was produced in December, following the application for an additional 38.8ha there has been one amendment in the OVERSEER® file, this was following a change in protocol when dealing with effluent solids. The following protocol is now used:

In the situation where an effluent pond has an efficient stirring system that results in minimal solids having to be removed (because the solids are irrigated onto the block through the gun with the liquids), it's all about representing in OVERSEER® the transfer of nutrients in the effluent onto the blocks.

The best way of getting around this in OVERSEER® is to select in the Pond solids data entry pane Spread on selected blocks, and enter in that the Ponds emptied every 1 year. Also ensure that the pond solids are "spread" on all the blocks receiving liquid effluent applications (i.e. every effluent block will have a liquid application and solids application).

The following summary has been taken from Don Hartford's technical report, in the first land use change consent.

Land Use Change Combined Farm Nutrient Budget

This proposal brings the two properties together to form a single enterprise of 268.7 ha. It proposes to milk 378 FxJ cows at peak milking, carry 14 bulls, 100 dairy cow replacements, and keep 100 R1 and R2 steers from the dairy herd.

Production is estimated at 138600 kg MS (1199 kgMS/ha and 366kgMS/cow). This is a lower intensity operation over a larger area (115.6 ha as opposed to 60.1 ha).

The proposal includes three blocks in trees and scrub totalling 33ha and 11.5 ha as Riparian planting.

The Steep Hill block proposes no dairy replacements on it from May to November, only sheep and dairy beef through this period. The Steep Riparian block has only sheep on this block from May to October.

The supplements imported are: 165 t DM PKE and 145 t DM of average pasture silage. This represents 0.82t/cow. Again a lower intensity of supplementary feeding over a larger number of cows. It also represents a lower tonnage of supplementary feeding (310 t v 416 t in total).

The crop of fodder beet/forage oats is removed from this new proposal.

Effluent spread has been moved to January, April, September and November, avoiding the May spreading of Kirkham Dairy.

The nutrient budgets assume capital fertiliser will be added and the Olsen P levels maintained at the range of 30-35.

The sheep stock numbers remain the same but the R1 and R2 cattle are reduced in numbers.

There is no wetland in the proposed nutrient budget due to protocols, but is outlined in the farm plan.

With the change in protocol for effluent solids, these are the OVERSEER® estimate values:

The OVERSEER® estimate for the RC granted (23533) NLL is 29 kg N/ha/yr

The OVERSEER® estimate for the RC granted (23533) total N is 7919 kg N/yr

Taumata 38.8ha Block

The land area for the Taumata Farm (TS2) is 38.8ha in total.

The block is currently being used as a dairy support owned and managed by Hugh Wallace. FxJ heifers are brought onto the property at weaning and carried through to June. The property has been owned by the Wallace family for many decades. The predominant soil type is Mairoa Ash with Ohaupo soils on the rolling and steeper country.

The stock numbers are supported by trucking receipts and an affidavit for stock numbers for the 2015-2016 year (refer to Figure 1).

Mob name	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
Dairy grazing (replacements) 1	0	0	0	6	76	96	96	96	96	96	96	96		
Dairy grazing (replacements) 2	105	108	108	108	108	108	108	106	129	134	97	97		
Dairy grazing (replacements) 3	3	0	0	0	0	0	0	0	0	0	0	0		
Bulls 1	0	0	0	6	4	4	0	0	0	0	0	0		

Figure 1 Stock numbers in OVR file (TS2)

Pasture production as estimated in OVERSEER® at 15.9t/ha.

The property has one historical soil test in a Mehlich calculation for phosphate levels. New Zealand commonly uses Olsen P, the transition of a Mehlich phosphate calculation to Olsen P is problematic and has an unacceptable margin of error. In May 2017 soil tests were undertaken on the property which showed high Olsen P levels (up to 50) on the TS2 blocks.

After much discussion, a fertiliser/soil test regime has been developed and is outlined in the FEP. This regime will help to mitigate the potential issues with high Olsen P levels. Please refer to pg 21 of the FEP for further details on the protocol developed. For further information on phosphate mitigations please refer to Sue McConnochie report.

The OVERSEER® estimate for the Taumata NLL is 29 kg N/ha/yr.

The OVERSEER® estimate for total nitrogen for the Taumata farm is 1130 kg N/yr.

