

**BEFORE THE INDEPENDENT HEARING PANEL
APPOINTED BY HAWKE'S BAY REGIONAL COUNCIL**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the hearing of submissions on Proposed Plan Change 9 (PPC9) – Tūtaekurī, Ahuriri, Ngaruroro and Karamū Catchments (TANK)

LEGAL SUBMISSIONS OF COUNSEL FOR DELEGAT LIMITED

9 June 2021

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May it please the Court

1. These submissions are supported by a statement of evidence of Dr Rengasamy Balasubramaniam, the Grower Business Development Manager for Delegat. Unfortunately, Dr Balasubramaniam is not able to attend the hearing (he is receiving treatment for health issues which arose over Queen's Birthday Weekend).
2. There has not been time since I was advised of Dr Balasubramaniam's situation to arrange another representative of Delegat to attend this hearing. That means that if the Hearing Panel has questions arising out of these submissions or Dr Balasubramaniam's evidence that only he can answer, I will make a note of those questions and provide a written response after speaking with him or another Delegat representative.
3. In Hawke's Bay, Delegat has over 1,000 hectares of planned vineyard plantings in the Crownthorpe (Matapiro Road) and Gimblett Gravels areas of the Ngaruroro Catchment. It has 677 hectares of planted and productive vineyard currently established and a substantial winery development located on Evenden Road, North of Hastings. A map showing Delegat's established vineyards within the Crownthorpe Terraces and Gimblett Gravels areas is attached to Dr Balasubramaniam's evidence.
4. The current value of those resources is approximately \$230M.
5. The company employs 30 permanent staff in the vineyards and winery and between 100 to 300 contractors on a seasonal basis.
6. The winery development on Evenden Road has been future-proofed and designed to ultimately process up to 20,000 tonnes of grapes per annum (1.6M cases) sourced from the vineyard on the winery site and Delegat's other vineyards in Hawke's Bay, as well as the 400 hectares of land Delegat intends to plant within the next ten years.
7. The table below sets out the volume of the existing water use and take permits held by Delegat.

TABLE OF WATER USE AND TAKE PERMITS

Consent No	Location	Maximum Volume (Annual)	Area able to be Irrigated	Expiry Date
WP140423T	Matapiro Road, Crownthorpe	2,630,808 cubic metres	515 ha	31 May 2025
WP140492T	Matapiro Road, Crownthorpe	653,576 cubic metres	308 ha	31 May 2025
WP140632T	Gimblett and Kirkwood Road	365,000 cubic metres	108 ha	31 May 2030
WP100258T	Gimblett Road	118,000 cubic metres	33 ha	31 May 2019 ¹

¹ The consents that expired in 2019 are currently being exercised under s124 of the RMA as the HBRC has placed the renewal applications them on hold.

WP990240T	Gimblett Road	N/A	21 ha	31 May 2019 ¹
WP090268Ta	Evenden Road (Winery consent)	52,564 cubic metres	6.18 ha of viticulture, 1.9 ha of pasture (and for winery use)	31 May 2020 ¹

8. Delegat is concerned that the Proposed Plan Change will affect the company's ability to renew consents for planned future development which have not been fully implemented at the time the existing consent expires.

Provisions supported by Deleat

9. In its submission, Deleat supported a number of the provisions in the notified version of the Plan Change. Those provisions were:
- (a) Objective 11(g);
 - (b) Objective 14(b);
 - (c) Objectives 16(c) and (d);
 - (d) Objectives 17(b), (c) and (d);
 - (e) Policy 21, 23, 24 and 25;
 - (f) Policy 37(d), Policy 46, Policy 52(b) and Rule TANK 9, Conditions (c) and (e) and Rule TANK 10, Conditions (e) and (g);
 - (g) Policy 37(a);
 - (h) Policy 43(a), (c) and (d);
 - (i) Policy 45(a);
 - (j) Policy 46(b);
 - (k) Policy 47(c);
 - (l) Policy 49(g);
 - (m) Policy 56;
 - (n) Rule TANK 1;
 - (o) Rule TANK 9;
 - (p) Rule TANK 13;
 - (q) The definition of Actual and Reasonable use;
 - (r) Schedules 30-31 (Ngaruroro River and Ngaruroro groundwater) and Schedule

32.

10. Delegat has reviewed the Hearing Report and the Addendum to the Hearing Report. While some of those provisions are recommended to be amended, Delegat is comfortable with the Officers' recommendations. From its perspective nothing more needs to be said about those provisions in these submissions.

