

15 May 2019

Emma Cowan
Resource Officer
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Dear Emma

Ecological Review of McPherson Resource Limited Resource Consent Application

In November 2018 McPherson Quarry submitted an application for resource consent to extend their quarry operations. At this time an ecological peer review was undertaken of the documentation submitted that was relevant to ecology. On completion of the peer review further information was requested (Section 92).

In April 2019 the applicant provided additional ecological documentation for review. This letter documents the steps and advice that have been provided to date and highlights where gaps still remain.

Yours faithfully



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Table 1 Initial peer review of documentation submitted by McPherson Quarry.

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<p><u>Overview of application</u></p> <p>A resource consent application was submitted to Waikato Regional Council (WRC) for the expansion and operation of McPherson Quarry, McPherson Road, Mangatawhiri (APP137612).</p> <p>The proposal included the clearance of vegetation within a Significant Natural Feature (SNF) and direct and indirect effects to watercourses that feed into the Waikato River.</p>
<p><u>Documentation</u></p> <p>A list of the documentation submitted for ecological peer review in November 2019 by the applicant is provided below;</p> <ul style="list-style-type: none"> • Kinetic Environmental (2018) McPherson Resources Limited Resource Consent Application and Assessment of Environmental Effects. • WSP OPUS (2018) McPherson Quarry Vegetation Assessment.
<p><u>Relevant policy and rules</u></p> <p>The ecological peer review takes into consideration objectives and policies presented within the Waikato Regional Policy Statement (WRPS) and rules within the Waikato Regional Plan (WRP). These are summarised below. This summary does not represent a full list of all policies and plan rules against which the application will be assessed. It is focused on those that are most relevant to the ecological review.</p> <p>The report submitted by Kinetic Environmental (2018) indicates that under the WRP - rule 5.1.4.15, vegetation clearance is a discretionary activity. The advisory notes indicate that information required to enable the assessment of any application under this rule are set out in Section 8.1.4.1 of the WRP.</p> <p>In relation to ecology, Section 8.1.4.1 states that the assessment should consider;</p> <p>What effects the activity (vegetation clearance) will have on the environment including:</p> <ul style="list-style-type: none"> • The extent to which the activity will adversely affect areas of significant indigenous vegetation and significant habitats of indigenous fauna¹. <p>There are also objectives and policies within the WRPS that are relevant to this peer review²;</p> <p>Objective 3.4 Health and wellbeing of the Waikato River – the health and wellbeing of the Waikato River is restored and protected and Te Ture Whaimana o Te Awa o Waikato (the Vision and Strategy for the Waikato River) is achieved.</p> <p><i>Policy 8.5 Waikato River catchment</i> - 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.</p> <p>Objective 3.19 Ecological integrity and indigenous biodiversity - The full range of ecosystem types, their extent and the indigenous biodiversity that those ecosystems can support exist in a healthy and functional state.</p> <p><i>Policy 11.1 Maintain and enhance indigenous biodiversity</i> - Promote positive indigenous biodiversity outcomes to maintain the full range of ecosystem types and maintain or enhance their spatial extent as necessary to achieve healthy ecological functioning of ecosystems.</p> <p><i>Policy 11.2 Protect significant indigenous vegetation and significant habitats of indigenous fauna</i> - Significant indigenous vegetation and the significant habitats of indigenous fauna shall be protected by</p>

¹ WRP presents criteria in section 11A and Table 11-1 for determining the significance of indigenous biodiversity. To be identified as significant an area needs to meet one or more of the criteria within Table 11-1.

² The objectives and policies presented here are not presented in full and the reader should refer back to the WRPS to obtain the full objectives, policies and supporting information. The list of objectives and policies presented is not comprehensive in relation to the application. The peer review has selected those which are most relevant to the assessment.

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ensuring the characteristics that contribute to its significance are not adversely affected to the extent that the significance of the vegetation or habitat is reduced.

Waikato Regional Council, at a regional scale, and Waikato District Council, at a district scale, have identified areas of significant indigenous vegetation and significant habitats of indigenous fauna as Significant Natural Areas (SNAs) / Significant Natural Features (SNF).