Combined 38.8ha and Resource Consent Nutrient Budget

The new proposal brings the two properties together to enable Doug and Kathy Wallace to extend their dairy platform. The total land area will be 307.5ha.

It proposes to milk 480 FxJ at peak milking, carrying bulls, 22% replacements, and sheep numbers to be maintained at 300 ewes.

Production estimated at 191,000 kg M/S.

All drystock animals are removed from the property except 300 ewes with all lambs finished to the works and replacement mixed aged ewes brought in.

A 16 ha chicory block will be planted and rotated through the milking platform. The chicory will be direct drilled in October receive 100kg DAP/ha and side dressing of 25kg N in December, once crop is replanted to grass in March/April a further 120kg DAP will be applied at re grassing. A new methodology has been used to model Chicory in the OVERSEER® budgets, as per OVERSEER® Protocols.

Chicory (single species not a pasture mix) when established without full cultivation and the crop cycle is greater than 12 months, more than 25% of the pastoral area, or the same area is used for that crop continuously, it has to be entered as an annual ryegrass CROP (not fodder crop), BPDIS section 1.3.

Chicory (single species not a pasture mix) when established without full cultivation but has a cycle less than 12 months needs to be entered as an annual ryegrass as a FODDER CROP, BPDIS section 4.16 and Appendix 6.

Any chicory established using cultivation has to be entered as a crop or fodder crop as rape (respectively as per the conditions above)

The proposal includes two riparian blocks as outlined below:

- 2.7ha block.
 - This block will be lightly grazed until it is retired, which is in 3 years. This is identified in the current FEP.
- 1.1ha block.
 - Some of this block is already in retirement other mitigations are outlined in the FEP.

The farm will bring in supplement feeds of 50t DM silage and 65t DM maize and 150t DM Palm Kernel in the shed. This represents a lower tonnage of supplementary feeding (265 v 310 in total).

Grass silage will be made from the entire milking platform and effluent blocks, this will be fed back to these blocks.

Where liquid effluent has been applied, solid effluent application has also been applied, following the new methodology used.

The OVERSEER® estimate for the Taumata NLL is 29 kg N/ha/yr.

The OVERSEER® estimate for total nitrogen for the Taumata farm is 9011 kg N/yr.

Summary

The Overall Nitrogen footprint for the proposed operation is 29.3 kg N/ha/yr or 9011 kg N/yr total N.

With a maximum allowable N loss of 29.4 kg N/ha/yr or 9049 kg N/yr (refer to the following table for a breakdown of N).

There is a modelled benefit of **38 kg N** benefit for the proposed land use change.

Table 1 - NLL and Total N leaching

Block	NLL (kg N/ha/yr)	Total N (kg N/yr)	Land Area (ha)
Resource Consent (AUTH137693.01.01)	29.5	7919	268.7
TS2	29.1	1130	38.8
Total	29.4	9049	307.5
Proposed Land Use - Application	29.3	9011	307.5
Modelled Benefit	0.1	38	

Note: The differences here are based on total nitrogen discharge (as reported OVERSEER®)/total land area.

Please refer to Appendices for full nutrient budgets.

Appendices – Combined OVERSEER® Reports

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
Nutrients added							
Fertiliser, lime & other	65	16	22	52	13	6	0
Rain/clover N fixation	111	0	1	3	2	3	8
Irrigation	0	0	0	0	0	0	0
Supplements	19	4	10	3	1	2	1
Nutrients removed							
As products	50	9	11	3	13	1	3
Exported effluent	0	0	0	0	0	0	0
As supplements and crop residues	0	0	0	0	0	0	0
To atmosphere	44	0	0	0	0	0	0
To water	29	0.8	20	63	57	21	43
Change in farm pools							
Plant Material	7	0	-1	0	0	0	0
Organic pool	48	8	3	-8	1	0	0
Inorganic mineral	0	8	-10	0	-3	-2	-10
Inorganic soil pool	16	-6	11	0	-52	-10	-27