Provisions opposed

11. In its submission, Delegat opposed a number of the provisions of the Proposed Plan Change. It sought amended wording for some provisions and the deletion of others. Delegat supports the reporting Officers' recommendations relating to:

- (a) Objective 17;
- (b) Policy 37(d)(ii)
- (c) Policy 37(e);
- (d) Policies 39, 40, 41 45(d) and Schedule 36;
- (e) Policy 46(a);
- (f) Policy 47(b);
- (g) Policy 53;
- (h) Rule TANK 5; and
- (i) Rule TANK 9(e).

Remaining concerns about the Proposed Plan Change

12. Delegat's remaining concern about the Proposed Plan Change is that Policy 36(f) and the definition of Actual and Reasonable potentially preclude the use of a consented but unused allocation of water relating to future planned primary production development.
13. This issue might arise where, for example, a winery holds consent to abstract water required to process the crop from planned future vineyard expansions. As Dr Balasubramaniam explains, because of the time it takes to plan and implement the development of new vineyards and wineries, it is entirely possible that not all of the vineyard intended to be developed and irrigated at the time the original consent was granted have been planted and irrigated at the time the consent expires.
14. If an existing vineyard is being redeveloped, the replanted vineyard will have below average water use during the first three years after replanting.

15. If at consent renewal time, water use is capped at the maximum water use prior to full development of the vineyard the remaining area cannot be developed.
16. If the timeframe of record used to determine Actual and reasonable use for a redeveloped vineyard includes the first three years after replanting, the application of the maximum annual take may not be enough to irrigate the vineyard when those vines are older (and require more water).
17. In its submission, Delegat sought amendments to Policy 36(f) and (g) to address that concern.
18. In response to this (and no doubt other similar submissions) the reporting officers have recommended that Rule TANK 9 be amended to refer to replacement consents. Delegat acknowledges that change is a helpful one and seeks a consequential amendment to condition (b) of Rule TANK 9 so that it is amended to read:

An application is either for the continuation of a water take and use previously authorised in a permit that was issued before 2 May 2020 (including the irrigation for previously planned but as yet unimplemented primary production development and associated processing) or is a joint or global application that replaces these existing water permits previously held separately or individually

19. If the Hearing Panel does not wish to make that amendment, Dr Balasubramaniam has suggested an alternative which is set out at paragraph 31 of his evidence. It is that Policy 36(f) be amended to read:

avoiding further adverse effects by granting new consents to take and use groundwater, unless those consents are to replace existing consents that authorise the irrigation for planned but as yet unimplemented primary production development and associated processing.

20. The amendment Delegat sought to Policy 36(g)² has not been made in the Hearing Report.
21. However, the reporting Officers have recommended that:
 - (a) Condition (e) of Rule TANK 9 be deleted and condition (c) be amended.
 - (b) The definition of Actual and Reasonable use be amended to refer to the maximum annual amount as measured by accurate water metre data in the 10-year period prior to 2 May 2020 (as opposed to the average annual amount).
22. Delegat supports those changes for the following reasons:
 - (a) In dry years, more water is applied to crops than would be the case on average over the 10-year period. That water is required to sustain the crops and the

² that it be amended to refer to reducing existing levels of irrigation water use to reasonable crop water needs

yields.

- (b) The maximum amount of water applied would relate to the driest year in the 10-year period of record.
- (c) Based on an analysis of annual water use from some of Delegat's takes, the difference between average water use across the period of record and the maximum water use is significant.
- (d) For non-irrigation takes (such as use in the winery) there will be a good reason why the maximum amount of water is taken in a particular year and that reason (and level of water use) may well occur in the future.

Further changes to definition of Actual and Reasonable sought

- 23. Dr Balasubramaniam suggests amendments to clauses (b) and (c) of the definition of Actual and Reasonable to allow for future planned primary production development.³
- 24. The amended wording of those clauses (b) and (c)(i) is set out below:

b) the maximum annual amount as measured by accurate water meter data in the ten years preceding 2 May 2020 if accurate water meter data is available, plus for replacement consents any allocation previously held for planned but as yet unimplemented primary production development and associated processing (if insufficient or no accurate data is available either clause a) or c) will apply)

or

c) for irrigation takes, the quantity required to meet the modelled crop water demand for the irrigated are with an efficiency of application of no less than 80% as specified by the IRRICALC water demand model (if it is available for the crop and otherwise with an equivalent method), and to a 95% reliability of supply where the irrigated area is:

(i) no more than in the permit due for renewal, or any lesser amount applied for, and in the case of Heretaunga Plains Groundwater Quantity Area, is not more than:

- the maximum annual amount irrigated in the ten years preceding 2 May 2020; or
- for a replacement consent, any allocation previously held for planned but as yet unimplemented primary production development; and

(ii) evidence is supplied to demonstrate that the area has, and can continue to be, irrigated and the permit substantially given effect to. In the case of a replacement consent for planned but as yet unimplemented primary production development, evidence must be supplied to demonstrate that the area will be irrigated and the permit

³ These amendments arise out of the reporting Officers' response to the submissions made by Delegat (and others) on Policy 36(f) and (g)
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substantially given effect to.

