

## Consent Evaluation Report

<b>Applicant:</b>	Taumata Farming Partnership Limited	<b>File No:</b>	61 69 55A
<b>Address of Site:</b>	124 Earle Rd, RD1, Pukeatua 3880	<b>Project Code:</b>	RC23533
<b>Application Number:</b>	APP137693		

### 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 (also referred to as “Healthy Rivers”). The application is recorded as document number 9634013. The proposal involves the conversion of land use from drystock to dairy. The application was supported by a Farm Environment Plan and Overseer assessments, all prepared by Rachael Mitchell of Perrin Ag Consultants. Shortly following lodgement, an amendment to the application was received. This amendment (document number 9655078) was to ensure that the application also explicitly covered the diffuse discharge of contaminants associated with the ongoing land use (ie stock effluent discharge directly to the land). As a result of discussions between the applicant and Council staff, there were also some minor changes to the Farm Environment Plan which was re-submitted to Council on 20/12/2016. The final FEP is document number 9721301.

Note that the 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 application against the statutory criteria in the Resource Management Act 1991 (RMA) and recommends whether consent should be granted for the proposed activity.

### 2 Background and Description of Proposal

The proposal involves the conversion of part of a recently purchased drystock block to dairy. The applicant currently owns and operates a 207 ha drystock block. They propose 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.

The property is located in sub-catchment 40 (Puniu at Bartons Corner Rd Br) which is a Priority 2 catchment as defined in the proposed Plan Change (Map 3.11-2 and Table 3.11-2). A tributary of the Owairaka Stream which feeds into the Puniu River, begins on the applicant’s property.

To meet contaminant and nutrient limitations as required under Plan Change 1, a restructuring of the residual property and farming operations, will occur. This is described in detail in the Farm Environment Plan submitted with the application and, for the purposes of this report, I adopt that description.

### **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 proposal requires to be assessed against 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.

### **4 Process matters.**

The initial application was lodged with the WRC on 5/12/2016 with the amendment referred to in section 1 above, lodged on 9/12/2016. The application was accepted under s88 on 6/12/2016. The application was on hold under s92 (request for further information) during the period 6/12/2016 to 20/12/2016.

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.

### **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 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 conclude 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

This consideration of effects 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, compare 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.

### Nitrogen

Mr D Harford has provided a report (WRC document no. 9720104) to me that 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. In doing so, Mr Harford noted that, because the existing dairy farm has been run as one of three dairy units under a single enterprise, it has not been possible to separate farm inputs with precision. The applicant has provided affidavits (document numbers 9719810 and 9721865) in support of the detail of how stock, supplements and fertiliser have been divided between the farms. This, in addition to milk production figures from each of the three farms, has enabled Mr Harford to have good confidence in the Overseer assessments undertaken.

The Overseer assessments are as follows:

- For the existing dairy unit (“Kirkham farm”) – estimated nitrogen leaching loss of 66 kg N/ha;
- For the existing drystock block - estimated nitrogen leaching loss of 19 kg N/ha;
- For the proposed new milking platform - estimated nitrogen leaching loss of 29 kg N/ha.

When considered as a total load of nitrogen, Mr Harford notes that “there is a small modelled benefit to the proposal of 219 kg N total. There is an added nitrogen loss benefit to the proposal, as no account of the denitrification from the wetland has been made in this nutrient budget.”

Overall, based on Mr Harford’s conclusions, I am satisfied that there will be an overall reduction in N losses from the proposal compared with the land uses as at the date of notification of the proposed Plan Change.

### Phosphorus, sediment and microbial pathogens

Mr P Smith has provided a report (WRC document no. 9660026) to me that assesses the likely losses of phosphorus, sediment and microbial pathogens. As for nitrogen, Mr Smith 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. His assessment is a qualitative one, based on his experience and expertise. He 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. In his conclusions he notes that “the mitigations proposed for the new enterprise are appropriate, and that contaminant loss, with respect to phosphorus, sediment and *E.coli* will be less than that of the two existing enterprises as they stand. The timeframes for actions contained within the FEP, and appendices, are achievable, measureable and realistic, and have clearly identified the owner as the responsible party for each action.”

Overall, based on Mr Smiths'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.