Figure 2 - Combined Nutrient Budget

Block name	Total N lost	N lost to water	N in drainage *	N surplus	Added N **
	kg N/yr	kg N/ha/yr	ppm	kg N/ha/yr	kg N/ha/yr
New Milking Platform ?	2,265	41	7.5	204	143
Easy Hill Country	636	30	N/A	173	116
Unutilised Scrub	37	3	N/A		
Pine Trees	32	3	N/A		
Native	31	3	N/A		
Combined Riparian	37	3	N/A		
Effluent 1 ?	859	38	7.2	186	143
Effluent 2 ?	897	39	7.3	188	143
Steep	742	16	N/A	90	0
Steep Riparian Mgmt	499	14	N/A	77	0
TS2 Flats ?	760	38	7.1	182	143
TS2 Rolling	514	45	8.7	216	143
TS2 Easy Knobs	14	28	N/A	125	0
TS2 Retired Trees	8	3	N/A		
TS2 Riparian	3	3	N/A		
Summer Chicory	1,224	77	11.2	148	138
Other sources	455				
Whole farm	9,011	29			
Less N removed in wetland	0				
Farm output	9,011	29			

Figure 3 - Combined Nitrogen Report

Block name	Total P lost kg P/yr	P lost to water kg P/ha/yr	P loss categories		
			Soil	Fertiliser	Effluent
New Milking Platform ?	31	0.6	Low	Low	Low
Easy Hill Country	18	0.9	Low	Medium	N/A
Unutilised Scrub	1	0.1	N/A	N/A	N/A
Pine Trees	1	0.1	N/A	N/A	N/A
Native	1	0.1	N/A	N/A	N/A
Combined Riparian	1	0.1	N/A	N/A	N/A
Effluent 1 ?	11	0.5	Low	N/A	Low
Effluent 2 ?	11	0.5	Low	N/A	Low
Steep	26	0.6	Low	Low	N/A
Steep Riparian Mgmt	19	0.6	Low	Low	N/A
TS2 Flats ?	10	0.5	Low	N/A	Low
TS2 Rolling	5	0.4	Low	N/A	Low
TS2 Easy Knobs	0	0.4	Low	N/A	N/A
TS2 Retired Trees	0	0.1	N/A	N/A	N/A
TS2 Riparian	0	0.1	N/A	N/A	N/A
Summer Chicory	4	0.3	N/A	N/A	N/A
Other sources	101				
Whole farm	241	0.8			

Figure 4 - Combined Phosphorus OVERSEER® Budget

Appendices – TS2 (38.8ha) Reports

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
Nutrients added							
Fertiliser, lime & other	37	16	41	1	0	0	0
Rain/clover N fixation	134	0	1	3	2	3	8
Irrigation	0	0	0	0	0	0	0
Nutrients removed							
As products	38	9	3	5	19	0	1
Exported effluent	0	0	0	0	0	0	0
As supplements and crop residues	0	0	0	0	0	0	0
To atmosphere	39	0	0	0	0	0	0
To water	29	0.5	20	24	79	28	56
Change in farm pools							
Plant Material	8	0	-2	0	0	0	0
Organic pool	38	13	6	-26	1	0	0
Inorganic mineral	0	17	-10	0	-3	-2	-11
Inorganic soil pool	19	-24	25	0	-95	-24	-37

Figure 5 - TS2 Whole Farm Nutrient Budget

Block name	Total N lost kg N/yr	N lost to water kg N/ha/yr	N in drainage * ppm	N surplus kg N/ha/yr	Added N ** kg N/ha/yr
Flats ?	525	26	4.4	115	42
Rolling	354	31	5.9	159	42
Steep	69	26	N/A	137	0
Easy Hill Knobs	14	27	N/A	138	0
Riparian	2	3	N/A		
Summer Chicory	150	58	8.7	77	42
Other sources	17				
Whole farm	1,130	29			
Less N removed in wetland	0				
Farm output	1,130	29			

Figure 6 - TS2 Nitrogen Report OVERSEER®

Block name	Total P lost kg P/yr	P lost to water kg P/ha/yr	P loss categories		
			Soil	Fertiliser	Effluent
Flats ?	4	0.2	Low	Low	N/A
Rolling	7	0.6	Low	Low	N/A
Steep	1	0.5	Low	N/A	N/A
Easy Hill Knobs	0	0.4	Low	N/A	N/A
Riparian	0	0.1	N/A	N/A	N/A
Summer Chicory	0	0.2	N/A	N/A	N/A
Other sources	6				
Whole farm	19	0.5			