Policy 37(e)

25. The Hearing Report did not recommend the change Deleगत had sought to this policy but instead recommended a substantial revision to Policy 39. Deleगत supports that proposed new policy wording.

Rule Tank 5 and 6 and Schedule 29

26. Schedule 29 has now been substantially rewritten. There were problems with Table 1: Land Use Types and Nitrogen Leaching Risk recommended in the initial Hearing Report. That Schedule listed “any irrigation” as the highest nitrogen leaching risk – higher even than intensive winter grazing and dairy farming which were given lower risk rankings.
27. That anomaly has been amended in the more recent recommendations contained in the Addendum Report to the Hearing Report. That change and changes made to Rules TANK 5 and 6 are an improvement and to that extent are supported.

Dated 9 June 2021



Lara Blomfield
Counsel for Deleगत Limited

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APPOINTED BY HAWKE'S BAY REGIONAL COUNCIL**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the hearing of submissions on Proposed Plan Change 9 (PPC9) – Tūtaekurī, Ahuriri, Ngaruroro and Karamū Catchments (TANK)

**STATEMENT OF EVIDENCE OF DR RENGASAMY BALASUBRAMANIAM
ON BEHALF OF DELEGAT LIMITED
7 June 2021**

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Introduction

1. My name is Dr Rengasamy Balasubramaniam. I am employed as the Grower Business Development Manager for Delegat Limited (**Delegat**), based in Blenheim. Delegat is the proprietary owner of two global wine brands, Oyster Bay and Barossa Valley Estate.
2. Although I hold the qualifications and experience set out in paragraphs 3 and 4 below, I am not appearing in the capacity of an expert in this hearing. My role in this hearing is as Delegat's representative. I am authorised to give this evidence on behalf of Delegat.
3. By way of relevant qualifications and experience I have a Bachelor of Science and Master of Science specialising in Plant Pathology as well as a PhD in Microbiology/Plant Pathology. These qualifications were obtained in Allahabad University (1977) and Canterbury University (1985).
4. I have worked in the primary production sector and in particular horticulture and viticulture since 1986, based in Blenheim. During this period, I have worked extensively in research, both nationally and also for a period of time based in the USA working for the US Department of Agriculture. With 32 years' experience in the viticulture industry I have a good understanding of the physiology and pathology of grapevines. Furthermore, I have worked with the Marlborough District Council and the Hawke's Bay Regional Council on various resource consent matters to meet Delegat's operational needs. I was also selected by the Marlborough District Council to be part of and contribute to the Water Allocation Group to work on water allocation policy for the Marlborough Environment Plan and to meet the guidelines of the National Water Policy Statement for Freshwater Management.
5. I have been employed by Delegat since 2000.
6. By way of company overview, Delegat was established in 1947. The company currently employs 431 permanent staff and up to a maximum of 1021 seasonal workers in each year. The company produces a range of export quality wine varieties including Sauvignon Blanc, Chardonnay, Pinot Noir, from vineyards in the Marlborough Region (Wairau and Awatere Valleys) and Merlot, Chardonnay and Pinot Gris vineyards within the Crownthorpe Terraces and Gimblett Gravel areas of Hawke's Bay. In the year to 30 June 2020, Delegat sold 3,277,000 cases of wine globally generating operating revenue of some \$303 million. Oyster Bay is Delegat's brand. Oyster Bay is a global brand exporting 90% of its production to various markets including Australia, USA, UK, Canada Europe and Asia.

7. Within Hawke's Bay, Delegat's resources include:
 - (a) Over 1,000 hectares of planned vineyard plantings in the Crownthorpe and (Matapiro Road) and Gimblett Gravel areas of the Ngaruroro catchment; with 677 hectares of planted and productive vineyard currently established.
 - (b) A substantial winery development between 2014 and 2015 (operational since February 2016), located on Evenden Road, north of Hastings.
8. The current asset value of these resources is approximately \$230 million.
9. Delegat employs 30 permanent staff in the vineyards and winery in Hawke's Bay, and between 100 to 300 contractors on a seasonal basis. The annual operating expenditure for these activities within the region (including staff wages and salaries) is approximately \$15.62 million.
10. In that context, the purpose of this statement of evidence is to explain Delegat's interests and concerns regarding the proposed TANK Plan Change to the Hawke's Bay Regional Resource Management Plan.

