

**BEFORE THE INDEPENDENT HEARING COMMISSIONERS ON BEHALF OF THE NORTHLAND
REGIONAL COUNCIL (NRC)**

Under: the Resource Management Act 1991

In the matter of: 24 applications for new and increased groundwater takes from the Aupōuri Aquifer subzones: Waihopo, Houhora, Motutangi, Paparoe, Sweetwater, Ahipara and Other

Applicants: Te Aupōuri Commercial Development Ltd, Waikopu Avocados Ltd, Henderson Bay Avocados Ltd, Far North Avocados Ltd, P McLaughlin, NE Evans Trust & WJ Evans & J Evans, P & G Enterprises (PJ & GW Marchant), MP Doody & DM Wedding, A Matthews, SE & LA Blucher, NA Bryan Estate, SG Bryan, CL Bryan, KY Bryan Valadares & D Bryan (Property No 1), MV Evans (Property No 2), MV Evans (Property No 1), Tuscany Valley Avocados Ltd (M Bellette), NA Bryan Estate, SG Bryan, CL Bryan, KY Bryan Valadares & D Bryan (Property No 2), Avokaha Ltd (c/- K Paterson & A Nicholson), KSL Ltd (c/- S Shine), Tiri Avocados Ltd, Valic NZ Ltd, Wataview Orchards (Green Charteris Family Trust), Mate Yelavich & Co Ltd, Robert Paul Campbell Trust, Elbury Holdings Ltd (c/- KJ & FG King), Te Rarawa Farming Ltd and Te Make Farms Ltd

SUPPLEMENTARY S42A REPORT

Stephanie Kane

Date: 28 May 2021

1 Purpose

1. The purpose of this supplementary s42A report is as follows:
 - a. To provide a summary of activities and correspondence that have occurred since the hearing was adjourned;
 - b. To clarify Council's position on the matters raised by the Applicants and the Department of Conservation throughout the adjournment; and
 - c. To give a further recommendation as to whether consent should be granted and any conditions that may be imposed.

2 Hearing adjournment and technical conferencing

2. The hearing was formally adjourned on Thursday 3 September 2020. Subsequent to the adjournment, the Commissioners issued a series of Minutes and Directions requesting further information on technical groundwater matters and a jointly agreed schedule of tasks and timeline for thus (Minute & Direction #2).
3. Minute & Direction #3 directed expert caucusing on hydrogeological matters relating to wetland identification and analysis, potential effects on wetlands and surface water bodies being a primary point of the submission lodged by the Director-General of Conservation. Minute & Direction #4 further clarified the scope of the direction relating to the development of a schedule of tasks and timeline.
4. A total of six separate joint witness statements were produced as a result of technical expert conferencing on hydrogeological, surface water and ecological matters. These statements have been provided to the Commissioners and the content is not repeated in this report. However, it is acknowledged that there remain matters subject to disagreement between the parties and these matters are outlined later in this report.

3 Planning conferencing

5. Minute & Direction #5 directed all three parties to undertake facilitated expert planning conferencing on the latest set of draft conditions to be provided by the Applicants, including the accompanying Groundwater Monitoring and Contingency Plans (**GMCPs**). The output of the conferencing was to comprise a set of annotated draft conditions (and GMCPs), including matters of agreement and disagreement and the reasons for such.
6. A conferencing session with planners for the Applicants, NRC and the Department was held on 21 April 2021. The joint witness statement provided by the planning experts (dated 20 May 2021) provides an outline of the content of the session and the outputs from conferencing and subsequent correspondence relating to GMCPs and conditions.
7. Following the initial session and during discussions regarding the programme for the subsequent conferencing session(s), it became clear that, due to availability issues, any

conclusion of resolution of matters through conferencing would be subject to a protracted period of time. As a result of this, the Applicants filed a memorandum seeking directions from the Commissioners for closure of the hearing and setting an approach and timeframe for such, including the preparation of a supplementary s42A report by 28 May 2021 *addressing the reporting officer's position in light of the process since the hearing was adjourned and attaching recommended GMCPs and consent conditions*¹.