Figure 7 - TS2 Phosphorus Report OVERSEER®

Appendices – Resource Consent (AUTH137693.01.01) OVERSEER® Reports

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
Nutrients added							
Fertiliser, lime & other	82	22	31	1	5	5	0
Rain/clover N fixation	92	0	1	3	2	3	8
Irrigation	0	0	0	0	0	0	0
Supplements	27	5	17	4	3	3	1
Nutrients removed							
As products	48	9	9	3	14	1	3
Exported effluent	0	0	0	0	0	0	0
As supplements and crop residues	0	0	0	0	0	0	0
To atmosphere	46	0	0	0	0	0	0
To water	29	0.8	21	12	56	21	41
Change in farm pools							
Plant Material	0	0	0	0	0	0	0
Organic pool	77	8	2	-8	0	0	0
Inorganic mineral	0	9	-7	0	-3	-2	-10
Inorganic soil pool	0	1	25	0	-58	-9	-25

Figure 8 - Whole Farm Nutrient Budget (AUTH137693.01.01)

Block name	Total N lost kg N/yr	N lost to water kg N/ha/yr	N in drainage * ppm	N surplus kg N/ha/yr	Added N ** kg N/ha/yr
New Milking Platform	2,709	43	8.0	210	186
Easy Hill Country	1,114	53	N/A	203	159
Unutilised Scrub	37	3	N/A		
Pine Trees	32	3	N/A		
Native	31	3	N/A		
Combined Riparian	34	3	N/A		
Effluent 1	1,120	43	8.0	209	186
Effluent 2	1,126	43	8.1	209	186
Steep	959	21	N/A	109	0
Steep Riparian Mgmt	448	13	N/A	99	0
Other sources	309				
Whole farm	7,919	29			
Less N removed in wetland	0				
Farm output	7,919	29			

Figure 9 - Nitrogen Report (AUTH137693.01.01)

Block name	Total P lost kg P/yr	P lost to water kg P/ha/yr	P loss categories		
			Soil	Fertiliser	Effluent
New Milking Platform	33	0.5	Low	Low	Low
Easy Hill Country	16	0.7	Low	High **	N/A
Unutilised Scrub	1	0.1	N/A	N/A	N/A
Pine Trees	1	0.1	N/A	N/A	N/A
Native	1	0.1	N/A	N/A	N/A
Combined Riparian	1	0.1	N/A	N/A	N/A
Effluent 1	20	0.7	Low	Low	Low
Effluent 2	19	0.7	Low	Low	Low
Steep	26	0.6	Low	Low	N/A
Steep Riparian Mgmt	19	0.6	Low	Low	N/A
Other sources	75				
Whole farm	212	0.8			

Figure 10 - Phosphorus Report (AUTH137693.01.01)

APPENDIX 2

**Technical Report for Consent Application (APP138290):
Assessment of contaminant (phosphorus, sediment and
microbial pathogens) loss status relating to proposed land
use change for Taumata Farming Partnership Ltd
in relation to
Proposed Waikato Regional Council Plan Change 1 –
Waikato and Waipa River Catchments.**

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Dated: 26 June 2017

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Introduction

This report concerns a proposal to convert a 38.8 ha block of land used at the date of notification of Proposed Plan Change 1 for drystock farming, to dairy farming. The block will be incorporated into an existing dairy platform for which land use change consent was obtained in December 2016.

My assessment has been to give consideration whether or not the mitigations proposed are adequate to provide assurance that contaminant loss is reduced under the new, larger enterprise, relative to the existing enterprise (as at the date of notification of the Proposed Waikato Regional Council Plan Change 1 – Waikato and Waipa River Catchments (Plan Change 1)).

With regard to this consideration, the following are noted:

- I have not considered nitrogen loss, this has been undertaken by Ms Reina Tamepo of Waikato Regional Council who is working with nitrogen loss models and will advise on this.
- This report instead focusses on phosphorus, sediment and microbial pathogens from the farming activities for the land to be converted (38.8 ha).
- I have taken into account the expert contribution to the previous consent granted (AUTH137693.01.01) for the current 115.6 ha dairy farm and 153.1 ha drystock operation where environmental mitigations are required to be undertaken in line with that consent.
- Consideration of the effluent system with regard to the current or proposed system has not been accounted for.
- There is currently no model readily available or capable of modelling contaminant loss from sediment or microbial pathogens. OVERSEER® does model nitrogen loss and to a limited extent phosphorus loss however still considered relatively coarse with regard to effectiveness of mitigations. Therefore, assessment of mitigations are based on my experience as a Land Management officer (Senior) at Waikato Regional Council, as a judge for the Waikato Farm Environment Awards and my understanding of good and best practice for land management.