Scope of Evidence

11. For that purpose, this evidence will:
 - (a) Give details of the range of assets and investments which Delegat owns and has made within Hawke's Bay, all of which are dependent on a secure supply of water;
 - (b) Detail the existing range of resource consents held to take, use and store water for viticulture and winemaking purposes associated with these assets and investments;
 - (c) Briefly outline Delegat's participation in the TANK process (through the Hawke's Bay Wine Growers' Association); and
 - (d) Discuss, from a practical perspective, Delegat's concerns with the version of the TANK Plan Change recommended by the Hearing Report author.

Hawke's Bay assets and investments

12. Produced with this statement as Attachment "A" is an aerial map showing in blue and red outline the areas of land on which Delegat has established vineyards within the Crownthorpe Terraces and Gimblett Gravel areas (respectively). The location of the winery at Evenden Road is also identified in yellow.
13. Set out below is a table detailing the areas of these vineyard plantings and the grape varieties grown on them.

Crownthorpe Terraces	526 Ha
Merlot	70 Ha
Chardonnay	166 Ha
Pinot Gris	267 Ha
Gewurztraminer	23
Gimblett Road	151 Ha
Merlot	108 Ha
Chardonnay	11 Ha
Other Red	32 Ha
Total Vineyard area	677 ha

14. The Delegat Winery development on Evenden Road includes a small vineyard, cellar door, and substantial new winery building with a gross floor area of approximately 18,950 m², established at a capital cost of approximately \$100 million. The winery building has been future proofed to ultimately process up to 20,000 tonnes of grapes per annum (1.6 million cases) sourced from the vineyard on the winery development site, and from Delegat's other vineyards in Hawke's Bay (including vineyards located on the Heretaunga Plains, Gimblett Road gravels and at Crownthorpe) and a further 400 hectares of land intended to be planted within the next ten years.
15. The winery is synonymous with Delegat's quality wine brands and confirms the company's presence and public face in Hawke's Bay. The development speaks strongly to Delegat's position in the New Zealand wine industry and the company's long-term commitment to Hawke's Bay as one of the world's premier New World wine regions.

Resource Consents held by Delegat

16. Set out below is a table detailing the range of existing water use and take permits relied on by Delegat to sustain these vineyard activities, as well as provide water for the winery processing operation at Evenden Road.
17. The table details the volume of each water take, area of land able to be irrigated by that water taken, and the current expiry date of each permit.

TABLE OF WATER USE AND TAKE PERMITS

Consent No	Location	Maximum Volume (Annual)	Area Able to be Irrigated	Expiry Date
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WP100258T	Gimblett Road	118,000 cubic metres	33 ha	31 May 2019 ¹

¹ The consents that expired in 2019 are currently being exercised under s124 of the RMA as the HBRC has placed the renewal applications them on hold.

WP990240T	Gimblett Road	N/A	21 ha	31 May 2019 ¹
WP090268Ta	Evenden Road (Winery consent)	52,564 cubic metres	6.18 ha of viticulture, 1.9ha of pasture (and for winery use)	31 May 2020 ¹

18. In 2017, Delegat applied for a variation to WP 140423T to provide for both a change of use (conversion of the property from dairy to less water and nutrient intensive viticulture²) and for the taking of up to an additional 700,000 cubic metres of water during winter periods of high river flow, and its storage in two reservoirs since constructed on the Crownthorpe Terraces Property (under what is now WP 140423Ta).
19. A particular and obvious concern to Delegat for both the Crownthorpe Terraces and Gimblett Rd and Winery consents is the potential for the TANK Plan Change to affect the ability to renew these consents.
20. The specific issue is the extent to which any renewed consents would be granted for the same or equivalent volumes and rates of take as the existing permits. These existing consents are vital in terms of sustaining the investments which Delegat has made (to the capital value of \$230 million in the Hawke's Bay region as stated above), and the continued employment of the number of staff and contractors also referred to. The Hawke's Bay operations are in turn a significant and vital part of Delegat's broader New Zealand operations and the extent of export revenue generated through the volume of wine sales referred to at the outset of my evidence. As mentioned previously, we intend planting a further 400 hectares and expanding the winery processing capacity, all of which needs security of water supply.

TANK process and plan change

21. Delegat has been involved with the TANK process through its membership in the Hawke's Bay Wine Growers' Association and the Ngaruroro Water Users Group since it began in 2012. For my part, I have seen this involvement as being consistent with Delegat's commitment to sustainability, as a founding member of Sustainable Wine Growing New Zealand which the company joined in 1996.
22. Part of that, as Delegat sees it, involves a practical commitment to using water efficiently. This can mean that the actual use of water for the vineyard and winery activities referred to earlier is not always at the level of the specific allocation in a given resource consent. Overall, I would estimate that the company takes approximately 80 - 100% of its actual allocation across the water permits held, although there can be quite a lot of variation from season to season and within any

² For example, water use in summer is reduced from 50m³ per ha per day to 18m³ per ha per day during peak demand in January and February, with less nitrates being added to the soil, and no effluent discharge to ground.

given season, noting that weekly or monthly limits on the maximum volume of water taken are set in those permits.