With regard to the losses of these contaminants from the proposed land use, I conclude that there will be no adverse effects compared with the existing land uses.

## **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 has been 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 16<sup>1</sup>, 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.*

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

### **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 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 direction for decision-making when determining applications under the rule. 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.

## **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 need to look at alternatives only arises if there are adverse effects arising from the proposal. 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. For these reasons, it is unnecessary to record here a detailed assessment against Part 2 of the Act. It suffices to say that I have considered all of the matters in sections 6 to 8 and 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.

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. This is reflected in the recommendation that follows.

## 14 Recommendations

I recommend that:

- This application be processed on a non-notified basis; and
- in accordance with 104B and 104D, resource consent application APP137693 be granted in accordance with the duration and conditions prescribed in the attached Resource Consent Certificate.

The reasons for the recommendation to grant the application 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;
- 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).



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Senior Advisor  
Resource Use Directorate

**Date: 20/12/2016**

## 15 Decision

That the resource consent application APP137693 is granted in accordance with the above recommendations.



Date: 20/12/2016

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Manager  
Industry and Infrastructure Section  
Resource Use Directorate

# RESOURCE CONSENT CERTIFICATE

**Resource Consent:** AUTH137693.01.01

**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:** 112 and 124 Earle Road, Pukeatua

**Legal description:** 112 Earle Road:  
Pt 4F Maungatautari Block Pt Lot 1 DP 24621 Pt Lot 1 DP 24621

124 Earle Road:  
Lot 4 DP 24621 Pt Lot 5 DP 24621

**Map reference:** NZTM 1821653E 5780477N

**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 9634013) 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 kgN/ha.
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 they intend 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 metre 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.

**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.

# **Appendix – Technical reports**



# Doug & Kathy Wallace Non Complying Consent Application Nitrogen Report

## Introduction

Doug and Kathy Wallace are applying for a non-complying consent to milk cows on an adjacent drystock farm. Under the proposed Healthy River's plan change, any land use change needs a non-complying consent. Any proposal must demonstrate no further increase in nitrogen, phosphorus, sediment and pathogens. This report addresses only the nitrogen aspect of the consent.

The nutrient budgets were prepared and the evidence collected by Rachael Mitchel of Perrin Ag, Rotorua. Rachael Mitchell is a certified nutrient management advisor.

Nitrogen reference points (NRP) have been established for the drystock and dairy unit. The proposed land use change has its own nutrient budget. The nutrient budgeting has been done using Overseer, version 6.2.2.

The data for the nutrient budgets have been inputted as per the input standards outlined in Schedule B of the Plan Change. One nutrient omission to the proposal has been the proposed wetlands. So the modelled nitrogen leaching figure for the new proposal is possibly higher than it would be, had the wetlands had been included in the nutrient budget.

The dairy farm, the Kirkham Dairy farm, is one of three dairy units operated under one enterprise. Farm inputs are not able to be separated and so no individual receipts can be sourced as primary evidence for the Kirkham dairy farm. So an affidavit (see attached document) has been supplied to show how the stock, supplements and fertiliser has been divided between the three farms. There are three Fonterra supply numbers, so the milk production figures for the Kirkham dairy farm are supplied.

## Kirkham Dairy Farm Nutrient Budget Nitrogen Leaching Loss (NLL)

The land area for the Kirkham farm is 61.7 ha in total

This NLL is based on the 2014/15 year where 210 cows producing 91521 kg MS (1483 kgMS/ha or 436 kgMS/cow). The budget estimates pasture production at 15,557 kg DM/ha with 1.98 kgDM/cow supplements feed.

I find that this high level of pasture production is consistent with a site in the area (Parawera DairyNZ Facts and Figures). The milk production figures are supported by a milk statement from Fonterra. The Olsen P levels, the crop and supplements all support this Fonterra figure.

The 20t DM of fodder beet (November to April) from the 2.0 ha cultivated followed by the 6 t DM of forage oats (May to December) are reasonable and there is supporting evidence for the area and the fodder beet grown. Attached in the appendix is the nutrient budget for the Kirkham Dairy

***The Overseer estimate for the Kirkham NLL is 66 kg N/ha.***

***The total estimated nitrogen leaching to water for Kirkham Dairy is 4013 kg of nitrogen***

## **Taumata Farm Drystock Nutrient Budget Nitrogen Leaching Loss**

The land area for the Taumata farm is 207 ha in total.