Existing Enterprise

Resource Consent AUTH137693.01.01 was granted in December 2016 for a change of land use. That consent addressed the addition of 63.2 ha of rolling land from a drystock block (original size of the drystock block was 216.3 ha) to a 61.7 ha dairy farm to form a new 115.6 ha dairy milking platform. The residual 153.1 ha in the original drystock block remained in use for drystock /sheep and also riparian retirement due to a number of factors including steep topography for sheep / light stock grazing and wet gullies.

This consent application is for the majority of a 38.8 ha (also known as Taumata Stage 2 or 'TS2') property currently used as a dairy drystock support block to be amalgamated with the 115.6 ha dairy platform. The 38.8 ha currently carries between 95 – 140 animals with stock brought onto the property at weaning (November) and carried through until June a year and a half later. The block management is relatively fluid with heifers being moved on and off property for short periods of time as required.

This block is predominately Mairoa Ash with Ohaupo soils which have high phosphate retention. Topography is as follows: 19.6 ha flat, 15.5 ha strong rolling, 2.5 ha steep banks, 0.4 ha riparian retirement and 0.7 ha non-effective (house, tracks and sheds).

A 2.6 ha chicory crop was direct drilled on the flats in 2015-16 being managed as a multi-year crop. In addition, 390 bales (12 bale equivalents) were cut from the flat blocks and fed to the heifers.

Proposed Enterprise

A total of 34.5 ha of the 38.8 ha will be utilised as an extension of the adjacent main milking platform. The remaining 4.3 ha will be either fenced for riparian retirement or fenced where steep for short term grazing (until 2020 with young stock in summer and sheep in winter) until tree planting is undertaken.

The current races will be utilised and a new main race (not part of this consent application) will be created in the future to join the north east corner of the existing platform and the centre of this 38.8 ha.

The main waterway which is currently fenced from stock access will have additional adjacent areas retired as indicated on the maps provided as part of the Farm Environment Plan (FEP). An additional area (0.8ha) of the current main dairy platform (115.6 ha) is also to be retired as part of this consent application to assimilate sediment and nutrients from the proposed new farm race.

A constructed wetland / sediment trap is proposed on the eastern boundary with the main dairy platform.

Sub-Catchment Priority Status

The existing (consented) operation is in the Mangapiko and Puniu at Bartons Corner Road bridge sub-catchments which are Priority 2 sub-catchments (sub-catchments #38 and #40 respectively in the Plan Change 1, Map and Table 3.11.2).

The new 38.8 ha is within the Waipa State Highway 23 bridge Whatawhata sub-catchment, #34, which is also Priority 2 under Plan Change 1. In accordance with Plan Change 1, Glossary of Terms definition of 'property', a "property is considered to be within a sub-catchment if more than 50% of that property is within the sub-catchment". As the existing dairy operation is in Priority 2 (even if in 2 separate catchments) for the purposes of this assessment, the property will be considered as Priority 2 where the greater proportion of the property is located which is the Puniu sub-catchment (#40).

For the Puniu sub-catchment, Table 3.11-1 indicates that nitrogen targets for both short and long term are already met. Clarity and E.coli targets indicate some improvements are required for the Puniu sub-catchment. Note that only the main stem of the Waikato River has specific phosphorous targets, there are no sub-catchments with phosphorus targets (as outlined in the Section 32 Evaluation report, Part C2.2.8, page 67). Regardless of the above, Plan Change 1 requires Farm Environment Plans to identify, assess and specify actions to reduce discharges of all (sediment, nitrogen, phosphorus and microbial pathogens) contaminants.