Comments on the Hearing Report Recommendations

23. Counsel for Delekat Lara Blomfield has listed the TANK provisions that Delekat supported. I can confirm that while some of the supported provisions have been recommended to be amended by the Hearing Report, Delekat is content with those amended provisions should the Panel adopt those recommendations.
24. There were a number of TANK provisions that Delekat opposed for the reasons set out in our original submission. Ms Blomfield has listed the provisions that have been amended, either in response to our submission or as a result of other submissions, and that Delekat is now content with. I can confirm that Delekat is satisfied with those provisions as they are recommended to be amended.
25. There were a number of TANK provisions that Delekat submitted on where the amendments we sought have not been recommended. Ms Blomfield has listed the provisions within that category where Delekat does not wish to pursue the change we originally sought.
26. However, there are some important TANK provisions that Delekat submitted on that we consider would benefit from further refinement. I offer comments on these provisions from a practical perspective.

POL TANK 36(f)

27. Delekat sought to amend clause (f) so that it did not preclude the use of a consented but as yet unused allocation of water that related to future planned primary production development, such as a vineyard expansion or winery development and expansion. The Hearing Report has recommended that clause (f) is amended to preclude the granting of new consents to take and use groundwater.
28. It takes time to plan and implement the development of new vineyards and wineries. This timing can be affected by market and climatic conditions as well as global issues such as Covid 19. It is entirely possible that not all of the vineyard intended to be developed and irrigated at the time the original consent was granted is in fact planted and irrigated when the original consent expires. However, that further vineyard area may be well advanced in terms of planning (including the forward purchasing of vineyard scion and root stock, and trellis and irrigation materials) and so it would be detrimental to not have irrigation water available for that area going forward. Further, replanted vineyards have below average water use during the first three years from replanting. If irrigation water is not available then it is likely that the further vineyard area will not be developed which has adverse financial implications for Delekat and the Hawke's Bay economy (in terms of employment and expenditure on goods and services).

29. I understand that any replacement of an expiring consent would be considered as a new consent. The Hearing Report has recommended that rule TANK 9 now explicitly refers to replacement consents which is helpful for users of the Plan.
30. In light of that recommendation, rather than seeking a change to POL TANK 36(f), Delegat now consequentially requests that Condition (b) of rule TANK 9 is amended to read:

An application is either for the continuation of a water take and use previously authorised in a permit that was issued before 2 May 2020 (including the irrigation for previously planned but as yet unimplemented primary production development and associated processing) or is a joint or global application that replaces these existing water permits previously held separately or individually

31. If the Panel does not wish to make that amendment, then as a second-best option I suggest that POL TANK 36(f) is amended to read:

avoiding further adverse effects by granting new consents to take and use groundwater, unless those consents are to replace existing consents that authorise the irrigation for planned but as yet unimplemented primary production development and associated processing.

POL TANK 36(g)

32. Delegat sought to amend clause (g) to refer to reducing existing levels of irrigation water use to reasonable crop water needs (as provided for in 5.10.6 Policy 37(d)(ii)) and the reasonable needs of primary produce processing facilities, including wineries.
33. The Hearing Report has recommended no changes to POL TANK 36(g). However, rule TANK 9 is recommended to be amended to delete clause (e) and to change both Condition (c) and Matter of Discretion 1 to refer to “Actual and Reasonable” (a defined term) which now refers to the “maximum annual amount as measured by accurate water meter data in the ten years preceding May 2020” instead of the maximum annual amount in the ten years preceding 1 August 2017.³
34. I support the change of date from 1 August 2017 to 2 May 2020 as it makes sense to use the most recent water meter data and the Plan notification date (2 May 2020) is a reasonable benchmark date to use that will prevent people ‘gaming’ the system by increasing their takes unnecessarily so as to boost their actual use.
35. I also support the latest change to the definition recommended in the Addendum Report to the Hearing Report (from the average annual amount to the maximum

³ The Hearing Report initially recommended that the definition of ‘Actual and Reasonable’ refer to ‘the average annual amount measured by accurate water meter data in the 10 years preceding May 2020’, but in the Addendum Report to the Hearing Report, the officers are now recommending that that the definition be amended to ‘the maximum annual amount as measured by accurate water meter data in the ten years preceding May 2020’

annual amount) for following reasons set out below.