This budget is a simpler budget and the N leaching levels are in my experience what would be expected from a drystock unit grazing dairy heifer and sheep on allophanic soils. The stock numbers are supported by grazing receipts and an affidavit for stock numbers for the 2014-15 year.

There are 374 ewes lambing on the 10 August and weaning on the 24 November. Natural lamb increase is 283 with 226 lambs bought in store. There are 472 heifers grazing for different periods on the farm. There are also 23 heifer and cows, 75 23 month steers, and 48 11 month steers purchased each year.

Pasture production is estimated at 13 t DM/year, which is consistent with the Olsen P levels of around 16.

***The Overseer estimate for the Tamata NLL is 19 kg N/ha***

***The total estimated nitrogen leaching to water for Taumata drystock farm is 4088 kg of nitrogen***

### **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 and November, avoiding the May spreading of Kirkham Dairy.

The nutrient budgets assume capital fertiliser will be added and the Olsen P levels lifted to 32.

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, but is outlined in the farm plan.

***The Overseer estimate for the new proposed NLL is 29 kg N/ha***

*The proposed estimated farm output is 7882 kg N loss to water compared to 8101 kg N loss from the new proposal. (Kirkham Dairy 4088 kgN total) and (Taumata Farm 4013kg N total) combined.*

## Summary

There is a small modelled benefit to the proposal of 219 kg N total. There is an added nitrogen loss benefit to the proposal, as no account of the denitrification from the wetland has been made in this nutrient budget.

Don Harford B.Sc(Hons); DipAgriSci; B.Theol; M.Min, SNM & ASNM, MNZARM, MNZIPIM.

## Appendix Nutrient Budgets

### 1 Kirkham Dairy Nutrient Budget

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
<b>Nutrients added</b>							
Fertiliser, lime & other	89	50	49	3	0	0	0
Rain/clover N fixation	98	0	1	3	2	3	8
Irrigation	0	0	0	0	0	0	0
Supplements	150	25	102	20	14	14	7
<b>Nutrients removed</b>							
As products	100	17	24	5	22	2	7
Exported effluent	0	0	0	0	0	0	0
As supplements and crop residues	0	0	0	0	0	0	0
To atmosphere	76	0	0	0	0	0	0
To water	66	1.5	23	30	108	27	48
<b>Change in farm pools</b>							
Plant Material	-9	-1	-6	-2	-4	-1	-3
Organic pool	98	21	16	-8	7	5	1
Inorganic mineral	0	19	-5	0	-3	-2	-12
Inorganic soil pool	5	18	100	0	-114	-14	-26

[Download this report](#)

## 2 Taumata Farm Nutrient Budget

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
<b>Nutrients added</b>							
Fertiliser, lime & other	26	15	23	1	16	16	0
Rain/clover N fixation	92	0	1	3	2	3	8
Irrigation	0	0	0	0	0	0	0
<b>Nutrients removed</b>							
As products	27	6	2	3	13	0	1
Exported effluent	0	0	0	0	0	0	0
As supplements and crop residues	5	1	2	0	1	1	1
To atmosphere	31	0	0	0	0	0	0
To water	19	0.5	19	9	51	24	49
<b>Change in farm pools</b>							
Plant Material	-4	0	-3	0	0	0	0
Organic pool	28	6	1	-9	0	0	0
Inorganic mineral	0	5	-9	0	-3	-2	-10
Inorganic soil pool	10	-4	13	0	-45	-4	-31


## 3 Combined Nutrient Budget (proposal)

(kg/ha/yr)	N	P	K	S	Ca	Mg	Na
<b>Nutrients added</b>							
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
<b>Nutrients removed</b>							
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	11	56	21	41
<b>Change in farm pools</b>							
Plant Material	0	0	0	0	0	0	0
Organic pool	78	9	3	-7	2	1	0
Inorganic mineral	0	9	-8	0	-3	-2	-10
Inorganic soil pool	0	-1	24	0	-59	-10	-25