Phosphorus (P)

Phosphorus is added to farm systems in the form of phosphate fertiliser for plant growth and also as imported feed. Because phosphate is relatively insoluble and attaches strongly to soil particles, a large proportion of P added to the system will be retained or 'fixed' to soil particles. Therefore, activities which disturb soil can contribute to losses of phosphate via erosion and surface water runoff into waterbodies.

The only historical soil tests for the 38.8 ha provides P as a Mehlich calculation which cannot be easily converted to Olsen P level (the standard method in New Zealand to assess phosphorus availability to plants, soil fertility and the P measurement used in OVERSEER®).

In May 2017 soil tests were undertaken and these showed very high Olsen P levels (up to 50) on the TS2 block and some areas of the existing dairy platform compared to the generally accepted range of 20-30 mg/L. The high Olsen P levels on TS2 and main milking platform will have been contributed to by the allophanic soil types that have a high phosphate retention. On TS2 two large dressings of phosphate fertiliser applied per year as part of a lease agreement during 1989 to 2002 and the current management continuing to apply phosphate since this time, will have also increased the Olsen P over time. It is noted that although the soil test results shows high Olsen P, it is only one test and long term soil tests from the same location build up a better picture of the soil nutrient status.

The fertiliser regime for the whole farm (main dairy platform and TS2 combined) as part of this consent application is identified in the current FEP (see page 21). This addresses:

- increasing Olsen P (capital P fertiliser applications will be required),
- decreasing Olsen P (mining of P with no application of P) and
- maintaining Olsen P within the optimal range (maintenance P fertiliser inputs).

The regime used for reduction of P will utilise annual soil tests and has used OVERSEER® to model what fertiliser is required to achieve the optimal levels. It is impossible to put an exact time frame on when the Olsen P levels will drop to within the optimal range, but it will occur over time and annual soil tests will form the basis for decision-making on fertiliser application.

In attending to high Olsen P levels, this has addressed how they intend to reduce P loss overall by an appropriate fertiliser regime. The FEP has been checked using OVERSEER® and I am confident the protocol developed will reduce the loss of P over the entire milking platform as a whole.

Mitigations have had to be considered that will counter the effect of the currently high Olsen P levels and also minimise the risk of phosphorus entering waterways in the future from soil loss. This is discussed in more detail under the title 'proposed mitigations'

Sediment

When soils erode, sediment is washed into streams and rivers. Sediment in waterways is often high in areas where river banks are grazed by livestock, on farms with steep slopes cleared of trees, and where there is a lack of riparian vegetation. Mitigations proposed to reduce sediment are highlighted in the section titled 'Proposed Mitigations'.

Microbial pathogens

Such pathogens are high in areas where there are stock and are discharged to streams and rivers mainly via stock in waterways, effluent irrigation and surface runoff. The next section outlines methods proposed to reduce microbial pathogens.

Proposed mitigations:

All of the following mitigations are set out in the FEP along with timeframes for implementing them.

1. **Steep land retirement.** The FEP proposes 2.7 ha steep erosion prone land be grazed by young stock in summer and sheep until 2020 and then planted in trees. The change in stock class on this area for the interim period should result in a significant improvement with regard to slope disturbance until planted.

After planting there will be no more soil disturbance and the trees over time will serve to stabilise the soils. Any tree planting undertaken will need to be mindful of not completely excluding sunlight to the ground so that grass growth is still provided which will assist in minimising any surface sediment losses during heavy rainfall events.

2. **Riparian retirement.** Currently riparian retirement consists predominantly of the fencing of the main stream flowing through the property. A number of areas (as indicated on the FEP maps) are to be incorporated into riparian retirement such as:
 - a. a narrow strip of low lying land north east of the stream,
 - b. north west of the stream a wet area frequently flooded,
 - c. increased distance of fence to at least one metre from the top of the bank. This work will be undertaken on the waterway parallel to the eastern side of the track, north of the stream and the north east side of the main stream, and
 - d. an area of 0.8 ha immediately adjacent to the 38.8 ha on the main dairy platform that was previously identified as 'occasional grazing' which has a steep bank and wet bottom (adjacent to the stream). This area will assimilate runoff from the new proposed north east track realignment.

These measures will prevent pugging, exclude stock from the waterways, prevent stock access to wet depressions and provide greater opportunity to capture phosphorus, sediment and bacterial losses before they enter the waterway which will be well beyond the current practices in place.