36. Firstly, assuming clause (b) applies to irrigation takes (because the wording does not say that it does not), it makes no sense to refer to the 'average' annual water use over the ten year period. In dry years more water would have been applied to crops than would be the case on average over the ten year period. That water was required to sustain the crops and their yields in those dry years. In most cases the amount of water applied would have been guided by soil moisture probes or irrigation scheduling based on soil moisture models. It costs money to pump the water used for irrigation and so users such as Delegat are careful to only pump the water they actually need.
37. I have attached a Table (attachment B) showing the annual water use from some of Delegat's takes and the average and maximum annual volumes to illustrate this point. Points to note from this table include:
 - (a) The year in which the maximum amount of water was used (shaded grey) varies from site to site;
 - (b) The difference between the average water use across the period of record and the maximum water use year is significant.
38. It is important to understand that annual water use (irrigation, washdown, spraying, flushing and maintenance needs of irrigation laterals) can vary depending on seasonal, evaporative demands and seasonal rainfall. Whilst Delegat has used the SPASMO model to estimate water demand for its water take consents, actual monthly use increases from bud burst onwards and peaks in February and then gradually declines till after harvest. This variation can also depend on soil type and water holding capacity (TAW's and RAW's – total available water and readily available water) of the soil.
39. For these reasons I support the reinstatement of the word 'maximum'. The 'maximum' amount of water applied would relate to the driest year in the ten year period. It is entirely conceivable that such a dry year will occur again. Using the 'average' amount of water used over the ten year period as a consent limit will mean that in those dry years crops will not receive the irrigation water they need and consequently fail or even potentially die.
40. I understand that is why clause (c) of the definition appropriately refers to the "95% reliability of supply", in other words a 9 ½ in 10 year drought. It is in these dry years that the irrigation water is most needed.
41. If it was intended that clause (b) does not apply to irrigation takes then that still does not make sense because the maximum amount of water used in a year for industrial purposes (such as in a winery) would have occurred for a good reason and is likely to be required again in the future.
42. My second concern is that the definition does not allow for future planned primary

production development, such as a vineyard expansion or winery development and expansion, that was previously granted water but has not occurred prior to the expiry of the existing take consent. If the Panel is mindful to makes the changes to TANK 9 or POL TANK 36(f) that I outlined above, then it would also be necessary to reflect that approach in the definition.

43. Finally, I suggest clause (c)(i) could be improved because irrigation consents utilising groundwater should most usefully in my view state seasonal (annual) volumes and Irricalc calculates seasonal (annual) volumes.
44. So, as a consequence of our submission on POL TANK 36(f) and (g) and the Hearing Report's response to those submissions, I suggest that the wording of clauses (b) and (c)(i) of the definition of Actual and Reasonable are amended as follows:
- b) the maximum annual amount as measured by accurate water meter data in the ten years preceding 2 May 2020 if accurate water meter data is available, plus for replacement consents any allocation previously held for planned but as yet unimplemented primary production development and associated processing (if insufficient or no accurate data is available either clause a) or c) will apply)

or

 - c) for irrigation takes, the quantity required to meet the modelled crop water demand for the irrigated are with an efficiency of application of no less than 80% as specified by the IRRICALC water demand model (if it is available for the crop and otherwise with an equivalent method), and to a 95% reliability of supply where the irrigated area is:
 - (i) no more than in the permit due for renewal, or any lesser amount applied for, and in the case of Heretaunga Plains Groundwater Quantity Area, is not more than:
 - the maximum annual amount irrigated in the ten years preceding 2 May 2020; or
 - for a replacement consent, any allocation previously held for planned but as yet unimplemented primary production development; and
 - (ii) evidence is supplied to demonstrate that the area has, and can continue to be, irrigated and the permit substantially given effect to. In the case of a replacement consent for planned but as yet unimplemented primary production development, evidence must be supplied to demonstrate that the area will be irrigated and the permit substantially given effect to.

POL TANK 37(e)

45. Deleat sought to amend clause (e) to read "... schemes, including through an individual consent holder's use of stored water to augment stream flows". The Hearing Report did not recommend any change to POL TANK 37(e), but it was

recommended that POL TANK 39 be substantially revised (note they called it POL TANK 38 by mistake).

46. I support new Flow Maintenance POL TANK 39 (or 38) because it helpfully now says that HBRC will investigate options (including funding) for stream flow enhancement in consultation with stakeholders and look to implement the preferred options within 10 years. That is sensible as the stakeholders (the water users) are likely to be the ones who will have to pay for and possibly implement any stream enhancement options.

Policies 39, 40 and 45 and Schedule 36

47. Deleat sought to amend Policies 39, 40 and 45 and Schedule 36 to enable an individual consent holder to mitigate their stream depletion effects, including by using stored water captured at times of high river flow.
48. The Hearing Report has recommended a new POL TANK 39, the deletion of POL TANK 40(e), no significant changes to POL TANK 45 and the deletion of Schedule 36. I support those recommendations for the same reason that I support the new POL TANK 39.