8. A subsequent memorandum of Counsel for the Department suggested that planning conferencing reconvene to produce a joint witness statement reflecting progress made in planning conferencing, and a subsequent direction to provide a statement to the Commissioners by 4pm Thursday 20 May 2021 was received².
9. The joint witness statement provided by the planning experts (dated 20 May 2021) outlines progress made in relation to the draft conditions and GMCPs. The annotated and amended conditions and GMCPs appended to that statement have provided the basis from which the proposed conditions (attached at Appendix A) and GMCPs (attached at Appendix B) have been developed. As such, the proposed conditions and GMCPs take into account changes to the documents insofar as they have been agreed amongst all parties, along with Council's recommendations.

4 Adaptive management

10. A fundamental component of the Department's submission on the applications is whether adaptive management is appropriate and/or whether there is sufficient information available to implement an adaptive management regime for the proposed takes.
11. The Department notes that adaptive management requires a degree of confidence around the nature and extent of potential adverse effects, that there is a requirement for 'reversibility' of effects, and that decision makers must favour caution and environmental protection where uncertainty exists around effects. Council agrees with these points.
12. Council acknowledges that, due to the nature of the resource, there is inherent uncertainty in groundwater modelling and assessment. The Aupōuri Aquifer has been subject to a significant amount of study and investigation, and the information available represents the best information available, in accordance with section 1.6 of the NPS. Council's groundwater expert, Brydon Hughes, reviewed the model developed by the Williamson Water & Land Advisory (**WWLA**) and considers the scenarios used to assess potential effects to be relevant and robust³. The assessment of effects indicates that the scale and extent of any actual or potential adverse effects is such that adaptive management is appropriate for the proposed takes.
13. The proposed adaptive management regime incorporates staging of takes in a manner that will enable potential effects to be monitored as abstractions are scaled up. The Staged Implementation Monitoring Review process included as part of the management regimes

¹ Memorandum of Counsel on Behalf of the Applicants, dated 13 May 2021

² Minute & Direction #7, dated 14 May 2021

³ As discussed in the NRC Staff Report (s42A report) prepared by S Kane and the appended hydrogeological assessments, dated

requires applicants to clearly demonstrate that their takes are not causing adverse effects beyond those anticipated and deemed acceptable and requires Council to review all monitoring data against the initial assessments and relevant conditions of consent prior to any increase in take being authorised. There is no automatic rollover or right to increase takes without proper review and consideration of the effects of those takes.

14. Continuous monitoring of both the shallow sand aquifer and the deep shellbed aquifer and the setting of trigger levels will enable the effects of the takes to be assessed in real time. It is acknowledged that the Department does not accept the use of groundwater levels within the shallow sand aquifer as a proxy for monitoring water levels in surface water bodies. However, there is little evidence presented to indicate connectivity between surface water and either of the underlying aquifer layers. In the case of localised connection between surface water bodies such as wetlands and lakes and the groundwater system, the technical hydrogeological experts generally agree that any reduction in surface water level would come about as a result of a decrease in groundwater levels in the shallow sand aquifer, and thus continuous monitoring of groundwater levels in both layers at representative sites is considered to be a practical and reasonable method of monitoring potential drawdown effects in a manner that corresponds with the assessed probability and impact of effects.
15. Council and the Department have both raised concerns with the lack of any requirement for staged take volumes to be exhausted or reach maximum prior to progressing to the next stage, and that this may essentially result in a 'lag' in effects as water users could effectively, for example, move from a Stage 1 take of 10% to a Stage 2 take of 50%, without the potential effects of a 25% take being monitored and assessed. The Applicants' planner, Ms Letica, has explained that the calculated volumes at each stage take include provision for water takes during drought conditions, and therefore it is unlikely that the maximum daily volumes would need to be taken for the whole irrigation period. Council acknowledges that the actual volumes are likely to vary according to a number of factors, and that the staged maximums provide an envelope, not a target. It is considered that any potential sharp increase in take volumes as a result of progression to subsequent stages can be adequately managed through the Staged Implementation and Monitoring Programme Review process.
16. Reversibility of effects or the ability to remedy effects before they become irreversible is a key tenet of adaptive management. Council considers that the proposed conditions and GMCPs (attached at Appendix A and Appendix B, respectively) constitute a management regime that provides for early identification of effects through the trigger level system at points where trends can be assessed and action taken to reduce or avoid effects beyond those anticipated in the modelled assessment. The methodology sets Trigger Level 1 at points where the outer limits of the baseline levels are being approached, essentially before any adverse effects are occurring. Trigger Level 2 provides for closer investigation and remedial action where baseline data limits are exceeded and there is a significant risk of effects manifesting, but at levels where the magnitude and/or consequences are anticipated to be reversible by reducing or ceasing abstraction. This point is particularly important in relation to saline intrusion, and the setting of trigger levels for salinity and conductivity parameters at levels where effects can be reversed is critical for the health of the aquifer, given that the effects of saline intrusion are often irreversible. In accordance