Summary of information provided

The Vegetation Assessment completed by WSP OPUS (2018) includes;

- an assessment of the value of the vegetation on site,
- it indicates the magnitude of the proposed impacts; and
- presents the level of effects without mitigation.

The assessment indicates that the development would have a **moderate** effect on a Significant Natural Feature (SNF) of **moderate value** during stages 1 and 2 of the quarry expansion and a **low** effect on a SNF of **high value** during stage 3 of the quarry expansion.

The assessment indicates that the mitigation hierarchy should be followed to avoid, remedy, mitigate, compensate or offset. The assessment indicates that if avoidance is not possible then there are potential areas of offset available.

The Vegetation Assessment does not include an assessment of effects post mitigation. This is completed within the Assessment of Environmental Effects (AEE) by Kinetic Environmental (2018).

The AEE presents a summary of the Vegetation Assessment. This document again indicates that the mitigation hierarchy should be followed and develops the suggested compensation/offset recommendations presented within the Vegetation Assessment. The text indicates likely areas that restoration planting would be provided, but does not definitively indicate areas, species and timeframes for delivery.

Peer Review

Indigenous vegetation

The documentation submitted (Kinetic Environmental, 2018; WSP OPUS, 2018) does not follow the mitigation hierarchy when considering provision of suitable mitigation. The first step is to consider whether avoidance of impacts on the SNF vegetation is possible. The AEE does not indicate that there has been consideration of alternative approaches that would retain the vegetation within the SNF.

It would appear from the documentation submitted that there could be the opportunity to retain the SNF vegetation identified for removal. The WRPS Objective 3.19 and Policy 11.2 indicate that significant indigenous vegetation should be protected and significant vegetation has been defined by the WRPS as vegetation classified to be SNA/SNF.

The Operative Waikato District Plan illustrates that the SNF extends over the existing quarry (refer to Figure 1). In this area all vegetation has been removed and the quarry may already be impacting on habitat connectivity, therefore, removing the validity of this area as being classified as SNF/Significant Natural Area (SNA). The Proposed Waikato District Plan shows that the boundary of the SNA has been remapped to exclude the existing quarry.

The reports submitted indicate that a significant percentage of the area identified for quarry extension is dominated by pasture and gorse and that these habitats are of low botanical value. Exotic vegetation can provide native fauna with suitable habitat which may be considered as 'significant' under Section 8.1.4.1 of the WRP e.g. lizards. This is not considered within the documentation provided.

There are stands of manuka and regenerating forest vegetation, located outside of the SNF, within the proposed extension areas. The loss of this habitat would need to be mitigated for as described in the AEE. The proposal to plant a vegetated corridor to the north of the quarry would provide an opportunity to re-link two sections of SNF, which are currently disconnected. However, the application

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would need to include detailed proposals that illustrate that this compensation planting meets compensation/offset requirements. It would need to indicate how this habitat would be managed in the long term and how it would be protected from future development.

The Vegetation Assessment and the AEE both focus on the immediate loss of vegetation (direct impacts). The Vegetation Assessment and AEE do not consider indirect effects on adjacent vegetation, excluding dust. It would appear from the information submitted that the quarry workings would extend up to the boundary of the SNF to the east, west and south. The Vegetation Assessment does not take into consideration indirect impacts on tree roots, alteration to drainage within the SNF or make reference to the potential for an increase in weed incursion and how these impacts would be mitigated.

The AEE makes reference to the overburden being placed within a pasture that includes a drain. Topographical maps show a stream flows from a waterbody within stage 3 of the proposed quarry extension and through the pasture identified for overburden storage. This stream links to the Waikato River via the Mangatawhiri River. The AEE does not include an assessment of the ecological values of this stream or present mitigation for potential impacts on this stream (or any others) or the Waikato River.

Indigenous fauna

The AEE does not make reference to potential direct and indirect impacts on fauna during vegetation clearance. It would be expected that this information would form part of the ecological assessment completed by the applicant and submitted to that WRC. This information is required for Council to understand whether habitat is 'significant' for indigenous species (Section 8.1.4.1 WRP).

It would be expected that if there could be impacts to native species that detailed surveys (completed at the correct time of year) would need to be completed. This information would need to be provided to WRC, along with details relating to proposed mitigation.