POL TANK 46(a)

49. Deleat sought to amend clause (a) to read “ensuring allocation limits and allocations of water for abstraction are calculated with known security of supply, including an irrigation reliability standard that meets demand 95% of the time”. The Hearing Report did not recommend that change but I no longer think it is necessary because POL TANK 47(c) already appropriately provides for a 95% reliability of supply for irrigation takes.

Rule TANK 5 and 6 and Schedule 29

50. Deleat sought to either delete Rules TANK 5 and 6 and Schedule 29 or amend them to ensure they are no more onerous than Government’s proposed national environmental standards restricting agricultural intensification. The Hearing Report has recommended substantial amendments to the rules and to Schedule 29 that they rely on.
51. I had concerns about the amendments to Schedule 29 recommended in the Hearing Report.
52. That Schedule listed “any irrigation” as the highest N leaching risk which was not sensible as irrigated grapes leach less nitrogen than the lower ranked ‘higher risk’ land uses such as intensive winter grazing and dairy farming. The simple reason being that irrigated grape vine have low levels of nitrogenous fertiliser applied (if any) and the vineyards do not carry stock that urinate on the ground. For example, at Deleat we only use up to a total of 31 kg of elemental nitrogen per hectare in the form of solid (nitrophoska, potassium nitrate, calcium nitrate and magnesium nitrate)

and liquid fertiliser (fertigation). These are applied at different periods during the growing season from September to early February.