with the proposed GMCPs, trigger levels are to be set based on existing baseline data or data collected as a result of monitoring required for these consents (if granted) and criteria agreed with Council.

17. Council, the Applicants and the Department agree that timely and frequent collection and reporting of monitoring data is necessary in order to ensure that effects can be observed and assessed in real time and remedial actions can be made swiftly where trigger levels are breached. All three parties accept telemetry of monitoring data in sentinel bores and abstraction volumes in production bores is necessary to avoid any 'lag' between effects occurring and being detected, and to enable remedial action such as reduction or cessation of takes to be implemented. These requirements are included in the proposed conditions of consent.
18. Council's position, based on the proposed conditions of consent and GMCPs, is that adaptive management is appropriate and can be implemented in a manner consistent with case law. The proposed regime allows for incremental increases in takes at a rate that enables effects to be measured and monitored as takes come online. Progression of takes to subsequent stages is through a defined process that requires additional assessment and agreement from Council. Trigger level breaches are managed through a defined process that includes investigative and remedial actions, along with potential suspension or cessation of takes if necessary. The scope for review of conditions and consent parameters is unrestricted. These matters constitute an appropriate level of precaution based on the probability, risk, extent and magnitude of the effects assessed.

5 National Policy Statement and Environmental Standards for Freshwater

19. The National Policy Statement for Freshwater Management 2020 (**NPS**) and the National Environmental Standards for Freshwater 2020 (**NES**) came into effect shortly after the hearing was adjourned. The applications must be considered in the context of both the NPS and NES. The NPS sets the policy direction for the management of freshwater as a hierarchy based on the concept of Te Mana o Te Wai, in which the health and wellbeing of water bodies and freshwater ecosystems maintains precedence over the health needs of people and the ability to provide for social, economic and cultural wellbeing of people and communities. In short, the condition and sustenance of the water resource holds primacy over its use.
20. The Department has highlighted several policies of the NPS, including Policy 6—no further loss of extent of natural inland wetlands, protection of their values and promotion of their restoration—and Policy 9—protection of habitats of indigenous freshwater species—as material to these applications. With regard to Policy 6, Council does not consider the proposed takes to be inconsistent with this policy, as the assessment of effects indicates that there is little interaction between surface water bodies (including wetlands) and the underlying Aupōuri Aquifer system. Council also accepts the use of groundwater level monitoring within the shallow sand aquifer as an appropriate proxy for effects on surface water levels, as any drawdown would be expected to propagate in the shallow aquifer before/alongside effects on surface water if a degree of interaction exists.

21. Likewise, any potential effects of groundwater takes on habitats of indigenous freshwater species are expected to be as a result of either drawdown or saline intrusion, both of which are addressed sufficiently through monitoring of groundwater levels and salinity parameters, which are again expected to propagate in groundwater before any effects on surface water and habitats.
22. The exception to the above is the Kaimaumau-Motutangi wetland, around which several of the proposed takes are located. These takes—known as the Middle Group—would be subject to a separate proposed GMCP that acknowledges and accounts for the existing monitoring being undertaken as part of the Motutangi-Waiharara Water User Group (**MWWUG**) abstractions and includes additional monitoring of water levels and other parameters within the Kaimaumau-Motutangi wetland to specifically monitor and assess effects on it as an outstanding and significant water body.
23. Identification and assessment of unmapped natural wetlands has been proposed as part of the technical conferencing undertaken for the applications. Several areas of interest have been identified and included in the GMCPs for further assessment in accordance with the Wetland Delineation Protocols developed by the Ministry for the Environment, which includes desktop and field analysis. Subsequent actions for sites delineated as natural wetlands are included in the GMCPs, including wetland vegetation surveys are also outlined in the proposed GMCPs.
24. Council considers the proposed unmapped wetland delineation and survey procedures to be an appropriate response to concerns raised by the Department about the potential effects of the proposed takes on surface water bodies, given the risk, probability and magnitude of those potential effects. The proposed processes will provide greater certainty of effects and enable a quantitative and qualitative assessment of the extent to which the proposed takes are consistent with the relevant policies of the NPS.
25. Council considers the timeframes proposed in the GMCPs for completing the remaining tasks associated with the wetland delineation generally appropriate and realistic given the staged manner of the takes and the requirement for baseline data to be collected (where it does not already exist) prior to setting trigger levels.
26. The Applicants have not confirmed whether the proposed take locations are within 100m of any natural inland wetlands, as defined in the NES and NPS; not all wetlands to which the NES applies are mapped by Council and thus there is potential that some of the takes may be within the 100m setback and further consent may be required. The areas of interest identified during technical expert conferencing for further investigation may result in additional consent requirements for specific takes under the NES⁴. The initial applications did not include consent pursuant to the NES for any of the proposed takes, nor have the requirements under the regulations been specifically included in any of the correspondence or further information provided subsequent to the hearing. It is anticipated that these matters will be addressed in the Applicants' final reply submissions,