#### 4 Kirkham Dairy Block Nitrogen

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
Effluent 1	1,648	65	12.3	211	136
Effluent 2	1,769	69	13.2	214	136
Sidlings	82	20	N/A	179	0
Fodderbeet	327	164	24.5	-436	0
Steep Corner	108	38	N/A	172	0
Other sources	154				
Whole farm	4,088	66			
Less N removed in wetland	0				
Farm output	4,088	66			

#### 5 Taumata Farms Block Nitrogen

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 	1,411	25	4.6	99	52
Easy Hill Country	534	25	N/A	140	77
Steep	1,314	16	N/A	89	0
Unutilised Scrub	37	3	N/A		
Pine Trees	6	3	N/A		
Native	31	3	N/A		
Wet pastoral	152	20	N/A	102	0
Maize	251	72	10.8	-78	195
Chicory	202	67	10.2	51	25
Other sources	76				
Whole farm	4,013	19			
Less N removed in wetland	0				
Farm output	4,013	19			

## 6 Combined Proposal Block Nitrogen

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	2,689	43	7.9	206	180
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	1,112	42	8.0	205	180
Effluent 2	1,117	43	8.0	205	180
Steep	959	21	N/A	109	0
Steep Riparian Mgmt	448	13	N/A	99	0
Other sources	309				
Whole farm	7,882	29			
Less N removed in wetland	0				
Farm output	7,882	29			

# Memo

**File No:** 61 69 55A

**Date:** 19<sup>th</sup> December 2016

**To:** Mark Brockelsby

**From:** Paul Smith BSc (ICM Catchment Management Lead – Waipa/Central)

**Subject:** **Memo on mitigation options regarding proposed land use change - Taumata Farming Partnership Wallace Land-use change Resource Consent Application**

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Following initial discussions between WRC, the Wallaces as applicants and their advisors (namely John Haywood and Rachael Mitchell), I visited and inspected the properties at 112 and 124 Earle Road on 29<sup>th</sup> November 2016, and have then reviewed the Farm Environment Plan (version 2) as supplied with the consent application.

The basis of my involvement has been to give consideration as to whether the mitigations proposed during the farm visit and recorded under the Farm Environment Plan (FEP) are enough to provide assurance that contaminant loss is reduced under the new proposed enterprise, relative to the current existing enterprises (i.e. as at the date of notification of the Plan, 22/10, 2016).

With regard to this consideration there some exclusions that need to be highlighted;

- Nitrogen loss - I have not considered N loss, instead focusing on the other three contaminants being phosphorus, sediment and *E.coli*. Don Harford is working with the nitrogen loss models and will advise on those.
- Enterprise figures as supplied – with regard to the current and proposed operation I have had to use the figures as supplied in the FEP with regards to stocking numbers, cropping and production. Again Don Harford through his work with Overseer will provide an adequate check on the accuracy of farm systems data provided.
- Effluent systems – I have not given any consideration to the effluent system, with respect to the current or proposed system.
- Modelling of contaminant loss – whilst OVERSEER does address N loss and to a limited extent P loss, the model is still considered relatively coarse with regards to effectiveness of mitigations. There is no model as yet readily available or capable with regard to Sediment and *E.coli*; as such the assessment of mitigations are based on my experience as Catchment Management Officer, a role that I have had for 10 years now. New spatial models are becoming available i.e. Ballance Mitigator, which in time may provide better opportunity to model contaminant loss beyond Nitrogen.

With regard to this proposal at Earle Road, the existing dairy farm sits within the Mangapiko catchment (sub-catchment #38), whereas the drystock operation sits within the Puniu catchment (subcatchment # 40). Both are considered P2 catchment under the plan change, although in accordance with the PC1 definitions, any property or enterprise that occupies land in two sub-catchments is deemed, for the purposes of the Plan, to be in that sub-catchment where the greater proportion of the property or enterprise is located. In this case that is the Puniu (sub-catchment 40).

For this sub-catchment, Table 3.11-1 indicates that the nitrogen targets for both short and long term are already met (notwithstanding downstream overallocation of N), whereas the clarity and *E.coli* targets indicate some improvements are required to meet sub-catchment targets. Note that neither this sub-catchment nor any other sub-catchments other than in the main stem of the Waikato River, have specific phosphorus targets (the reasons for this being set out on page 67 of the Section 32 document). Irrespective of all of the above, proposed Plan Change requires FEPs to address, and to seek to make reductions in the losses of all contaminants.