53. Ms. Blomfield and I are happy to answer questions that the Panel may have.

Rengasamy Balasubramaniam

7 June 2021

Delegat

Hawke's Bay Vineyards

Crownthorpe Vineyard

Gimblett Road Vineyard

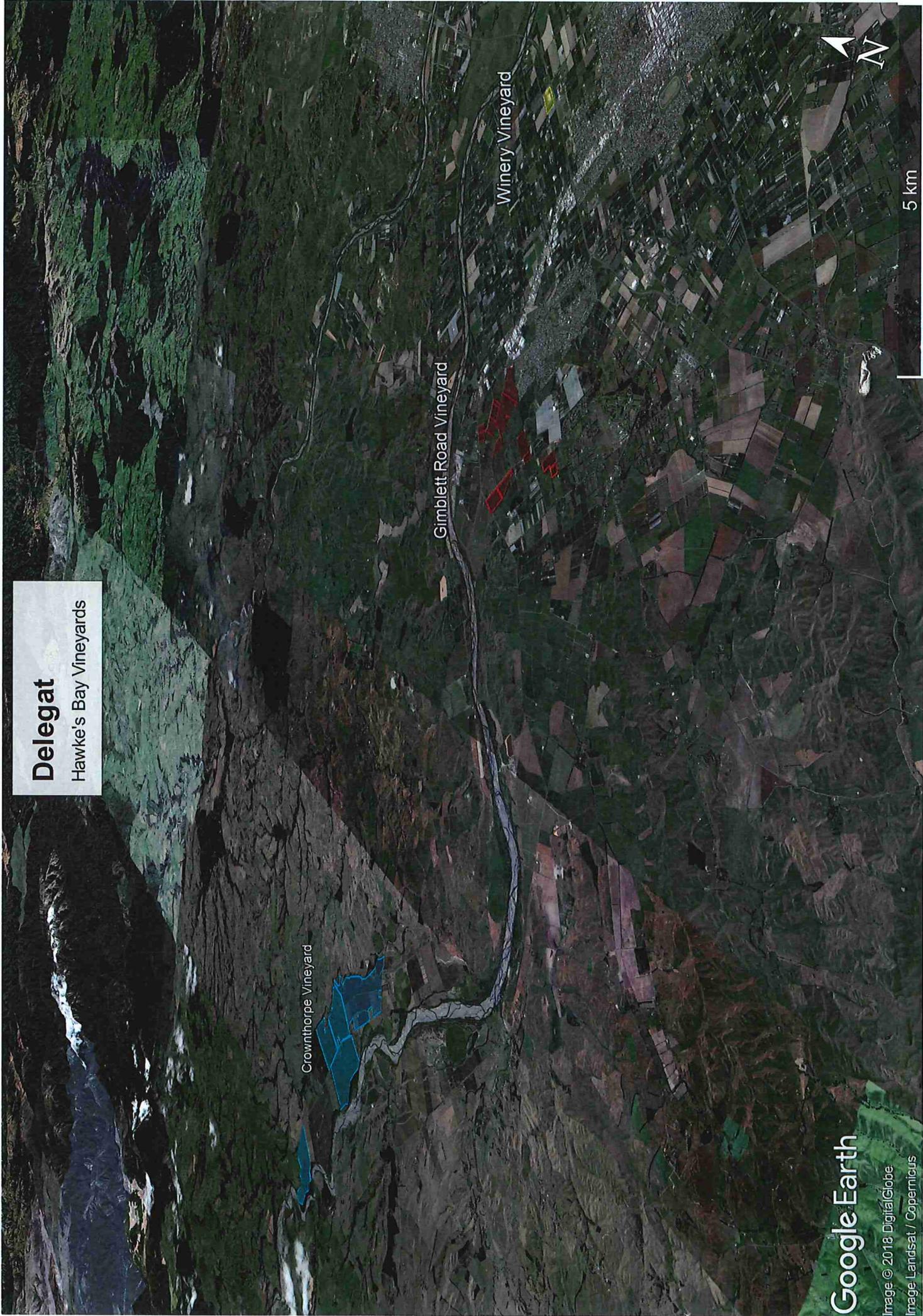
Winery Vineyard

Google Earth

Image © 2018, DigitalGlobe
Image Landsat / Copernicus



5 km



Attachment B – EIC – Water Use Data – 13 May 2021

Site/ Water Meter Name	Date Range	Usage - 2011 (m³)	Usage - 2012 (m³)	Usage - 2013 (m³)	Usage - 2014 (m³)	Usage - 2015 (m³)	Usage - 2016 (m³)	Usage - 2017 (m³)	Usage - 2018 (m³)	Usage - 2019 (m³)	Usage - 2020 (m³)	Usage - 2021 (m³)	Maximum	Average	Difference
Winery Water Meter - Winery Bore	From 02/02/16 11:20 till 29/04/21 08:30	N/A	N/A	N/A	N/A	N/A	15,895	22,545	22,457	25,057	25,830	17,312	25,830	21,516	4,314
Rauriki - Pivot	From 21/09/16 10:30 till 29/04/21 09:50	N/A	N/A	N/A	N/A	N/A	18,125	38,539	94,932	157,360	207,207	140,255	207,207	109,403	97,804
Rauriki - Linear	From 1/12/16 10:04 till 29/04/21 09:50	N/A	N/A	N/A	N/A	N/A	0	4,424	10,628	76,527	78,974	115,180	115,179	57,146	58,033
Gimblett - GIR A-F	From 06/07/11 00:00 till 29/04/21 11:30	N/A	N/A	46,982	56,827	67,084	75,069	52,028	30,492	35,598	41,077	17,085	75,069	48,814	26,255
Gimblett - GIR E-F	From 06/07/11 00:00 till 29/04/21 11:30	N/A	N/A	8,123	37,548	71,552	78,817	131,774	57,636	52,394	65,466	31,577	131,744	50,389	81,355
Gimblett - GIR A/B	From 06/07/11 00:00 till 29/04/21 11:30	7,807	61,306	87,611	N/A	76,106	81,156	59,569	40,250	55,514	54,208	22,855	87,611	54,638	32,973
Gimblett - GIR C/D	From 06/07/11 00:00 till 29/04/21 11:30	N/A	N/A	20,926	43,370	18,550	19,654	25,738	8,253	11,018	9,038	5,041	43,370	17,954	25,416
Gimblett - MEV Irrigation	From 06/07/11 00:00 till 29/04/21 11:30	N/A	410	2,422	6,185	11,143	13,383	10,741	3,014	5,469	4,149	2,108	13,383	5,902	7,481
Crownthorpe - Irrigation	From 09/11/17 11:07 till 29/04/21 13:00	N/A	N/A	N/A	N/A	N/A	N/A	86,281	224,752	136,744	255,528	122,369	255,528	165,135	90,393
Crownthorpe - Dam	From 09/11/17 11:07 till 29/04/21 13:00	N/A	N/A	N/A	N/A	N/A	N/A	405	336,973	132,346	248,596	120,651	336,973	167,794	169,179
Crownthorpe - 4in Bore	27/07/11 09:46 till 29/04/21 13:30	4,229	8,688	11,792	2,484	4,963	13,297	1,068	143	5,850	33,712	11,302	33,712	8,866	24,846
Crownthorpe - 8in Bore	27/07/11 09:46 till 29/04/21 13:30	2,428	63,327	94,326	90,814	8,703	1,307	42,136	72,296	4,692	79,851	36,854	94,326	45,158	49,168
Crownthorpe - New Bore	27/07/11 09:46 till 29/04/21 13:30	84,425	1,856	147,797	140,829	146,648	93,224	159,511	41,545	17,353	151,327	78,265	159,511	96,616	62,895