⁴ Council has considered only the take component of the proposed applications in relation to activities subject to the NES in this supplementary report. Any potential requirements under the NES in regard to the use and/or discharge of water taken for irrigation purposes is outside the scope of the applications and is not considered in this report.

and the Commissioners may choose to expand any consents granted to include consent under the NES.

27. Whilst the specific requirements under the NES need to be confirmed (i.e. which takes fall within 100m of a natural inland wetland), Council considers that the assessment of effects undertaken for the applications and the proposed monitoring and management measures developed adequately address the majority of the requirements for applications under the NES. In particular, the adaptive management approach, comprehensive groundwater monitoring and wetland delineation and assessment methodologies refined through expert conferencing meet the information requirements.
28. If consent pursuant to the NES regulations is to be considered as part of the applications, the addition or inclusion of wording or conditions that reflect the general conditions requirements in regulation 55 of the NES should be considered.
29. If potential consent requirements under the NES are not considered as part of this process and any additional consents required are to be confirmed and deferred to a separate process at a later date, there is potential that some of the applications (if granted) would be unable to be given effect to upon commencement. The Applicant will need to determine which (if any) of the proposed takes fall within the 100m setback and thus require consent.

6 Proposed conditions and GMCPs

30. Council generally supports the proposed condition sets produced during expert planning conferencing and considers that they provide a sound basis from which a potential adaptive management regime can be implemented in accordance with the three GMCPs.
31. The rationale behind arranging the proposed takes into three separate groups was based on the amount of monitoring data available in the broader area of influence, geographic and spatial proximity of take locations and sub-aquifer divisions, and interfaces with existing large volume abstractions for the MWWUG.
32. The South-western group consolidates those takes sought by the two current large groundwater users in the Ahipara and Sweetwater areas. Monitoring associated with the existing Sweetwater Farm and Elbury Holdings takes provides sufficient baseline data on groundwater levels and salinity indicators to enable trigger levels to be set without interim trigger levels being put in place while an additional 12 months of data is collected. The takes are concentrated around the same geographic location and the area of influence is considered to be fairly discrete in terms of individual and cumulative effects.
33. The Middle group overlaps the area of influence for the MWWUG consents and these takes also occur in closer proximity to the Kaimaumu Wetland. The separation of these takes into a specific group enables them to be managed in a manner that adequately considers potential impacts on the wetland as a significant and outstanding area and the priority given to the MWWUG consent holders in allocating the resource. This grouping also recognises the monitoring undertaken and data available as part of the MWWUG takes and the Kaimuamau Wetland and the role that this information has in helping to set trigger levels and monitor cumulative effects.