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. phosphorous, sediment and *E.coli*, tend to be associated with physical processes, and so in general terms are lost via above ground surface run-off. Given the modelling work completed by Rachael Mitchell did show a slight decrease in N loss under the combined enterprise, the focus of mitigations are tailored to land management practices which better address contaminant loss via run-off processes. There are numerous mitigations that are proposed, and include stock management to ensure appropriate stock classes on appropriate land, pasture management to maintain an appropriate pasture cover on at-risk land, best practice cropping management, fertiliser management, land retirement, pest management and constructed wetlands / sediment traps. These are documented in the FEP in a format that clearly sets out risks, actions required and timeframes for doing so.

#### Existing enterprise considerations

I note from the information provided in the FEP the 2015/16 dairy operation produced 1546kgMS/ha, which seems remarkably high. As a comparison the New Zealand Dairy Statistics 2014-15 publication recorded the district average for the 2014/15 season as 1168kgMS/ha, whilst the district average for previous 2013-14 seasons was recorded as 1106kgMS/ha. Similarly the existing cows per hectare rate for the 2015/16 season was recorded at 3.80cows per ha, which is considerably high when compared to the DairyNZ district average for the 2014/15 season at 3.07cows per hectare. This is likely in part due to the high use of supplement, of which some is delivered via the in-shed feeder. The current operation also utilised a 2ha crop of fodder beet, which was feed in paddock. The establishment and lifting of the crop, plus in paddock feeding, would involve a large area of soil disturbance. Overall the current dairy enterprise as outlined in the FEP is highly intensive, which in turn would likely result in relatively high contaminant loss.

With regards to the existing drystock operation I note that it too is relatively intensive, incorporating replacement dairy heifer grazing, dry carry-over cows, a beef finishing system and sheep. Crops were grown on farm during the 2014-15 season, being 3.5ha of maize and 3.0ha of chicory. Overall the drystock farm when visited was very well maintained, with excellent tracks throughout, very low weed burden and high pasture cover and quality.

It should be noted that the Wallaces have been on farm for 17 years now, and so are very knowledgeable and experienced when considering the landscape, the soils, their capability and their limitations. During this time they would have experienced numerous different seasons and so have a good understanding of the potential seasonal variation. I understand they have previously share-milked on the dairy operation too, and so are very familiar with the soil resource for their potential enterprise. They also seemed to be very accepting of the proposed regulations, and were looking for an approach that would work under the proposed plan change.

#### New enterprise considerations

As part of the new proposed enterprise the FEP has a stated objective to increase the soil fertility levels with regards to phosphorous, specifically Olsen P. Whilst an increase in soil fertility will also result in an increase in nutrient exports via production, even under "best practice" an increase in soil



fertility results in an increase of phosphorus loss. As such mitigations have had to be considered that will counter the effect of increased fertility.

With regard to cropping, both existing operations incorporated elements of a cropping regime. Under the proposed enterprise there will be an area of cropping, at this stage recorded as up to 10ha of chicory. There will be no winter cropping under the proposed enterprise, and the establishment of the chicory crop will be direct drilled for both crop and pasture re-establishment. Both of these aspects are very positive outcomes as regards potential contaminant losses, relative to the existing operations.

It is also noted the predicted nitrogen leaching loss for the modelled enterprise has produced a nitrogen leaching loss sitting just below the loss averaged over the two enterprises. The FEP does acknowledge seasonal variation will have a bearing on the actual stock numbers, and have stated “that when pastoral feed is not available on farm, trading stock will need to be sold rather than feed purchased to support them”. This is a significant acknowledgement on the part of the owners.