Based on a review of GIS maps and local knowledge of the area, habitats on site could support native lizards, birds and potentially long-tailed bats.

Comments and request for further information November 2018

The information provided by the applicant is incomplete and therefore it cannot be determined if the mitigation proposed is acceptable. It would appear that there is an opportunity to avoid impacts to the SNFs, and the submitted documentation does not indicate why this opportunity does not exist.

Additional information is requested to inform the ecological assessment:

- The assumption should be that vegetation within the SNF/SNA is retained, in line with Waikato Regional Council Policy Statement, Objective 3.19 and Policy 11.2. A review of alternative approaches to excavation is required within the AEE and supporting documentation.
- The AEE needs to consider potential indirect impacts on the SNF and present mitigation for these impacts e.g. buffer between excavation and SNF, additional plantings etc.
- Submitted documentation should present detailed offset proposals for the loss of manuka/regenerating vegetation within the site but outside of the SNF. It is considered appropriate that a permanent link is established between the two parts of the SNF/SNA. The documentation should detail how the habitat would be created, managed and protected in the long term.
- The ecological assessment should consider direct impacts on watercourses/bodies, and indirect effects on the Waikato River and present appropriate mitigation within the AEE and supporting documentation.
- Detailed species surveys should be undertaken, as appropriate. The AEE and supporting documentation should consider direct and indirect effect on native faunal species and present appropriate mitigation.
- The Ecological Impact Assessment (EclA), pre and post mitigation, should be completed by

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an experienced ecologist.

Table 2 Site visit to McPherson Quarry

Stage 2 – Site visit

A site visit was undertaken by the ecological peer reviewer (AECOM) and the WRC processing planner to gain an understanding of the proposals and the environment to be impacted by the proposals.

The applicant and their planning consultants talked through their proposals during the site visit.

The ecological peer reviewer indicated that the applicant needs to address the information gaps that existed, which were highlighted by the Section 92 request.

Table 3 Section 92 Response.

Stage 3 – Review of documentation submitted in response to the Section 92 request

New documentation provided for review

- Ecology New Zealand (2019) Ecological Impact Assessment.

Presentation of alternatives

The Section 92 requested that the applicant review alternatives that did not result in the loss of SNF vegetation.

This review is not presented in the documentation that has been provided. This assessment is still required.

Consideration of indirect effects on the SNF

The Section 92 requested that the applicant consider the indirect effects of their development on the SNF.

This assessment is not presented in the documentation that has been provided. This assessment is still required.

Offset proposals

As indicated previously, the applicant should consider how the loss of indigenous vegetation can be avoided as required by the WRPS and as advised by their ecological consultants (Opus) and their planners (Kinetic Environmental).

The Section 92 request indicated that if indigenous vegetation was to be lost then detailed proposals would need to be provided to offset the loss of habitat.

As stated in the Section 92 request (November 2018), it is considered appropriate that a permanent habitat link is established between the two parts of the SNF/SNA as offset, as proposed by Opus. The Section 92 request went on to state that the applicant needed to provide documentation that details how the habitat would be created, managed and protected in the long term.

To provide further clarification. An Ecological Management Plan is required that illustrates;

- The location of the offset planting (clear maps);
- Clarification / evidence that this land is in the ownership or management control of the applicant;
- Details on how this land will be protected in perpetuity (e.g. QEII covenant);
- Details on the species composition of the proposed planting including species list, spacing and

Stage 3 – Review of documentation submitted in response to the Section 92 request

planting density;

- A programme for planting (e.g. plants should be in the ground before vegetation loss occurs) – programme and associated map illustrating deliverables;
- Details on the ground preparation;
- Details on the management of the plantings (e.g. weed control) until they have fully established;
- Monitoring that will be undertaken to ensure that the plantings establish; and
- Trigger levels relating to when replacement plantings would be undertaken.

Direct and indirect effects on watercourses

The Ecology New Zealand Report presents survey results for the watercourses, ponds and wetlands identified on site.

It is considered that the survey works completed were fit for purpose.

However, further clarification / information is required in relation to the Assessment of Effects on these habitats.

The applicant's assignment of ecological value is unclear –

- stream 1 – page 15 moderate to high value while on page 28 high value.
- Tributary 1 – page 16 low to moderate while on page 28 it is low value.