34. The Northern group applications occur within an area that does not have an existing body of baseline or monitoring data available to assist in setting trigger levels. There are fewer takes from this part of the aquifer and the use of interim trigger levels whilst sufficient data is collected to establish trigger levels will be required if takes within this area are to occur.
35. The groupings enable the same conditions and adaptive management measures to be applied across all of the proposed takes, whilst allowing for localised nuances, geographic factors and existing water use to be considered. The structure and wording of the proposed conditions and GMCPs does not prevent the application of remedial measures or the use of monitoring data across and between groups. Rather, it simply provides another tier of management where the measures provided for in the GMCPs can be applied discretely and in a more targeted manner than broad-brush across the aquifer.
36. That being said, the proposed conditions and GMCPs do not preclude the application of remedial or adaptive management measures to all takes (if granted) in the event that effects are identified as potentially having adverse effects more broadly than within a specific group area. There is also scope in the proposed conditions for review of consents to “be carried out separately or together with reviews of other consents for the purpose of managing the effects of the activities carried out under those resource consents.”
37. Council is not averse to the Department’s position that a technical review mechanism should be established to provide input into processes outlined in the GMCP, including the setting of trigger levels, review of proposed amendments to the GMCPs, staging increases and annual environmental monitoring reviews. To make the process as efficient as possible, Council suggests nominating a suitably qualified and experienced hydrogeologist (and ecologist if required) to act as an independent expert for those processes where technical input or review is required.
38. The Department’s mandate makes its input relevant and, in respect to some specific locations and habitats, necessary when the management of adverse effects is considered. However, Council needs to maintain control of processes to ensure that compliance is monitored and achieved. To this end, Council considers that it is appropriate to set timeframes on feedback and approval loops. Council does not, however, support wording within conditions that essentially result in default or deemed approval of parties in the event that these timeframes are exceeded. Tacit or inferred approval cannot be relied on legally or morally in Council’s exercise of its statutory functions. A response timeframe of 20 working days is considered to be generally appropriate in most instances, be that an interim, qualified or final response. Efficiency may be advanced through the nomination of an independent technical expert or experts, as noted above.
39. The Department has expressed concerns that there is an over-reliance on the GMCPs instead of conditions and an unsatisfactorily large scope for amendments based on a high trust model rather than formal processes under the consent variation (s127) and review (s128) provisions of the RMA. Council’s position is that the proposed conditions provide Council with largely unfettered discretion to initiate a review of one or more consents and that deferral of trigger levels to the GMCPs is not only appropriate but necessary for adaptive management. A formal s127 process is subject to statutory timeframes and processes that require renotification to all 113 persons who made submissions. Given the scope of the changes provided for and the fact that these processes have already been

subject to scrutiny by a number of parties through the submissions and hearing process, requiring each consent to go through a formal variation process for changes that are already anticipated is unreasonable and onerous.

40. Council has not suggested any further amendment to the proposed conditions produced through planning conferencing at this stage. The proposed conditions are attached at Appendix A.
41. In accordance with the comments made in this supplementary report, suggested amendments to the GMCPs produced through planning conferencing have been made to the proposed GMCPs. These changes and annotations are tracked in the GMCPs attached at Appendix B.

7 Other considerations

42. Section 108A of the RMA enables Council to require a bond from consent holders to secure the performance of one or more conditions. In the context of these applications and the proposed conditions, a bond could be sought to guarantee the construction of all monitoring bores and instruments or the implementation of any necessary ecological surveys, or to provide security for remediation of unanticipated impacts on freshwater habitat or other water users. Given the nature of the activities, it is unlikely any bond would need to continue beyond the expiration of the consents (if granted).
43. The Department's statement of general concerns references the MWWUG conditions and issues experienced through the Director-General's previous engagement with Council. The conditions for the MWWUG consents and previous engagement separate to that undertaken for these applications is outside the scope of this report. However, it is recommended that the Department's specific concerns regarding the setting of trigger levels and wetland monitoring are considered in any trigger level setting exercise undertaken for these applications, if granted.

8 Conclusions

44. Council maintains its position that the applications for consent can be granted, subject to conditions consistent with those agreed during planning conferencing (attached at Appendix A). These conditions are broadly consistent with the management of the MWWUG abstractions previously granted and enable Council to move toward a consistent monitoring and management approach for large-scale groundwater takes in Te Hiku.
45. The amendments and annotations made to the proposed GMCPs attached at Appendix B are suggested in order to address residual concerns amongst parties and to enable the proposed adaptive management measures to be implemented in a manner that provides an appropriately precautionary approach commensurate to the level of risk inherent in allowing the proposed abstractions and maintains the ability to remedy any adverse effects before they become irreversible.

Appendix A: Proposed conditions of consent

Appendix B: Proposed Groundwater Management and Contingency Plans