#### Proposed mitigations

- Land retirement – The FEP currently proposes an additional 20.5ha of land retirement, being 11.5ha to riparian and 10.5ha to trees. The land proposed for the 10.5ha is steep erosion prone land, and so this will result in reduced contaminant loss as stock are removed. The riparian retirement will prevent stock access to wet depressions and stream sides and provide greater opportunity to capture phosphorous, sediment and bacterial losses before they enter water.
- Managed grazing – a managed grazing approach can be very beneficial with regards to contaminant loss off a property, particularly with regard to phosphorous, sediment and bacteria. The most intensive areas of farm will be focused on the best land – LUC classes 3 and 4 based on the map provided by Landsystems (figure 6 of the FEP). The FEP acknowledges that the “steep riparian” areas of farm will be predominantly sheep grazing throughout the year, and only be grazed for short periods with young stock over the late spring and summer months to manage pasture quality. Identified steeper areas within the milking platform will be managed with lighter stock only, thus reducing slope disturbance and so contaminant loss from these areas. With regard to grazing slopes, 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.
- Steep land – through grazing management it has been identified that the steep areas to remain in grazing will be sheep only during the winter months. Water ways on land slopes less than 25° will be fenced to prevent stock access. On the areas over 25° where fencing has not been considered practicable, reticulated stock water is already in place, in addition to some shading and shelter within paddock. For the main waterway through the steep block, it is possible to fence on one side, which will restrict stock using the stream itself as a thoroughfare. During my visit on site, this approach, along with managed grazing, was considered the most practicable and appropriate mitigation for this particular land.
- Cropping – as already mentioned the cropping regime will be focused on summer crop, and direct drilled, which is an improvement on the cropping approaches undertaken during the 2014/15 season.
- Fertiliser use – The FEP specifies soil testing will be undertaken annually. Regular soil testing to ensure soil nutrients remain within the optimum agronomic range is certainly considered

best practice, although once levels are at the optimum bi-annual testing would likely be sufficient. It is also noted that the proposed fertiliser approach is “little and often” for applications, including no winter fertiliser. This approach ensures soil nutrients are applied to match pasture uptake, and so is definitely a best practice option.

- Tracking – existing tracks on the drystock block are very well maintained, with appropriate cut-offs and no obvious damage or concerns. The dairy block did have some tracks in need of repair and improvement, and the FEP states that these tracks will be contoured to ensure run-off is dispersed into paddocks and grass buffers beside any riparian crossings will be maintained. If the Wallace’s current approach to tracks and races continues over the entire enterprise, I believe that will represent an improvement.
- Critical source areas - the current silage pits and PKE storage bins are concrete lined, which will prevent leachate losses during storage. It is noted the silage will be feed in paddock, whereas the PKE is feed via the in-shed feeder. One concern with PKE is the use of trailers to feed in paddock which results in a small area of significant pugging and soil disturbance – the in-shed feeder system should negate this concern.
- Poplar poles – there are some areas of historic and existing erosion apparent on the steep land, and the FEP does include a proposal to do poplar planting around these areas. From a land management perspective the use of poplar planting on steep land is definitely best practice, and whilst there is considerable opportunity for further planting throughout the steep land, I consider the current proposal is beneficial compared with the current systems in place.
- Pest Control – pests can have a significant negative effect on the understory of bush remnants and ground cover, which in turn can impact rainfall interception and associated run-off rates. The FEP does give consideration of pest control, including the removal of goats from an existing “un-utilised block”. This will allow and maintain good understory and ground cover, reducing the run-off rates and associated sediment and contaminant loss.
- Constructed wetlands and sediment traps – these features act to trap contaminant loss from run-off, and so are hugely beneficial. Whilst not originally considered, my visit on farm identified a couple of areas where this approach could be adopted. Accordingly they have been incorporated into the FEP and proposed mitigations. The proposed “constructed dairy wetland” is situated in an ephemeral watercourse within the middle of the milking platform – and is currently grazed. At approximately 2.4% of the catchment area, this feature will provide a significant opportunity for contaminant capture from the system. Other proposed mitigation features, such as the three “wet depressions”, “trackside riparian”, “airstrip riparian” and “new MP gully head” will also offer increased contaminant capture opportunities, well beyond the current practices in place.

### Conclusion

Based on my visit to the farm, meeting with the Wallaces and their advisors, the Wallace’s farming history with the land resource in the district, and a detailed review of the FEP provided, I believe that the mitigations proposed for the new enterprise are appropriate, and that contaminant loss, with respect to phosphorus, sediment and *E.coli* will be less than that of the two existing enterprises as they stand. The timeframes for actions contained within the FEP, and appendices, are achievable, measureable and realistic, and have clearly identified the owner as the responsible party for each action.