It is the peer reviewer's opinion from the information provided that stream 1 is of high value and tributary 1 is of moderate value.

The Ecology New Zealand Report indicated that there are two wetlands within the area that overburden will be stored. These habitats are not valued and it is not clear what will happen to these areas of habitat. Will they be lost? Will they be restored?

The ecological documentation does not discuss how indirect effects on the stream system will be managed from the overburden areas. Large areas of spoil will be located adjacent to a high value stream and no discussion has been presented as to how impacts will be managed. It is considered that the placement of spoil could lead to significant degradation of Waipunga Stream (stream 1) without suitable mitigation.

The Assessment of Effects concludes that to offset stream loss of 250m that 750m of Waipunga Stream will be replanted at a width of 7.5m on a 3:1 ratio.

It is considered that the length of offset for stream loss is suitable, however, it is considered that the planting should be 10m each side of the stream to buffer impacts. It is also considered that tributary 1 should be planted to buffer the indirect effects of the overburden piles. The applicant is requested to reconsider their proposals to mitigate impacts on streams.

The applicant needs to provide details of how the stream restoration works would occur within an Ecological Management Plan.

The ecological report discusses the construction of a wetland to compensate for the loss of ponds elsewhere on site, but there is no indication as to where this feature would be constructed. The applicant needs to provide within the Ecological Management Plan a clear indication of;

- Where will the wetland be located;
- What is the size of the wetland;
- Construction phasing and how this will occur in relation to the quarry extension (provide detailed timings);
- How will this structure be planted, and the prevention of plantings being overloaded with

Stage 3 – Review of documentation submitted in response to the Section 92 request

sediment;

- How the feature will improve water quality when it discharges as the ecological report indicates that all of the current waterbodies have low water quality due to their use as settlement ponds; and
- How this structure will be maintained e.g. dredging and how this may impact on ecological values.

Detailed species survey

As requested the applicant has completed detailed species surveys for bats, lizards and freshwater species (fish and macroinvertebrates). Incidental recordings of birds were made.

The conclusions of this as presented;

- Incidental observations of farmland birds were made. Five minute bird counts were not undertaken, which would be required to detect forest bird species. The assessment concludes that the habitat on site is of moderate value to birds. It is considered that this is likely to be an underestimate of the value of the habitat on site for forest birds.
- Bat acoustic surveys detected one bat pass. This is a low level of activity during their peak active period.
- Lizard survey did not detect any native lizard species. It is considered that if the SNF habitat were to be cleared that it would be necessary to apply for a permit from the Department of Conservation (DOC) to undertake lizard salvage.
- It is agreed that fish salvage would be required for dewatering works.

Assessment of Ecological Effects

The Ecology New Zealand Report includes an Assessment of Ecological Effects. However, it is considered that insufficient information has been provided for Waikato Regional Council (WRC) to complete their assessment. In summary, but not limited to, the information that is missing or contradictory is listed below;

- Consideration of alternatives to the loss of the SNF habitat;
- Assessment of the nature of the forest habitat in the SNF differs between the Opus report and the Ecology New Zealand report (e.g. manuka shrubland (Opus) or kanuka-dominated forest (Ecology New Zealand));
- Assessment of effects on existing wetland is not discussed;
- Assessment of indirect effects of the overburden piles on the surrounding watercourses is not discussed;
- Habitat loss is described in relation to the percentage of the site rather than area loss e.g. forest habitat 6%, what does this equate to in area?;
- The report does not indicate how the amount of habitat offset will be calculated.

Conclusion

Insufficient information has been provided for WRC to be able to conclude that the project will not have a significant ecological impact.

The applicant should review the text above and address the current information gaps within the Assessment of Ecological Effects.

The applicant is to provide a detailed Ecological Management Plan as previously described. This document should include sufficient detail to guide a contractor undertaking these works on behalf of the applicant. It should have sufficient detail so that WRC can monitor compliance.

Stage 3 – Review of documentation submitted in response to the Section 92 request

Based on the information provided to date, I consider that the project would have significant impacts on the environment through the loss of native forest habitat and impacts to streams. Therefore, I would recommend that resource consent should not be issued.