3. **Constructed Wetlands / Sediment Traps.** These features act to trap contaminant loss from run-off, and so are hugely beneficial. The catchment area for the constructed wetlands is 1.4 ha (with 0.4 ha being tile drained). With a planned 400m² of constructed wetland, this equates to 2.5% of the catchment area of the wetland and is expected to result in up to 40% nitrate-N removal from the drainage water in addition to sediment retention and the ability of sunlight to breakdown bacterial pathogens.
4. **Races/Tracks.** There is one main race on the 38.8 ha which is currently steep in two places and considered a critical source area for contaminants to enter the stream at the bottom of the slopes. The southern track is of particular concern. As an interim measure, the applicant proposes to bench the southern race to direct water and contaminants into the paddock to the west instead of down the track slope directly into the stream.

In the future, it is proposed to install a new farm race to the north east of the 38.8 ha to join it to the main dairy platform. There are various mitigations proposed for this race installation which are considered to be an improvement on the continued use of the existing southern race with benching. This race may require an earthworks consent and advice should be sought from Waikato Regional Council regarding this.

In addition, any upgrading of the remaining farm races will involve cambering away from drains and streams, instead towards paddocks. This will be an improvement of the current situation where tracks have a rounded camber regardless of proximity to streams and drains.

5. **Fertiliser use and application**– The FEP specifies annual soil testing will be undertaken. Annual soil testing to ensure soil nutrients remain within the optimum agronomic range is considered best practice. Once levels are at the optimum, bi-annual testing should be sufficient although given the limited soil test history for the 38.8 ha block, it is considered more appropriate to ensure soil nutrients are within the optimal range and sufficient soil test history obtained before such an option is investigated. Fertiliser approach is ‘little and often’ with no winter fertiliser. This ensures soil nutrients are applied to match pasture uptake, a best practice option.

With regard to phosphorus, there are some areas on the 38.8 ha and existing dairy platform that have high Olsen P levels. The FEP outlines what measures will be taken to:

- reduce Olsen P over time (where above optimal) with no application of phosphate fertiliser,
- slightly reduce Olsen P (where currently just above range) with sub-maintenance phosphate fertiliser and
- maintain Olsen P where slightly above optimal range with maintenance phosphate fertiliser application. This will allow for losses over the year before the next soil test.

This will result in Olsen P levels reducing over time (where high) to come within the optimal range and also to maintain Olsen P levels within the optimal range to ensure a productive farming operation can continue.

6. **Managed grazing** – This approach can be very beneficial with regard to contaminant loss, especially with regard to phosphorus, sediment and bacteria. The FEP identifies that when strip grazing is used, the animals will be grazed down slope with back fencing used during wet weather – an approach considered good practice.
7. **Cropping.** The cropping regime will be focused on summer crop, and direct drilled on the northern flats of the 38.8ha with direct drilling of pasture species. ‘No till’ cultivation and use of only a summer crop are considered an improvement of previous years where maize silage has been utilised in closer proximity to the main stream through the property (the northern flats are a significant distance from the main stream).

Conclusion

Existing resource consent AUTH137693.01.01 for the 268.7 ha, required a variety of mitigations to be undertaken to appropriately alleviate the effects of phosphorus, sediment and microbial pathogens. The mitigations for the 268.7 ha were taken into consideration with regard to this consent application and no further mitigations are considered necessary except a review of the fertiliser regime for phosphorus and the retirement of 0.8 ha ‘occasional grazing’ immediately below the proposed new farm race connecting the existing dairy platform and TS2.

This technical report has been developed based on my site visit to the property, a detailed review of the FEP, technical contribution from Ms Reina Tamepo regarding phosphorus for this resource consent application, technical contribution from Mr Paul Smith for mitigations relating to the previous resource consent application (AUTH137693.01.01) and meeting with Mr Doug Wallace. I consider that contaminant loss with respect to phosphorus, sediment and microbial pathogens will be less than that of the combined losses from the existing dairy platform and the new 38.8 ha block as it was operated prior to the date of notification of the Plan Change 1 (October 2016). The timeframes for actions contained in the FEP and appendices are achievable, measureable and realistic with clear identification of the person(s) responsible for each action. Based on this, I believe that the mitigations proposed for the new enterprise are appropriate.